

BEACON

Single Use Carryout Bag Ordinance

Final Environmental Impact Report

SCH # 2012111093

May 2013



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Prepared by:

**Beach Erosion Authority for Clean Ocean and Nourishment
(BEACON)**

c/o City of Ventura Engineering Division
501 Poli Street, PO Box 99
Ventura, CA 93001

Contact: Gerald Comati, P.E., Program Manager
206 East Victoria Street
Santa Barbara, CA 93101
email: comati@Beacon.ca.gov
fax: (805) 962-5209

Prepared with the assistance of:

Rincon Consultants, Inc.
180 N. Ashwood Avenue
Ventura, California 93003

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Single Use Carryout Bag Ordinance EIR

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EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed ordinance and the significant environmental impacts, mitigation measures, and residual impacts associated with the proposed Single Use Carryout Bag Ordinance.

PROJECT SYNOPSIS

Project Sponsor

Beach Erosion Authority for Clean Oceans (BEACON)
501 Poli Street
Ventura, CA 93001
(805) 654-7827
Contact: Gerald Comati, P.E.

Project Characteristics

The proposed Single Use Carryout Bag Ordinance (Proposed Ordinance) would regulate the use of paper and plastic single use carryout bags within the geographical limits of Santa Barbara and Ventura counties, including the unincorporated areas as well as the participating incorporated municipalities (see full list of participating municipalities in Section 2.0, *Project Description*). For the purposes of this Program EIR, the geographical limits of Santa Barbara and Ventura Counties and all of the participating municipalities are referred to as the “Study Area.” The Proposed Ordinance would apply to two categories of retail establishments that are located within or doing business within the geographic limits of Santa Barbara or Ventura Counties or the participating municipalities. The ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags and (2) require retail establishments to charge customers for ~~recycled~~ recyclable paper bags ~~and~~ at the point of sale. Regulated retail establishments would be allowed to sell reusable bags or distribute them free of charge. The ordinance sets forth that the minimum charge for single use recyclable paper bags would be ten cents (\$0.10). The Proposed Ordinance would not apply to restaurants and other food service providers, allowing them to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider’s premises.

The intent of the ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags. It is anticipated that by prohibiting single use plastic carryout bags and requiring a mandatory charge for each paper bag distributed by retailers, the Proposed Ordinance would provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single use plastic and paper bags within the participating municipalities.

Single use carryout bags are defined in the Proposed Ordinance as bags made predominantly of plastic derived from either petroleum or biologically-based sources, such as corn or other plant sources, which is provided to a customer at the point of sale. Regulated plastic carryout bags (those plastic bags covered by the proposed ordinance) would include compostable and biodegradable bags would not include bags without handles exclusively used to carry produce,



meats, or other food items from a display case within a store to the point of sale inside a store or to prevent such food items from coming into direct contact with other purchased items. Recyclable paper carryout bags are defined in the Proposed Ordinance as bags that (1) contain no old growth fiber, (2) are 100% recyclable overall and contain a minimum of 40% post-consumer recycled material, (3) is capable of composting, (4) is accepted for recycling in curbside programs, (5) has printed on the bag the name of the manufacturer, the location (country) where the bag was manufactured, and the percentage of postconsumer recycled material used, and (6) ~~displaces~~ displays the word “recyclable” in a highly visible manner on the outside of the bag.

As noted previously, the Proposed Ordinance would prohibit the sale or free distribution of single use carryout plastic bags at the point of sale and would require regulated retailers to impose a mandatory charge of \$0.10 for each paper carryout bag provided. Retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction.

PROJECT OBJECTIVES

BEACON’s objectives for the Proposed Ordinance include:

- *Reducing the environmental impacts related to single use plastic carryout bags, such as impacts to biological resources (including marine environments), water quality and utilities (solid waste equipment and facilities)*
- *Deterring the use of paper bags by retail customers*
- *Promoting a shift toward the use of reusable carryout bags by retail customers*
- *Reducing the amount of single-use bags in trash loads to reduce landfill volumes*
- *Reducing litter and the associated adverse impacts to stormwater systems, aesthetics and marine and terrestrial environments*

ALTERNATIVES

As required by CEQA, the EIR examines a range of alternatives to the proposed project that feasibly attain most of the basic project objectives. These alternatives are described and evaluated in Section 6.0, *Alternatives*. Studied alternatives include:

- ***Alternative 1: No Project*** - *The no project alternative assumes that the Carryout Bag Waste Reduction Ordinance would not occur. The existing retail establishments would continue to provide single use bags free of charge to the customers.*
- ***Alternative 2: Ban on Single use Plastic Bags at all Retail Establishments, Except Restaurants*** - *This alternative would prohibit all retail establishments in the Study Area from providing single use plastic bags to customers at the point of sale, but restaurants and other food establishments would still be excluded from the Proposed Ordinance.*
- ***Alternative 3: Mandatory Charge of \$0.25 for Paper Bags*** - *This alternative would continue to prohibit retail establishments (except restaurants) in the Study*



Area from providing single use plastic bags to customers at the point of sale, but would increase the mandatory charge for single use paper bags from \$0.10 to \$0.25.

- **Alternative 4: Ban on Both Single Use Plastic and Paper Carryout Bags** – This alternative would prohibit all retail establishments (except restaurants) in the Study Area from providing single use plastic and paper carryout bags to customers at the point of sale.
- **Alternative 5: Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags** – This alternative would continue to allow Study Area retail establishments to provide single use carryout plastic and paper bags to customers at the point of sale, but would create a mandatory charge for a single use plastic and paper bags of \$0.10.

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table ES-1 includes a brief description of the environmental issues relative to the Proposed Ordinance, the identified significant environmental impacts, proposed mitigation measures, and residual impacts. Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts which require a statement of overriding considerations to be issued pursuant to the *CEQA Guidelines* §15093 if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *CEQA Guidelines*. Class III impacts are considered less than significant impacts, and Class IV impacts are beneficial impacts.

Table ES-1
Summary of Significant Environmental Impacts,
Mitigation Measures, and Residual Impacts

Impact	Mitigation Measures	Significance After Mitigation
AIR QUALITY		
Impact AQ-1 With a shift toward reusable bags, the Proposed Ordinance is expected to substantially reduce the number of single use carryout bags, thereby reducing the total number of bags manufactured and the overall air pollutant emissions associated with bag manufacture, transportation and use. Therefore, air quality impacts related to alteration of processing activities would be Class IV, <i>beneficial</i> .	Mitigation is not required.	The impact would be beneficial without mitigation.



**Table ES-1
 Summary of Significant Environmental Impacts,
 Mitigation Measures, and Residual Impacts**

Impact	Mitigation Measures	Significance After Mitigation
Impact AQ-2 With an expected increase in the use of recyclable paper bags, the Proposed Ordinance would generate air pollutant emissions associated with an incremental increase in truck trips to deliver recycled recyclable paper and reusable carryout bags to local retailers. However, emissions would not exceed SBCAPCD or VCAPCD operational significance thresholds. Therefore, operational air quality impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.
<i>BIOLOGICAL RESOURCES</i>		
Impact BIO-1 Although the Proposed Ordinance would incrementally increase the number of recycled recyclable paper and reusable bags within the Study Area, the reduction in the amount of single use plastic bags would be expected to reduce the overall amount of litter entering the coastal and bay habitat, thus reducing litter-related impacts to sensitive wildlife species and sensitive habitats. This is a Class IV, <i>beneficial</i> , effect.	Mitigation is not required.	The impact would be beneficial without mitigation.
<i>GREENHOUSE GAS EMISSIONS</i>		
Impact GHG-1 The Proposed Ordinance would increase the number of recyclable paper and reusable bags used in the Study Area and would therefore incrementally increase GHG emissions compared to existing conditions. However, emissions would not exceed thresholds of significance. Impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	The impact would be less than significant without mitigation.
Impact GHG-2 The Proposed Ordinance would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	The impact would be less than significant without mitigation.
<i>HYDROLOGY/WATER QUALITY</i>		
Impact HWQ-1 The Proposed Ordinance would incrementally increase the number of recycled recyclable paper and reusable bags used in the Study Area, but the reduction in the overall number of single use plastic bags used in the Study Area would reduce the amount of litter and waste entering storm drains. This would improve local surface water quality, a Class IV, <i>beneficial</i> , effect.	Mitigation is not required.	The impact would be beneficial without mitigation.
Impact HWQ-2 A shift toward reusable bags and potential increase in the use of recyclable paper bags could increase the	Mitigation is not required.	Impacts would be less than significant without mitigation.



**Table ES-1
 Summary of Significant Environmental Impacts,
 Mitigation Measures, and Residual Impacts**

Impact	Mitigation Measures	Significance After Mitigation
<p>use of chemicals associated with their production, which could degrade water quality in some instances and locations. However, bag manufacturers would be required to adhere to existing regulations, including NPDES Permit requirements, AB-258, and the California Health and Safety Code. Therefore, impacts to water quality from altering bag processing activities would be Class III, <i>less than significant</i>.</p>		
<p>UTILITIES AND SERVICE SYSTEMS</p>		
<p>Impact U-1 The increase in reusable bags within the Study Area as a result of the Proposed Ordinance would incrementally increase water demand due to washing of reusable bags. However, sufficient water supplies are available to meet the demand created by reusable bags. Therefore, water supply impacts would be Class III, <i>less than significant</i>.</p>	<p>Mitigation is not required.</p>	<p>Impacts would be less than significant without mitigation.</p>
<p>Impact U-2 Water use associated with washing reusable bags would increase in the Study Area resulting in a corresponding increase in wastewater generation. However, projected wastewater flows would remain within the capacity of the wastewater collection and treatment systems in the Study Area, and would not exceed applicable wastewater treatment requirements of the RWQCB. Impacts would be Class III, <i>less than significant</i>.</p>	<p>Mitigation is not required.</p>	<p>Impacts would be less than significant without mitigation.</p>
<p>Impact U-3 The Proposed Ordinance would alter the solid waste generation associated with increased paper bag <u>and reusable bag</u> use in the Study Area. However, projected future solid waste generation would remain within the capacity of regional landfills. Impacts would therefore be Class III, <i>less than significant</i>.</p>	<p>Mitigation is not required.</p>	<p>Impacts would be less than significant without mitigation.</p>



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1.0 INTRODUCTION

This document is a Program Environmental Impact Report (Program EIR) for the proposed Single-Use Bag Reduction Ordinance (the Proposed Ordinance). The Proposed Ordinance would prohibit retail establishments engaged in the sale of groceries (excluding restaurants) in the Counties of Ventura and Santa Barbara from distributing single-use plastic carryout bags. It would also create a mandatory minimum charge of ten cents (\$0.10) for each recyclable paper bag provided to a customer. The intent of the Proposed Ordinance is to reduce waste by decreasing the use of single use carryout bags.

The Proposed Ordinance would apply to retail establishments, including, but not limited to, drug stores, pharmacies, supermarkets, grocery stores, convenience food stores, food marts, or other similar retail stores or entities engaged in the retail sale of grocery items; and is located within the geographical limits of unincorporated Santa Barbara or Ventura Counties or any of the following participating municipalities:

Santa Barbara County

- Buellton
- Goleta
- Guadalupe
- Lompoc
- Santa Barbara
- Santa Maria
- Solvang

Ventura County

- Camarillo
- Fillmore
- Moorpark
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura

For the purposes of this Program EIR, the geographical limits of Santa Barbara and Ventura Counties and all of the participating municipalities listed above shall be known as the “Study Area.” The cities of Ojai and Carpinteria currently have bag ordinances that apply to retail stores located in these jurisdictions and, therefore, are not part of the Study Area. The Proposed Ordinance is described in greater detail in Section 2.0, *Project Description*. This section discusses:

- *The project background;*
- *The legal basis for preparing a Program EIR;*
- *The scope and content of the Program EIR;*
- *Type of EIR*
- *Lead, responsible, and trustee agencies; and*
- *The environmental review process required under the California Environmental Quality Act (CEQA).*

1.1 PROJECT BACKGROUND

In order to reduce the environmental impacts ~~related~~related to the use of single-use carryout bags, the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) has prepared a Single-Use Carryout Bag Ordinance that participating agencies within Santa Barbara and



Ventura counties may consider for adoption (see Draft Ordinance in Appendix B). Adoption of the Proposed Ordinance would be a discretionary action subject to the environmental review requirements of the California Environmental Quality Act (CEQA). Therefore, BEACON staff determined that an EIR should be prepared examining the Ordinance’s potential environmental impacts.

The analysis of the Proposed Ordinance in this Program EIR considers a bag ordinance that would be adopted within Santa Barbara and Ventura counties, including the incorporated cities within the County. As described above, for this Program EIR, the geographical limits of Santa Barbara and Ventura counties and all of the participating municipalities define the “Study Area.”

Several cities and counties in California have previously considered or passed similar ordinances within their respective jurisdictions. These include, but are not limited to: the City of San Francisco, ~~the City of Seattle~~, the County of Los Angeles, the City of Berkeley, the City of San Jose, the City of Manhattan Beach, the City of Palo Alto, Marin County, the City of Malibu, the City of Santa Monica, San Mateo County, the City of Sunnyvale, Alameda County, the City of Calabasas, the City of Fairfax, the City of Huntington Beach, the City of Dana Point, the City of Laguna Beach, and the City of Long Beach.

BEACON prepared a Notice of Preparation (NOP) of a Program EIR for the Proposed Ordinance and distributed the NOP for agency and public review for a 30-day review period beginning November 30, 2012. BEACON received five letters in response to the NOP. BEACON also conducted two public scoping meetings during the NOP comment period. These took place in Santa Barbara (December 12) and Oxnard (December 19). To be as concise as possible and as allowed by CEQA, the Program EIR identifies common environmental topics of concern expressed in the scoping comments. Table 1-1 summarizes these environmental topics of concern, beginning with the most common comments received. Not all comments received are summarized, only the ones pertinent to CEQA. Comments related to the merit of the proposed project are outside the purview of CEQA analysis and are therefore excluded from this list. The NOP and Initial Study prepared for the project as well as the comment letters received are presented in Appendix A.

**Table 1-1
 Summary of Written Scoping Comments and
 Comments Provided at Public Scoping Sessions**

Topic of Concern Index	Comment Received	Response, including Reference to Where Comment is Addressed in the Program EIR
Topic No. 1	Multiple commenters suggested that there are sanitation and health issues related to reusable bags.	While the proposed ordinance would promote a shift toward the use of reusable bags, periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers. As required by the proposed Ordinance (see Appendix B), reusable bags are required to be machine washable or made from a material that can be cleaned or disinfected. The environmental impacts of reusable bags are discussed throughout this EIR.



**Table 1-1
 Summary of Written Scoping Comments and
 Comments Provided at Public Scoping Sessions**

Topic of Concern Index	Comment Received	Response, including Reference to Where Comment is Addressed in the Program EIR
Topic No. 2	A commenter states the environmental impacts associated with washing reusable bags should be considered.	The water and wastewater use associated with washing reusable bags is analyzed in Section 4.5, <i>Utilities and Service Systems</i> . The greenhouse gas emissions associated with energy use to wash and dry reusable bags are discussed in Section 4.3, <i>Greenhouse Gas Emissions</i> .
Topic No. 3	A commenter states that the washing of reusable bags will increase costs to consumers from higher water and electricity utility bills.	The comment expresses concern about a potential economic impact of the proposed project, which is not CEQA's purview. The purpose of the Program EIR is to address the project's environmental effects, not its economic effects. CEQA Guidelines Section 15064(e) specifically states that "economic and social changes resulting from a project shall not be treated as significant effects on the environment."
Topic No. 4	A commenter requests that the EIR address airborne litter from trash and recycling trucks.	Impacts to aesthetics are discussed in the Initial Study, included as Appendix A. Impacts to solid waste and solid waste facilities are discussed in Section 4.5, <i>Utilities and Service Systems</i> .
Topic No. 5	An alternative was suggested by a commenter that instead of banning plastic bags, BEACON should consider a fee for plastic and paper bags.	This alternative is considered in Section 6.0, <i>Alternatives</i> .
Topic No. 6	An alternative was suggested by a commenter that instead of banning plastic bags, the Agency should consider additional education about recycling plastic bags and a plastic bag deposit, incentive, or recovery program.	As noted in Section 6.0, <i>Alternatives</i> , this alternative was considered, but rejected because it would not achieve all of the project objectives. As noted in Section 2.0, <i>Project Description</i> , one of the project objectives is to reduce the number of single-use plastic bags distributed by retailers.
Topic No. 7	A "status quo" or no project alternative was suggested.	The "no project" alternative is considered as Alternative No. 1 in Section 6.0, <i>Alternatives</i> .
Topic No. 8	A commenter requests that the analysis include harm to wetlands, protected habitat areas, and public lands.	Impacts to wetlands and habitat are considered in Section 4.2, <i>Biological Resources</i> . Impacts to land are considered throughout the EIR.
Topic No. 9	A commenter requests that the EIR consider the effectiveness of trash excluders to meet objectives of reducing trash in waterways.	The impacts of the Proposed Ordinance compared to existing conditions for stormwater systems are discussed in the Initial Study, which is included as Appendix A.
Topic No. 10	A commenter notes that plastic bags do not decompose in landfills, and therefore do not release greenhouse gases.	Section 4.3, <i>Greenhouse Gases</i> , considers the greenhouse gas emissions from the manufacturing, transportation, and disposal of plastic bags as well as those from paper and reusable bags.



**Table 1-1
 Summary of Written Scoping Comments and
 Comments Provided at Public Scoping Sessions**

Topic of Concern Index	Comment Received	Response, including Reference to Where Comment is Addressed in the Program EIR
Topic No. 11	A commenter noted that plastic and paper carryout bags are not exclusively “single-use,” stating that they reuse bags and recycle bags.	This opinion is noted and will be considered by Agency decision makers as they review the project. As noted in Section 2.0, <i>Project Description</i> , single-use carry-out bags (plastic or paper) are narrowly defined in the Proposed Ordinance. These bags can be reused by customers and are recyclable. Data shows that 5% of single carry out plastic bags are recycled in California. ¹
Topic No. 12	A commenters stated that the Proposed Ordinance would place a burden on shoppers that would be unable to carry heavy grocery loads that can be contained in reusable bags	This opinion is noted and will be considered by Agency decision makers as they review the project. However, the comment expresses concern about the merits of the proposed project, which is not CEQA’s purview. The purpose of the Program EIR is to address the project’s environmental effects. CEQA Guidelines Section 15064(e) specifically states that “economic and social changes resulting from a project shall not be treated as significant effects on the environment.”
Topic No. 13	A commenter suggested some wording changes to the Project Description.	The suggestions have been included in Section 2.0, <i>Project Description</i> .
Topic No. 14	A commenter suggested that plastic and paper bag usage may decrease dramatically (up to 94% for both plastic and paper) with the Proposed Ordinance.	As stated in Section 2.0, <i>Project Description</i> , this EIR assumes that plastic bag use will be reduced by 95% and paper bag use will increase by 30%. These assumptions are conservative and are considered reasonable based upon the best available sources of information.
Topic No. 15	A commenter stated that reusable bags, when used multiple times, have fewer environmental impacts than plastic bags in regards to water quality, biological resources, air quality, traffic, utilities, and greenhouse gases.	The Draft EIR analyzes the effects of increased reusable bag use resulting from the Proposed Ordinance. Impacts to water quality are discussed in Section 4.4, impacts to biological resources are discussed in Section 4.2, impacts to air quality are discussed in Section 4.1, impacts to traffic are discussed in the Initial Study (see Appendix A), impacts to utilities are discussed in Section 4.5, and impacts related to greenhouse gases are discussed in Section 4.3.
Topic No. 16	A commenter suggests that the EIR examine the environmental impacts from manufacturing paper bags.	The air quality impacts of paper bag manufacturing are considered in Section 4.1, <i>Air Quality</i> , the greenhouse gas impacts are considered in Section 4.3, <i>Greenhouse Gas Emissions</i> , and impacts related to water quality from manufacturing paper bags are considered in Section 4.4, <i>Hydrology and Water Quality</i> .
Topic No. 17	A commenter suggests that the “No Project” alternative consider applicable requirements and regulations, such as the Ventura River Trash Total Maximum Daily Load (TMDL). The commenter also notes that the TMDL program would not achieve the goal of zero trash in water bodies.	This information is considered in the “No Project” Alternative (Alternative 1) in Section 6.0, <i>Alternatives</i> .

¹ US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007).



1.2 PURPOSE AND LEGAL AUTHORITY

The proposed Single-Use Bag Reduction Ordinance requires the discretionary approval of the Counties of Santa Barbara and Ventura and each of the participating municipalities. Therefore, it is subject to the requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines*, the purpose of this Program EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This Program EIR is to serve as an informational document for the public and the decision-makers of BEACON, the counties of Santa Barbara and Ventura, and participating municipalities. BEACON, the counties, and the participating municipalities will review and consider the information in the Program EIR, along with any other relevant information, in making final decisions regarding the Proposed Ordinance (Section 15121 of the *CEQA Guidelines*). The environmental review process will culminate with a BEACON Board of Directors hearing to consider that the Final Program EIR was completed in compliance with CEQA and to authorize and direct the BEACON Executive Director to distribute copies of the Final Program EIR to BEACON member agencies and other jurisdictions for those jurisdictions' consideration and use, at their discretion, in adoption of a Single-Use Bag Reduction Ordinance. ~~certification of a Final Program EIR.~~ For each of the counties and participating municipalities, Section 2.6 in Section 2.0, *Project Description*, provides a detailed description of approvals that may be necessary for the Proposed Ordinance.

1.3 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The *CEQA Guidelines* define lead, responsible and trustee agencies. In accordance with the CEQA Guidelines (Section 15051(d)), when two or more public agencies have a substantial claim to be the Lead Agency, the public agencies may by agreement designate an agency as the Lead Agency. An agreement may also provide for cooperative efforts by two or more agencies by contract, joint exercise of powers, or similar devices. For BEACON is the lead agency for the purposes of this EIR, BEACON, a California Joint Powers Agency, is acting as a "Co-Lead Agency" with the other participating counties and municipalities. BEACON does not intend to enact any ordinance, itself, that would apply to any of the participating jurisdictions. Thus, although BEACON is participating, pursuant to CEQA Guidelines 15051(d), in the joint powers effort to prepare the CEQA document, BEACON is not exercising any approval authority over a project under CEQA. BEACON is preparing a Program EIR to be utilized by the participating cities and counties. However, each jurisdiction (cities and counties) would individually need to certify the Final Program EIR and approve the project (a Single-Use Bag Reduction Ordinance) which would apply within their specific jurisdictional boundaries. BEACON is thus functioning as a joint powers agency for preparation of the Program EIR, while the participating cities and counties would function as lead agencies for the certification of the Final EIR for each individual jurisdiction's project (adoption of a Single-Use Bag Reduction Ordinance that would apply within that jurisdiction).



A responsible agency refers to a public agency other than the lead agency that has discretionary approval over a project, and a trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. ~~As Each of the participating counties and municipalities would be acting as lead agencies for the certification of the Final Program EIR and approval of the project, there are no responsible agencies for the Proposed Ordinance. - responsible agencies because each individual municipality would have discretionary approval over the Proposed Ordinance within its respective jurisdiction. There are also no trustee agencies for the Proposed Ordinance.~~

1.4 TYPE OF EIR

This EIR is a Program EIR under the CEQA Guidelines (Section 15168 and 15180(b)). Information in this Program EIR can be used with subsequent environmental documentation for similar ordinances by each of the participating municipalities to provide the basis for determining whether an ordinance in that jurisdiction would have any significant effect, and if necessary, to focus further environmental assessment on discussion of new effects that had not been considered before. This Program EIR does not preclude any requirement for individual participating municipalities to undergo further environmental review.

The degree of specificity required in this EIR corresponds to the degree of specificity involved in the underlying activity (the Proposed Ordinance) which is described in the Program EIR. The *CEQA Guidelines* provide the standard for the degree of specificity on which this document is based. Section 15146 of the *CEQA Guidelines* states:

- (a) *An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.*
- (b) *An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.*

The analysis provided in this Program EIR is intended to provide sufficient information to understand the environmental impacts of the Proposed Ordinance at a planning level and to permit a reasoned choice among alternatives. The EIR is intended to permit informed decision making and public participation. As a program-level EIR, this document focuses on the broad changes to the environment that would be expected to result from implementation of the Proposed Ordinance within the two counties and participating municipalities.

1.5 EIR SCOPE AND CONTENT

This Program EIR addresses the potentially significant effects that BEACON determined could result from adoption of the Proposed Ordinance. The issues addressed in this Program EIR include:



- *Air Quality*
- *Biological Resources*
- *Greenhouse Gas Emissions*
- *Hydrology/Water Quality*
- *Utilities and Service Systems*

The Program EIR references pertinent policies and guidelines of Santa Barbara and Ventura Counties, certified EIRs and other adopted CEQA documents, and background documents prepared by the BEACON in preparing the Proposed Ordinance. A full reference list is contained in Section 7.0, *References and Report Preparers*.

The alternatives section of the Program EIR (Section 6.0) was prepared in accordance with Section 15126.6 of the *CEQA Guidelines*. The alternatives discussion evaluates the CEQA-required “no project” alternative and four alternative scenarios for the Proposed Ordinance. It also identifies the environmentally superior alternative among the alternatives assessed.

The level of detail contained throughout this Program EIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* provide the standard of adequacy on which this document is based. The *CEQA Guidelines* state:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure. (Section 15151)

1.6 ENVIRONMENTAL REVIEW PROCESS

The major steps in the environmental review process, as required under CEQA, are outlined below. The steps are presented in sequential order.

1. **Notice of Preparation (NOP).** After deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk’s office for 30 days. The NOP may be accompanied by an Initial Study that identifies the issue areas for which the proposed project could create significant environmental impacts (in this case, the Initial Study accompanies the Draft EIR).
2. **Draft Environmental Impact Report (DEIR).** The DEIR must contain:
 - a) Table of contents or index;
 - b) Summary;
 - c) Project description;
 - d) Environmental setting;



- e) Discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts);
 - f) Discussion of alternatives;
 - g) Mitigation measures; and
 - h) Discussion of irreversible changes.
3. **Notice of Completion/Notice of Availability of Draft EIR.** A lead agency must file a Notice of Completion with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability for the Draft EIR. The lead agency must place the Notice in the County Clerk's office for 45 days (Public Resources Code Section 21092) and send a copy of the Notice to anyone requesting it (*CEQA Guidelines* Section 15087). Additionally, public notice of DEIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public, and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a DEIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the Clearinghouse (Public Resources Code 21091) approves a shorter period.
4. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
5. **Certification of FEIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the FEIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.



8. **Mitigation Monitoring Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

9. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).



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2.0 PROJECT DESCRIPTION

This section describes the Proposed Single Use Carryout Bag Ordinance (“Proposed Ordinance”), including information about the project proponent, the project location, major project characteristics, project objectives, and discretionary approvals needed for project approval.

2.1 PROJECT SPONSOR

Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)
501 Poli Street
Ventura, CA 93001
Contact: Gerald Comati, P.E., Program Manager
(805) 654-7827

2.2 PROJECT LOCATION

For the purposes of this analysis, this document assumes that the Proposed Ordinance would apply to specified retail establishments selling grocery items, including, but not limited to, drug stores, pharmacies, supermarkets, grocery stores, convenience food stores, food marts, or other similar retail stores or entities, and is located within any of the following municipalities:

Santa Barbara County

- Unincorporated Santa Barbara County
- Buellton
- Goleta
- Guadalupe
- Lompoc
- Santa Barbara
- Santa Maria
- Solvang

Ventura County

- Unincorporated Ventura County
- Camarillo
- Fillmore
- Moorpark
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura

The area within the geographical limits of Santa Barbara and Ventura Counties, including the incorporated municipalities listed above, are referred to as the “Study Area” in this Program EIR. Note that the cities of Ojai and Carpinteria currently have bag ordinances that apply to retail stores located in these jurisdictions and therefore are not part of the Study Area. However, these jurisdictions are considered in the analysis of cumulative environmental impacts. Figure 2-1 illustrates the Study Area in its regional context. Figure 2.2 shows Santa Barbara County and incorporated municipalities and Figure 2.3 shows Ventura County and incorporated municipalities.



Single Use Carryout Bag Ordinance EIR
Section 2.0 Project Description



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 County Boundary



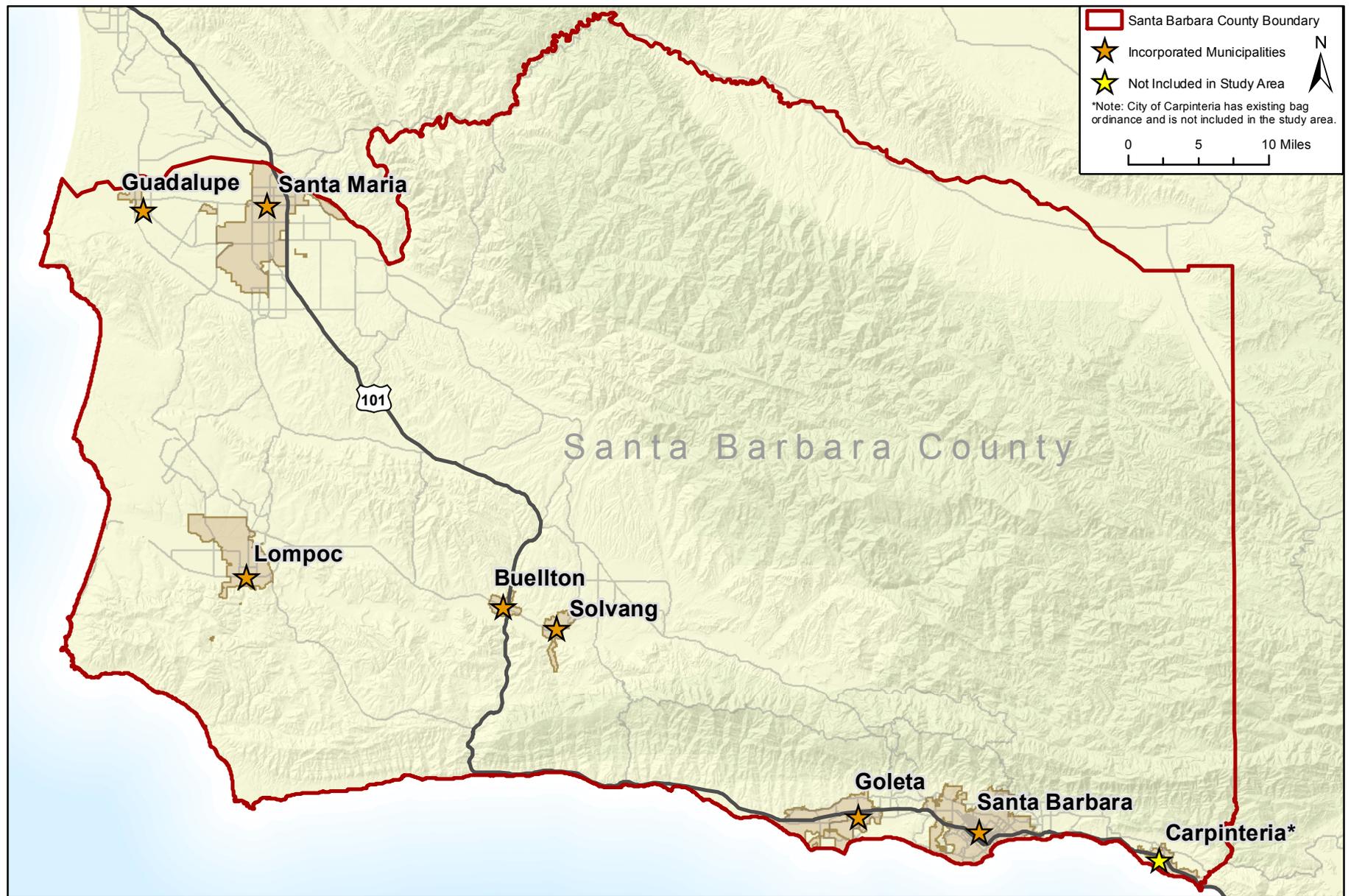
0 10 20 Miles




Regional Location

Figure 2-1

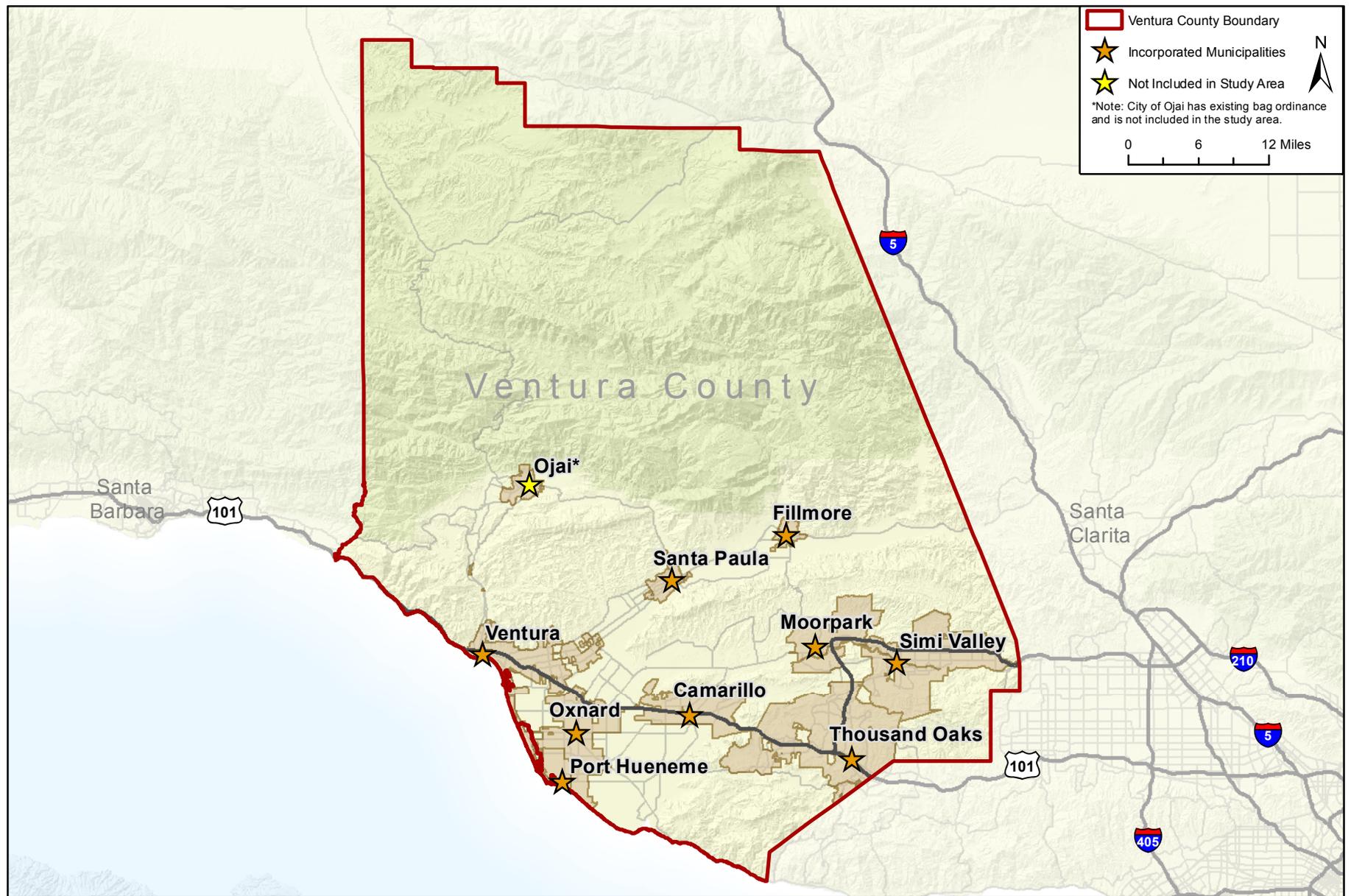




Sources: ESRI, 2012 and County of Santa Barbara, 2012.

Aerial Map of Santa Barbara County
and Incorporated Municipalities

Figure 2-2
BEACON



Basemap Source: ESRI, 2012

Aerial Map of Ventura County
and Incorporated Municipalities

Figure 2-3
BEACON

2.3 EXISTING CHARACTERISTICS

2.3.1 Carryout Bags in the Study Area

The types and amounts of carryout bags currently used within the Study Area are discussed below.

a. Types of Carryout Bags.

Plastic Bags. Single-use disposable plastic grocery bags are typically made of thin, lightweight high density polyethylene (HDPE) (Hyder Consulting, 2007). Although not as popular as HDPE bags due to cost, some retailers may also utilize low density polyethylene (LDPE) plastic bags that are intended for a single use. For consumers, they offer a hygienic, odorless, water resistant and sturdy carrying sack, but are generally intended for one use before disposal. Currently, almost 20 billion of these plastic grocery bags are consumed annually in California (San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2007). Conventional single-use plastic bags are a product of the petrochemical industry. Studies suggest that conventional single-use plastic bags are manufactured by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources and that 85% of plastic bags used in the United States are made in the United States (Stephen L. Joseph, July 22, 2010). The HDPE bag cycle begins with the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers (Herrera et al, 2008; County of Los Angeles, 2009). These polymers are connected with heat to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags. Typical single-use plastic bags are approximately five to nine grams in weight, and can be purchased in bulk for approximately two to five cents per bag (AEA Technology, 2009). Single-use plastic bags can be reused by customers and are recyclable. Approximately 5% of single-use plastic bags in California are recycled (US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007).

Paper Bags. Like plastic grocery shopping bags, single-use paper bags are usually distributed free of charge to customers at grocery stores, and are intended for one use before disposal. Paper bags are recyclable and can be reused by customers. Approximately 21% of paper bags nationwide are recycled (CIWMB, 2009). Reports indicate that consumers nationally recycle paper products at a rate of 50 percent (International Paper, 2012). Paper grocery bags are typically produced from kraft paper and weigh between 50 and 100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). These bags can be purchased in bulk for approximately 15 to 25 cents per bag (City of Pasadena, 2008). Kraft paper bags are manufactured from a pulp that is produced by digesting a material into its fibrous constituents via chemical and/or mechanical means (FRIDGE, 2002). Kraft pulp is produced by chemical separation of cellulose from lignin (Environmental Paper Network, 2007). Chemicals used in this process include caustic sodas, sodium hydroxide, sodium sulfide, and chlorine compounds (Environmental Paper Network, 2007). The paper bags are typically made from trees (paper) and corn (glue) which are both re-planted and re-grown (International Paper, 2012). Processed and then dried and shaped into large rolls, the paper is formed into bags, baled, and then



distributed to grocery stores. Paper bags have many other uses outside of grocery stores, including use as recycling and composting containers, school book covers, gift wrap, and other craft projects, and use for picnics or sporting events (International Paper, 2012).

Biodegradable Bags. Multiple types of single-use biodegradable bags are currently available, distinguished by their material components. Biodegradable bags are composed of thermoplastic starch-based polymers, which are made with at least 90% starch from renewable resources such as corn, potato, tapioca, or wheat, or from polyesters, manufactured from hydrocarbons, or starch-polyester blends (James and Grant, 2005). These bags are approximately the same size and weight as HDPE plastic bags, but are more expensive and only biodegrade if they are sent to commercial composting facilities (World Centric, 2013). They can be purchased in bulk for approximately 12 to 30 cents per bag (www.ecoproducts.com, 2009).

Reusable Bags. Reusable bags can be made from plastic or a variety of cloths such as vinyl or cotton. These bags differ from the single-use bags in their weight and longevity. Built to withstand many uses, they typically cost approximately three dollars wholesale, weigh at least ten times what an HDPE plastic bag weighs and two times what a paper bag weighs, and require greater material consumption on a per bag basis than HDPE plastic bags (ExcelPlas Australia, 2004; City of Pasadena, 2008). Many types of reusable bags are available today. These include: (1) non-woven polypropylene (100% recyclable) ranging from \$1-\$2.50 per bag; (2) cotton canvas bags, which are approximately \$5.00 per bag; (3) bags made from recycled water/soda bottles, which are approximately \$6.00 per bag; (4) polyester and vinyl, which are approximately \$10.00 per bag; and (5) 100% cotton, which are approximately \$5.00 to 10.00 per bag.

The production stages in reusable bag life cycles depend on the materials used. Once used, these bags are reused until worn out through washing or regular use, and then typically disposed either in the landfill or recycling facility.

b. Carryout Bag Use in the Study Area. Statewide, almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2007). Based on this per capita bag, retail customers within the Study Area currently use about 658 million plastic bags per year (see Table 2-1).

The customer base of retailers located within the Study Area may include residents of communities located within or outside of the Study Area (i.e., visitors who live outside the Study Area but travel to shop within the Study Area). Likewise, study area residents may shop outside of Santa Barbara and Ventura counties. In order to estimate the current number of plastic bags used per year in the Study Area, the Program EIR applies the rate discussed above (531 bags used per person/per year) to the number of residents in the Study Area. This estimate is considered reasonable and conservative for the purposes of this analysis.



**Table 2-1
 Estimated Single-Use Plastic Bag Use in the Study Area**

Area	Population*	Total Bags Used Annually**
Santa Barbara County		
Unincorporated Areas	134,890	71,626,590
Buellton	4,858	2,579,598
Goleta	29,930	15,892,830
Guadalupe	7,097	3,768,507
Lompoc	42,854	22,755,474
Santa Barbara	89,082	47,302,542
Santa Maria	100,199	53,205,669
Solvang	5,281	2,804,211
Ventura County		
Unincorporated Areas	96,589	51,288,759
Camarillo	66,407	35,262,117
Fillmore	15,145	8,041,995
Moorpark	34,826	18,492,606
Oxnard	200,390	106,407,090
Port Hueneme	21,682	11,513,142
Santa Paula	107,166	56,905,146
Simi Valley	29,882	15,867,342
Thousand Oaks	125,317	66,543,327
Ventura	128,031	67,984,461
Total	1,239,626	658,241,406

* California Department of Finance, "City/County Population and Housing Estimates" (May 2012).

**Based on annual statewide estimates of plastic bag use of 531 bags per person = 20 billion bags used statewide per year (CIWMB, 2007) / 37,678,563 people statewide (California's current population according to the State Department of Finance, 2012).

2.3.2 Regulatory Setting

In 2006, California enacted AB 2449 (Chapter 845, Statutes of 2006) and it became effective on July 1, 2007. The statute states that stores providing plastic carryout bags to customers must provide at least one plastic bag collection bin in an accessible location to collect used bags for recycling. The store operator is also required to make reusable bags available to shoppers for purchase. AB 2449 applies to retail stores of over 10,000 square feet that include a licensed pharmacy and to supermarkets with gross annual sales of \$2 million or more that sell dry groceries, canned goods, nonfood items or perishable goods. Stores are also required to



maintain records of their AB 2449 compliance and make them available to the California Integrated Waste Management Board (now CalRecycle) or local jurisdiction.

AB 2449 further requires the manufacturers of plastic carryout bags to develop educational materials to encourage the reducing, reusing, and recycling of plastic carryout bags, and to make the materials available to stores. Manufacturers are also required work with stores on their at-store recycling programs to help ensure the proper collection, transportation and recycling of the plastic bags.

Finally, AB 2449 restricted the ability of cities (including charter cities) and counties to regulate single-use plastic grocery bags through imposition of a fee. Public Resources Code Section 42254(b) provided as follows:

Unless expressly authorized by this chapter, a city, county, or other public agency shall not adopt, implement, or enforce an ordinance, resolution, regulation, or rule to do any of the following:

- (1) Require a store that is in compliance with this chapter to collect, transport, or recycle plastic carryout bags.*
- (2) Impose a plastic carryout bag fee upon a store that is in compliance with this chapter.*
- (3) Require auditing or reporting requirements that are in addition to what is required by subdivision (d) of Section 42252, upon a store that is in compliance with this chapter.*

Though AB 2449 expired under its own terms on January 1, 2013, it was extended to January 1, 2020 by the adoption of SB 1219 on September 9, 2012. However, the provision listed above that preempts local regulatory action was not extended and thus expired on January 1, 2013.

There are no other California statutes that directly focus on grocery bags.

2.4 PROPOSED ORDINANCE CHARACTERISTICS

In response to concerns regarding the environmental impact of plastic bags, BEACON has prepared a carryout bag waste reduction ordinance that participating agencies within Santa Barbara and Ventura counties can consider for adoption. For the purposes of this Program EIR, it is assumed that the Proposed Ordinance would apply to two categories of retail establishments that are located within the limits of the Study Area. These include:

1. A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the Revenue and Taxation Code) which sells a line of dry grocery or canned goods, or non-food items and some perishable food items for sale or a store that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or



2. A drug store, pharmacy, supermarket, grocery store, convenience food store, food mart, or other similar retail store or entity engaged in the retail sale of a limited line of grocery items or goods which typically includes, but is not limited to, milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 liquor license issued by the state Department of Alcoholic Beverage Control.

The Proposed Ordinance would not apply to restaurants, fast food providers, or other food establishments (unless specified in the Proposed Ordinance). Thus, restaurant owners and other food establishments would be able them to continue to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider's premises.

The Proposed Ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags, and (2) require retail establishments to charge customers for recyclable paper bags at the point of sale. Regulated retail establishments would be allowed to sell reusable bags or distribute them free of charge. The ordinance sets the minimum charge for single use recyclable paper bags at ten cents (\$0.10).

The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use carryout bags. It is anticipated that by prohibiting single use plastic carryout bags and requiring a mandatory charge for each paper bag distributed by retailers, the Proposed Ordinance would provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single-use plastic and paper bags used within the Study Area.

Single-use carryout bags are defined in the Proposed Ordinance as bags made predominantly of plastic derived from either petroleum or biologically-based sources, such as corn or other plant sources, and that are provided to a customer at the point of sale. Regulated plastic carryout bags (those plastic bags covered by the proposed ordinance) would include compostable and biodegradable bags, but would not include bags without handles exclusively used to carry produce, meats, or other food items from a display case within a store to the point of sale inside a store or to prevent such food items from coming into direct contact with other purchased items. Recyclable paper carryout bags are defined in the Proposed Ordinance as bags that (1) contain no old growth fiber, (2) are 100% recyclable overall and contain a minimum of 40% post-consumer recycled material, (3) are capable of composting, (4) are accepted for recycling in curbside programs, (5) have printed on the bag the name of the manufacturer, the location (country) where the bag was manufactured, and the percentage of postconsumer recycled material used, and (6) display the word "recyclable" in a highly visible manner on the outside of the bag.

As noted above, the Proposed Ordinance would prohibit the sale or distribution of single use carryout plastic bags, and would require regulated retailers to impose a mandatory charge of at least \$0.10 for each paper carryout bag provided. Retail establishments would be required to keep complete and maintain accurate records and report annually to the governing jurisdiction.

The complete Draft Ordinance is contained in Appendix B.



2.5 ANTICIPATED CHANGES IN BAG USE AS A RESULT OF THE PROPOSED ORDINANCE

The analysis in this EIR assumes that as a result of the Proposed Ordinance, 95% of the volume of plastic bags currently used in the Study Area (658,241,406 plastic bags per year) would be replaced by ~~recycled~~ recyclable paper bags (approximately 30%) and reusable bags (approximately 65%), as shown in Table 2-2. It is assumed that 5% of the existing single-use bags used in the Study Area would remain in use since the Proposed Ordinance does not apply to some retailers who distribute plastic bags (e.g., restaurants) and these retailers would continue to distribute single-use plastic bags after the Proposed Ordinance is implemented. Thus, the EIR analysis assumes that 32,912,070 plastic bags would continue to be used annually within the Study Area after implementation of the Proposed Ordinance. It also assumes that an estimated 197,472,422 paper bags would replace approximately 30% of the plastic bags currently used in Study Area. This 1:1 replacement ratio is considered conservative, because the volume of a single-use paper carryout bag (20.48 liters) is generally equal to approximately 150% of the volume of a single-use plastic bag (14 liters), such that fewer paper bags would ultimately be needed to carry the same number of items.

**Table 2-2
Existing Plastic Bag Replacement Assumptions in the Study Area**

Type of Bag	Replacement Assumption	Bags used Post-Ordinance	Explanation
Single-use Plastic	5% (remaining) ¹	32,912,070	Because the Proposed Ordinance does not apply to all retailers (e.g. restaurants), some single-use plastic bags would remain in circulation.
Single-use Paper	30% ²	197,472,422	Although the volume of a single-use paper carryout bag is generally 150% of the volume of a single-use plastic bag, such that fewer paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.
Reusable	65% ²	8,228,018	Although a reusable bag is designed to be used up to hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Carryout Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.
Total		238,612,510	

¹ Rate utilized in the City of Sunnyvale Final EIR, SCH # 2011062032, November 2011.

² Rates utilized in the City of San Jose Final EIR, SCH # 2009102095, October 2010.

See Appendix C for full Bag Reductions for each individual municipality.

In order to estimate the number of reusable carryout bags that would replace 427,856,914 plastic bags (65% of the existing number of plastic bags used annually in the Study Area), this analysis assumes that a reusable carryout bag would be used by a customer once per week for one year (52 times). According to the March 2010 MEA on Single-use and Reusable Bags, reusable bags may



be used 100 times or more; therefore the estimate of 52 uses per year for reusable bags is conservative. Based on the estimate of 52 uses, 427,856,914 single-use plastic bags that would not be used as a result of the Proposed Ordinance would be replaced by 8,228,018 reusable bags. This amounts to about seven reusable bags per person per year based on a Study Area population of 1,239,626. Based on these assumptions, implementation of the Proposed Ordinance would reduce the approximately 658 million single-use plastic carryout bags currently used in the Study Area annually to approximately 239 million total bags (combined single-use and reusable).

2.6 PROJECT OBJECTIVES

BEACON's objectives for the Proposed Ordinance include:

- *Reducing the environmental impacts related to single use plastic carryout bags, such as impacts to biological resources (including marine environments), water quality and utilities (solid waste equipment and facilities)*
- *Deterring the use of paper bags by retail customers*
- *Promoting a shift toward the use of reusable carryout bags by retail customers*
- *Reducing the amount of single-use bags in trash loads to reduce landfill volumes*
- *Reducing litter and the associated adverse impacts to stormwater systems, aesthetics and marine and terrestrial environments*

2.7 REQUIRED APPROVALS and PERMITS

For BEACON, functioning as a joint powers agency for preparation of the Program EIR, the following approvals would be required.

- *Certification of the Receive a report that the Final Program EIR was completed in compliance with CEQA (Board of Directors)*
- *Authorize and direct the Executive Director to distribute copies of the Final Program EIR to BEACON member agencies and other jurisdictions for those jurisdictions' consideration and use, at their discretion, in adoption of a Single-Use Bag Reduction Ordinance*

For Both Santa Barbara and Ventura counties and each participating municipality, each would function as lead agencies for the certification of the Final EIR for each individual jurisdiction's project (adoption of a Single-Use Bag Reduction Ordinance that would apply within that jurisdiction). In addition, each jurisdiction will consider whether to adopt the Proposed Ordinance. For unincorporated Santa Barbara and Ventura counties, adoption of the Proposed Ordinance in each jurisdiction would require certification of the Final Program EIR (in accordance with CEQA Guidelines Section 15090) and an amendment to the county's ordinance code with discretionary approval by the county's Board of Supervisors. The following approvals would be required:

- *Certification of consider the Final Program EIR (Board of Supervisors)*
- *Adoption of an Ordinance amending the Ordinance Code (Board of Supervisors)*



For each of the participating municipalities, adoption of the Proposed Ordinance would require certification of the Final Program EIR (in accordance with CEQA Guidelines Section 15090) and an amendment to the city's municipal code with discretionary approval by the municipality's city council. The following approvals would be required for each of municipalities considering adoption:

- *Certification ~~consider~~ of the Final Program EIR (City Council)*
- *Adoption of an Ordinance amending the Ordinance Code (City Council)*

Subsequent to adoption of the Proposed Ordinance, each municipality would need to file a Notice of Determination (NOD) per CEQA Guidelines (Section 15094).



3.0 ENVIRONMENTAL SETTING

This section provides a general overview of the environmental setting for the Proposed Ordinance. More detailed descriptions of the environmental setting germane to each environmental issue area can be found in Section 4.0, *Environmental Impact Analysis*.

3.1 REGIONAL SETTING

The proposed Single-Use Bag Reduction Ordinance (Proposed Ordinance) would regulate the use of paper and plastic single-use bags within the Study Area. The Study Area includes unincorporated Santa Barbara and Ventura Counties and the following incorporated jurisdictions within the counties:

Santa Barbara County

- Buellton
- Goleta
- Guadalupe
- Lompoc
- Santa Barbara
- Santa Maria
- Solvang

Ventura County

- Camarillo
- Fillmore
- Moorpark
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura

3.1.1 County of Santa Barbara

Santa Barbara County is located in the central coastal area and has a population of 427,267 (California Department of Finance, 2012). Santa Barbara County occupies approximately 2,739 square miles and is bounded by San Luis Obispo County to the north, Ventura County to the east, Kern County to the northeast, and the Pacific Ocean to the south and the west. The County has approximately 110 miles of coastline. The geographic center of the County is about 300 miles south of San Francisco and 100 miles north of Los Angeles.

The County has a Mediterranean climate characterized by warm, dry summers, and cooler, relatively damp winters. Mild temperatures occur throughout the year, particularly near the coastline. Maximum summer temperatures average 70 degrees Fahrenheit near the coast and in the high 80s to low 90s inland. During winter, average minimum temperatures range from the 40s along the coast to the 30s inland. Although precipitation is confined primarily to the winter months, occasional, tropical air masses result in rainfall during summer months. Santa Barbara County is located within the South Central Coast Air Basin, which and is in the jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD).

The County contains four principal watersheds: Santa Maria, which includes the Cuyama and Sisquoc watersheds; San Antonio Creek; Santa Ynez; and South Coast, which is composed of approximately 50 short, steep watersheds. Water supply in Santa Barbara County is provided by groundwater, surface water, imported State Water Project water, and recycled water.



The transportation system in Santa Barbara County consists of a series of highways, major roads, bikeways, bus systems, rail lines, and five airports. U.S. Highway 101 is the backbone of the regional road system, providing access to the County's major urban areas as well as points north and south of the County. Other important components of the County road system include Highway 154, Route 1, and Route 246. Transit service systems within the County include: Santa Barbara Metropolitan Transit District, Santa Maria Area Transit, City of Lompoc Transit, Santa Ynez Valley Transit, Guadalupe Transit, Cuyama Transit, the Clean Air Express, and the Coastal Express.

3.1.2 County of Ventura

The County of Ventura is located in the central coast of California and has a population of 832,970 (California Department of Finance, 2012). Ventura County is bounded by Los Angeles County to the east, Kern County to the north, Santa Barbara County to the west, and the Pacific Ocean to the south.

Like Santa Barbara County, Ventura County has a Mediterranean climate characterized by warm, dry summers, and cooler, relatively damp winters. Ventura County is also within the South Central Coast Air Basin, but is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD).

Ventura County contains six watersheds: the Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek, Cuyama River, and Coastal Creeks. Ventura County water supplies primarily come from groundwater, surface water, and imported water.

Ventura County's transportation system consists of a series of highways, streets, bikeways, transit systems, ~~pedestrian~~ passenger rail service, three harbors, and four airports. The system provides for the shipment of goods as well as the movement of people. Major regional transportation facilities include U.S. Highway 101, Route 1, Highway 33, Highway 118, and Highway 126. There are several public transportation systems in the County, including ~~South~~ South Coast Area Transit, Ventura Intercity Service Transit Authority, Camarillo Area Transit, Moorpark Transit, Simi Valley Transit, and Thousand Oaks Transit. Passenger rail service includes Amtrak and Metrolink.

3.2 CUMULATIVE PROJECTS SETTING

CEQA defines cumulative impacts as two or more individual actions that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis allows the Program EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

Although CEQA analysis typically lists development projects in the vicinity of a project site, this document analyzes the environmental impacts associated with a proposed ordinance and does not include development or construction activity. As such, the cumulative significance of the proposed Single-Use Bag Reduction Ordinance has been analyzed within the context of other bag ordinances that are approved or pending throughout California. Table 3-1 lists current adopted and pending ordinances in California. These ordinances are considered in the cumulative analyses in Section 4.0, *Environmental Impact Analysis*. As shown in Table 3-1, there are currently 36 adopted, proposed or pending bag ordinances (including the proposed Carryout Bag Waste Reduction Ordinance) located throughout California.

**Table 3-1
 Adopted, Proposed and Pending Bag Ordinances in California**

Ordinance Location	Proposed Action	Status
City of Calabasas	This ordinance bans the issuance of plastic carryout bags and imposes a ten (10) cent charge on the issuance of recyclable paper carryout bags at regulated stores.	Adopted February 2011 Effective July 2011
City of Carmel-by-the-Sea	This ordinance is a plastic bag ban in all retail stores.	Adopted July 2012 Effective February 2013
City of Carpinteria	This ordinance is the first double bag ban in the state. Starting in July 2012, large retailers as specified are prohibited from distributing single-use paper and plastic bags. Starting in April 2013, plastic bags are banned in all other retail stores including restaurants.	Adopted March 12, 2012 Carpinteria's 2012 bag ban was challenged by the Save The Plastic Bag Coalition (STPBC) March 20, 2012. They settled out of court with the agreement that the City would exempt restaurant carryout bags from the ordinance.
City of Dana Point	This ordinance places a ban on single-use plastic bags from all retail stores within city limits.	Adopted March 6, 2012 Effective in larger stores April 1, 2013, and all other stores October 1, 2013.
City of Fairfax	This ordinance allows all stores, shops, eating places, food vendors and retail food vendors, to provide only recyclable paper or reusable bags as checkout bags to customers.	Adopted August 2007 After legal challenge, adopted by voter initiative November 2008
City of Fort Bragg	This ordinance bans plastic bags and requires a 10 cent paper bag charge in all retail stores.	Adopted May 14, 2012 Effective in large stores December 10, 2012 and all other stores December 2013.
City of Huntington Beach	This ordinance would prohibit distribution of plastic carry-out bags in commercial point of sale purchases within Huntington Beach, and establish a ten (10) cent charge on the issuance of recyclable paper carry-out bags at all stores that meet at least one of the criteria listed below.	A Draft EIR has been prepared and circulated in February 2012. City Council review of the ordinance and certification of the Final EIR is pending.
City of Laguna Beach	This ordinance requires a plastic bag ban in all retail stores. Grocery stores, pharmacies, and convenience/liquor stores must include a 10 cent minimum price requirement on paper bags distributed.	Adopted February 2012 Effective January 1, 2013
City of Long Beach	This ordinance bans plastic carryout bags at all supermarkets and other grocery stores, pharmacies,	Long Beach passed this ordinance in May 2011. But unlike LAC, Long Beach



**Table 3-1
 Adopted, Proposed and Pending Bag Ordinances in California**

Ordinance Location	Proposed Action	Status
	drug stores, convenience stores, food marts, and farmers markets and would place a ten (10) cent charge on the issuance of recyclable paper carryout bags by an affected store, as defined. The ordinance would also require a store to provide or make available to a customer recyclable paper carryout bags or reusable bags.	did not issue a statement of overriding consideration for the likelihood of passing the GHG emission threshold of significance. The suit was settled after Long Beach agreed to adopt the County's Statement of Overriding Consideration in October 2011. Addendum to the County of Los Angeles Final EIR certified May 2011. The ordinance was also effective in larger stores starting August 2011, and will expand to others stores in 2012.
City of Los Angeles	The ordinance would prohibit provision of single-use plastic bags at supermarkets. Large markets are allowed to phase out plastic bags over 6 months and then provide free paper bags for 6 months. Smaller markets have a year to phase out plastic bags. After a year, paper bags would be allowed for a charge of 10 cents.	Approved May 2012
City of Malibu	This ordinance bans the use of non-compostable and compostable plastic shopping bags for point-of-sale distribution.	Adopted May 2008 Effective November 2009
City of Manhattan Beach	This ordinance bans the distribution of plastic bags at the point-of-sale for all retail establishments in Manhattan Beach.	Adopted July 2008 The California Supreme Court overturned a legal challenge to the ordinance in July 2011, ruling in favor of an appeal by the City of Manhattan Beach affirming the right of small local governments to phase out plastic grocery bags without an EIR.
City of Millbrae	This ordinance bans single-use bags and free paper carryout bags and would apply to all retailers. Stores can charge a minimum of 10 cents per bag, should a customer need to purchase one. Those paper bags sold must be comprised of at least 40 percent post-consumer recycled materials. Thicker reusable plastic bags are allowed but would also need to be imprinted showing the bag is made of at least 40 percent post-consumer recycled materials.	Adopted February 2012. Certified a Negative Declaration. Effective September 1, 2012.
City of Monterey	This ordinance bans plastic bags and places an initial 10 cent minimum price requirement on paper bags for the first year, and 25 cents after.	Adopted December 6, 2011
City of Ojai	A proposed ordinance would ban plastic shopping bags and impose a 10-cent fee on paper bags at grocery stores, supermarkets, convenience stores, liquor stores and gasoline mini-marts.	Adopted April 2012. Effective July 1, 2012.
City of Palo Alto	This ordinance bans large grocery stores in Palo Alto from distributing single-use plastic check out bags. Only reusable bags (preferred) or paper bags can be distributed. Single-use plastic bags can still be used in produce and meat departments.	Adopted March 2009 Palo Alto's 2009 bag ban was challenged by the STPBC. They settled out of court with the agreement that the City would not expand its ban to other



**Table 3-1
 Adopted, Proposed and Pending Bag Ordinances in California**

Ordinance Location	Proposed Action	Status
	Pending expansion of the ordinance would apply the ban to all retailers including restaurants in the city. An EIR on the expanded ordinance is currently being prepared.	stores without an EIR. Effective September 2009 An EIR for the expansion of the ordinance to all retailers including restaurants is currently being prepared.
City of Pasadena	This ordinance bans plastic bags, and imposes a 10 cent minimum price on paper bags.	Adopted November 2011 Effective July 1, 2012 for large stores and supermarkets and December 2012 for convenience stores.
City of San Francisco	Retail stores governed by the ordinance can only provide the following types of bags: a. compostable plastic b. recyclable paper c. reusable bag of any material In February 2012, the ordinance was expanded to all retail and food establishments within the City and requires a minimum ten cent charge for reusable <u>checkout</u> bags.	Adopted April 2007 In February 2012, San Francisco expanded its bag ban and was sued by the STPBC. The two causes of action are related to CEQA compliance and the bag ban for restaurants. A judge upheld the expansion in September 2012. The decision is expected to be appealed.
City of San Jose	This ordinance prohibits the distribution of single-use carryout paper and plastic bags at the point of sale (i.e., check-out) for all commercial retail businesses in San José except restaurants. An exception is made for “green” paper bags containing at least 40 percent recycled content, accompanied by a charge of 10 cents to the customer, with the charge retained by the retailer. For the first two years, paper bags will be sold under this ordinance at 10 cents each; after two years the minimum price per paper bag is 25 cents each.	Adopted January 2011 Effective January 2012
City of Santa Cruz	This ordinance bans plastic bags and places a 10 cent paper bag charge.	Adopted July 2012 Effective April 2013
City of Santa Monica	This ordinance: (1) prohibits retail establishments in Santa Monica from providing “single-use plastic carryout bags” to customers at the point of sale; (2) prohibits the free distribution of paper carryout bags by grocery stores, convenience stores, mini-marts, liquor stores and pharmacies; and (3) requires stores that make paper carryout bags available to sell recycled paper carryout bags to customers for not less than ten cents per bag.	Adopted January 2011 Effective September 2011
City of Solana Beach	This ordinance prohibits the provision of plastic bags (except at restaurants) and allows purchase of paper bags for 10 cents.	Adopted May 2012, amended July 2012
City of Sunnyvale	This ordinance prohibits specified retail establishments in Sunnyvale from providing single-use plastic carryout bags to customers at the point of sale, and creates a mandatory 10 cent (\$0.10) charge for each paper bag distributed by these stores.	Adopted December 2011 Effective June 20, 2012 (grocery stores, convenience stores and large retailers) Effective March 2013 (all retailers)
City of Ukiah	This ordinance prohibits retail establishments (except	Adopted May 2012



**Table 3-1
 Adopted, Proposed and Pending Bag Ordinances in California**

Ordinance Location	Proposed Action	Status
	eating establishments) in Ukiah from providing single-use bags. Recycled-content paper bags or reusable bags could be provided at a minimum charge of 10 cents per bag.	Effective in large stores 180 days after adoption and 545 days for all other stores.
City of Watsonville	This ordinance prohibits retail establishments from providing non-recycled paper or plastic bags and allows sale of recycled and recyclable paper bags for a 10 cent charge.	Adopted May 2012
City of West Hollywood	This ordinance prohibits retail establishments from providing non-recycled paper or plastic bags and places a 10 cent recyclable paper bag charge.	Adopted August 2012
County of Alameda (Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City)	This ordinance prohibits the distribution of single-use carryout paper and plastic bags at the point of sale (i.e., check-out) for all commercial retail businesses in Alameda County. Exception would be made for recycled paper or reusable bags containing a specified minimum percentage of recycled content, which can only be provided to customers for a nominal charge (ten cents on or before January 1, 2015 and 25 cents on or after January 1, 2015) to cover the cost to the business of providing the bags.	Adopted January 2012 Effective January 1, 2013
County of Los Angeles	This ordinance bans the issuance of plastic carryout bags and imposes a ten (10) cent charge on the issuance of recyclable paper carryout bags at all supermarkets and other grocery stores, pharmacies, drug stores, convenience stores, and foodmarts, in unincorporated Los Angeles County. The ordinance requires a store to provide or make available to a customer only recyclable paper carryout bags or reusable bags. The ordinance would also encourage a store to educate its staff to promote reusable bags and to post signs encouraging customers to use reusable bags in the unincorporated areas of the County of Los Angeles.	Adopted November 2010 In October 2011, Hilex and some individuals filed a petition to void the LA County ordinance. They alleged that the 10-cent charge on paper bags is really a local special tax that requires voter approval as amended by Prop 26. In March 2012, the Court denied the petition and ruled that a paper bag charge was not a tax under Prop 26. Helix appealed the decision April 2012 and the case is still pending.
County of Marin	This ordinance prohibits the distribution of plastic carryout bags and would charge at least \$0.05 for a recycled paper bag.	Adopted January 2011 In September 2011, Marin County Superior Court found the ordinance “a reasonable legislative and regulatory choice” to protect the environment without causing a significant negative impact. The County had correctly determined the project to be exempt based on its actions to protect the environment and natural resources. STPBC filed an appeal of this decision on November 29, 2011 and the case is still pending.
County of Mendocino	This ordinance bans plastic bags with a 10 cent paper bag charge.	Adopted June 12, 2012 Effective in large stores January 2013, and all other retailers January 2014
County of San Luis Obispo (City and	The San Luis Obispo County Integrated Waste Management Authority adopted a plastic bag ban with	Adopted January 2012 It goes into effect on September 1,



**Table 3-1
 Adopted, Proposed and Pending Bag Ordinances in California**

Ordinance Location	Proposed Action	Status
County of San Luis Obispo, Atascadero, Grover Beach, Morro Bay, Paso Robles, and Pismo Beach)	a 10 cent minimum price requirement on paper bags.	2012 in all seven incorporated cities as well as unincorporated areas of the county. A petition was filed January 30, 2012. The SLO lawsuit had two causes of action, but the second cause was dropped in February. The first cause of action is CEQA compliance. The case is pending.
County of San Mateo (unincorporated) and 24 participating municipalities in San Mateo and Santa Clara Counties	This ordinance prohibits the provision of single use plastic bags and places a 10 cent (up to 25 cents in January 2013) charge on recycled paper bags.	Approved by San Mateo County Board of Supervisors October 2012. Effective April 2013.
County of Santa Clara	This ordinance allows affected retail establishments to distribute either a 'green' paper bag or a reusable bag. Reusable bags may be given away or sold and are initially defined (until January 2013) as bags made of cloth or other machine washable fabric that has handles; or a durable plastic bag with handles that is at least 2.25 mils thick and is specifically designed and manufactured for multiple use. 'Green' paper bags may be sold to customers for a minimum charge of \$0.15 and are defined as paper bags that are 100% recyclable and are made from 100% recycled material.	Adopted April 2011 Effective January 2012
County of Santa Cruz	The ordinance bans single-use plastic bags and places a 10 cent minimum price requirement on single-use paper bags throughout unincorporated county areas.	Adopted September 13, 2011 The STPBC filed a lawsuit in October 2011. The case was settled out of court and in February 2012 the City repealed the ban of plastic bags used at restaurants.
County of Sonoma	The Sonoma County Waste Management Agency ordinance would ban single-use plastic bags and place a 10 cent minimum price requirement, that goes up to 25-cents, on single-use paper bags throughout the County.	Pending

Source: Californians Against Waste, http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/local , accessed October 2012 ; Save the Plastic Bag Coalition, <http://savetheplasticbag.com>, accessed December 2012; San Luis Obispo County, Alameda County, City of Oakland, City of San Jose, City of Calabasas, City of Carpinteria, City of Dana Point, City of Fairfax, City of Laguna Beach, City of Palo Alto, City of Los Angeles, County of Los Angeles, City of Malibu, City of Manhattan Beach, City of San Francisco, City of Solana Beach, City of Pasadena, Marin County, City of Santa Monica, Santa Clara County, Santa Cruz County, City of Long Beach, City of Ojai, City of Sunnyvale, City of Millbrae Homepages, December 2012.



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4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the Proposed Ordinance for the specific issue areas that were identified through the Initial Study and NOP process (see Appendix A) as having the potential to experience significant impacts. “Significant effect” is defined by the *CEQA Guidelines* §15382 as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

The assessment of each issue area begins with a discussion of the setting relevant to that issue area. Following the setting is a discussion of the Proposed Ordinance’s impacts relative to the issue area. Within the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria adopted by the County, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential impacts are significant. The next subsection describes each impact of the Proposed Ordinance, mitigation measures for significant impacts, and the level of significance after mitigation. Each impact under consideration for an issue area is separately listed in bold text, with the discussion of the impact and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

Class I, Significant and Unavoidable: An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.

Class II, Significant but Mitigable: An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made.

Class III, Not Significant: An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.

Class IV, Beneficial: A reduction in existing environmental problems or hazards.

Following each environmental impact discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect.

The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the Proposed Ordinance in conjunction with other adopted and pending bag ordinances.



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4.1 AIR QUALITY

This section analyzes the Proposed Ordinance's long-term impacts to local and regional air quality. The analysis focuses on air quality impacts associated with bag manufacturing facilities and truck trips associated with bag distribution. Impacts related to global climate change are addressed in Section 4.3, *Greenhouse Gas Emissions*.

4.1.1 Setting

a. Characteristics of Air Pollutants. Santa Barbara and Ventura Counties are located within the South Central Coast Air Basin (Basin). The Santa Barbara County Air Pollution Control District (SBCAPCD) is the regional government agency that monitors and regulates air pollution within Santa Barbara County, and the Ventura County Air Pollution Control District (VCAPCD) monitors and regulates air pollution in Ventura County. Pollutants that are monitored within the counties and compared to State and Federal Standards include ozone, carbon monoxide, nitrogen dioxide and suspended particulates. The general characteristics of these pollutants are described below.

Ozone. Ozone (O₃) is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG). Nitrogen oxides are formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it occurs in concentrations considered serious primarily between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a colorless, odorless, poisonous gas that is found in high concentrations only near the source. The major source of CO is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO₂) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO₂ absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM₁₀ and acid rain.

Suspended Particulates. PM₁₀ is particulate matter measuring no more than 10 microns in diameter, while PM_{2.5} is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM₁₀ and



PM_{2.5} are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions.

The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates (PM_{2.5}) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body’s mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

b. Air Quality Standards. Federal and state standards have been established for six criteria pollutants: ozone, CO, NO₂, sulfur dioxide (SO₂), PM₁₀, and PM_{2.5}, and lead (Pb). Table 4.1-1 lists the current federal and state standards for criteria pollutants. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

**Table 4.1-1
 Current Federal and State Ambient Air Quality Standards**

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg) 100 ppb (1-hr avg)	0.030 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	75 ppb (1-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 µg/m ³ (30 day avg)	1.5 µg/m ³ (calendar qtr) 0.15 µg/m ³ (rolling 3-month avg)
Particulate Matter (PM ₁₀)	150 µg/m ³ (24-hr avg)	20 µg/m ³ (annual avg) 50 µg/m ³ (24-hr avg)
Particulate Matter (PM _{2.5})	15 µg/m ³ (annual avg) 35 µg/m ³ (24-hr avg)	12 µg/m ³ (annual avg)

ppm= parts per million ppb= parts per billion µg/m³ = micrograms per cubic meter
 Source: California Air Resources Board (2012), www.arb.ca.gov/research/aaqs/aaqs2.pdf

The SBCAPCD and VCAPCD are required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.”



c. Current Air Quality. Several monitoring stations are located throughout Santa Barbara and Ventura Counties. As an example of air quality conditions in the region, the following data was taken from the El Rio-Rio Mesa School #2 monitoring station in Oxnard. Table 4.1-2 indicates the number of days that each of the state and federal air quality standards has been exceeded at the station. As shown, there were some exceedances of federal or state standards for ozone and PM₁₀ from 2009 through 2011.

**Table 4.1-2
 Ambient Air Quality Data**

Pollutant	2009	2010	2011
Ozone, ppm - Worst Hour	0.099	0.083	0.081
Number of days of State exceedances (>0.09 ppm)	1	0	0
Ozone, ppm – Worst 8 Hours	0.077	0.073	0.069
Number of days of State exceedances (>0.070 ppm)	1	1	0
Number of days of Federal exceedances (>0.075 ppm)	1	0	0
Particulate Matter <10 microns, µg/m ³ Worst 24 Hours	99.9	61.5	51.7
Number of samples of State exceedances (>50 µg/m ³)	2	1	1
Number of samples of Federal exceedances (>150 µg/m ³)	0	0	0
Particulate Matter <2.5 microns, µg/m ³ Worst 24 Hours	19.7	21.4	18.3
Number of samples of Federal exceedances (>35 µg/m ³)	0	0	0

*Data collected from the El Rio-Rio Mesa School #2 monitoring station
 Source: CARB, 2009, 2010, & 2011 Air Quality Data Statistics, Top Four Summary, available at
<http://www.arb.ca.gov>*

d. Air Quality Management. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. Santa Barbara County is in non-attainment for the state 8-hour ozone, 1-hour ozone, and PM₁₀ standards. Ventura County is designated as nonattainment for the state and federal 8-hour ozone standard, and the state standards for 1-hour ozone, PM_{2.5}, and PM₁₀ (ARB, December 2012). Both counties are required to prepare plans for improvement.

The Santa Barbara County Clean Air Plan (CAP) was updated in 2010 from its previous update in 2007. The 2010 CAP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2007 CAP. The 2010 CAP was adopted by the SBCAPCD Board of Directors on January 20, 2011. The 2010 CAP was prepared to address both federal and state requirements. The federal requirements pertain to provisions of the Federal Clean Air Act that apply to the City’s current designation as an attainment area for the federal 8-hour ozone standard. Areas that are designated as attainment for the federal 8-hour ozone standard and attainment for the previous federal 1-hour ozone standard with an approved maintenance plan must submit an 8-hour maintenance plan under section 110(a)(1). The California Clean Air Act, under Health and Safety Code sections 40924 and 40925, requires areas to update their clean air



plans every three years with the goal of attaining the state 1-hour ozone standard. The 2010 Plan provides a three-year update to the SBCAPCD's 2007 CAP. The 2010 CAP also includes a climate protection chapter, with an inventory of carbon dioxide emissions in the County. More information on carbon dioxide emissions and climate change can be found in Section 4.6, Greenhouse Gas Emissions.

The 2007 Ventura County Air Quality Management Plan (AQMP) was adopted on May 13, 2008. The AQMP presents control measures intended to bring the County into compliance for 8-hour ozone. The 2007 AQMP also presents the 2003 – 2005 Triennial Assessment and Plan Update required by the California Clean Air Act (CCAA). The goal of the CCAA is to achieve more stringent health-based state air quality standards at the earliest practicable date. Ventura County is designated a severe nonattainment area under the CCAA and must meet many of the most stringent requirements under this act.

e. Air Quality and Bags. Single use bags can affect air quality in two ways: through emissions associated with manufacturing processes and through emissions associated with truck trips for the delivery of carryout bags to retailers. Each is summarized below.

Manufacturing Process. The manufacturing process to make carryout bags requires fuel and energy consumption, which generates air pollutant emissions. These may include particulate matter, nitrogen oxides, hydrocarbons, sulfur oxides, carbon monoxide, and odorous sulfur (Green Cities California MEA, 2010). The level of emissions varies depending on the type and quantity of carryout bags produced. These emissions may contribute to air quality impacts related to acid rain (atmospheric acidification) or ground level ozone formation.

Although manufacturing facilities may emit air pollutants in the production of carryout bags, manufacturing facilities are subject to air quality regulations, as described below, that are intended to reduce emissions sufficiently to avoid violations of air quality standards. For this Program EIR, the analysis is focused on the South Central Coast Air Basin, the air basin in which the Study Area is located.

Truck Trips. Delivery trucks that transport carryout bags from manufacturers or distributors to the local retailers in the Study Area also contribute air emissions locally and regionally. As discussed in the *Transportation* section of the Initial Study (see Appendix A), assuming 2,080,000 plastic bags per truck load (City of Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011) approximately 316 annual truck trips (an average of about 0.87 trips per day) would be needed to deliver the 658,251,406 estimated plastic carryout bags used in the Study Area.

Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material (ARB "Diesel & Health Research", 2011). The visible emissions in diesel exhaust are known as particulate matter, or PM, which are small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures ("hot-spots").

Like manufacturing facilities, delivery trucks are also subject to existing regulations primarily related to diesel emissions, as described in Section f. *Regulations Applicable to Delivery Trucks*. These regulations are intended to reduce emissions associated with fuel combustion.

Ground Level Ozone and Atmospheric Acidification. Various studies have estimated air emissions for the different carryout bags (single use plastic, paper or reusable bags) to determine a per bag emissions rate. In order to provide metrics to determine environmental impacts associated with the Proposed Ordinance, reasonable assumptions based upon the best available sources of information have been established and are utilized in this Program EIR. Specific metrics that compare impacts on a per bag basis are available for single use plastic, single use paper and low-density polyethylene (LDPE) reusable bags. Air pollutant emissions associated with the manufacturing and transportation of one single use paper bag result in 1.9 times the impact on atmospheric acidification as air pollutant emissions associated with one single use plastic bag. On a per bag basis, a reusable carryout bag that is made of LDPE plastic would result in 3 times the atmospheric acidification compared to a single use plastic bag if the LDPE bag is only used one time. In addition, on a per bag basis, a single use paper bag has 1.3 times the impact on ground level ozone formation of a single use plastic bag. Finally, a reusable carryout bag that is made of LDPE plastic and only used one time would result in 1.4 times the ground level ozone formation of a single use plastic bag (Stephen L. Joseph, 2010; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010, City of Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011).

The above statistics use the LDPE carryout bag as a representation of reusable bags in evaluating air quality impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential air pollutant emissions. However, the emissions from all types of reusable bags are lower than single use plastic and paper carryout bags because reusable bags are usually used at least once per week, or 52¹ uses based on one use per week and a one-year lifespan. Thus, the air pollutant emissions from these bags are expected to be comparable to the LPDE bag or lower (Santa Clara County Single use Carryout Bag Initial Study, October 2010).

Table 4.1-3 lists the emissions contributing to ground level ozone and atmospheric acidification using the per-bag impact rates discussed above and the estimated number of existing single use paper and plastic bags used in the Study Area. As shown in Table 4.1-3, the manufacture and transport of single use plastic bags currently used in the Study Area each year generates an estimated 15,140 kilograms (kg) of emissions associated with ground level ozone and 713,534 kg of emissions associated with atmospheric acidification.

¹ This represents a conservative estimate. According to the March 2010 *MEA on Single-use and Reusable Bags*, reusable bags may be used 100 times or more.



**Table 4.1-3
 Current Emissions from Ground Level Ozone and
 Atmospheric Acidification (AA) from Carryout Bags
 In the Study Area¹**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag*	Ozone Emissions (kg) per 1,000 bags**	Ozone Emissions per year (kg)	AA Emission Rate per Bag*	AA Emissions (kg) per 1,000 bags***	AA Emissions per year (kg)
Single use Plastic	658,241,406	1.0	0.023	15,140	1.0	1.084	713,534
Total				15,140	Total		713,534

Source:

* Impact rate per bag as stated in Stephen L. Joseph, 2010; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

** Emissions per 1,000 bags from Ecobilan, 2004; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

*** Emissions per 1,000 bags from FRIDGE, 2002 and Green Cities California MEA, 2010; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

¹ See Appendix D for listing of emissions by each participating municipality.

f. Regulations applicable to Manufacturing Facilities.

EPA Title V Permit. Title V is a federal program designed to standardize air quality permits and the permitting process for major sources of emissions across the country. The name "Title V" comes from Title V of the 1990 federal Clean Air Act Amendments, which requires the EPA to establish a national, operating permit program. Accordingly, EPA adopted regulations [Title 40 of the Code of Federal Regulations, Chapter 1, Part 70 (Part 70)], which require states and local permitting authorities to develop and submit a federally enforceable operating permit programs for EPA approval. Title V only applies to "major sources." EPA defines a major source as a facility that emits, or has the potential to emit (PTE) any criteria pollutant or hazardous air pollutant (HAP) at levels equal to or greater than the Major Source Thresholds (MST). The MST for criteria pollutants may vary depending on the attainment status (e.g. marginal, serious, extreme) of the geographic area and the Criteria Pollutant or HAP in which the facility is located (EPA Title V, December 2008). Carryout bag manufacturing facilities that emit any criteria pollutant or HAP at levels equal to or greater than the MST of the local air quality management district would need to obtain, and maintain compliance with, a Title V permit.

Local Air Quality Management District Equipment Permits. Manufacturing facilities may also be required to obtain permits from the local air quality management district. A local air quality management district permit is a written authorization to build, install, alter, replace, or operate equipment that emits or controls the emission of air contaminants, such as NO_x, CO, PM₁₀, oxides of sulfur (SO_x), or toxics. Permits ensure that emission controls meet the need for the local region to make steady progress toward achieving and maintaining federal and state air quality standards.



The SBCAPCD and VCAPCD, the local air quality management districts serving the Study Area, require operators that plan to build, install, alter, replace, or operate any equipment that emits or controls the emission of air contaminants to apply for, obtain and maintain equipment permits. Equipment permits ensure that operators make steady progress toward achieving and maintaining federal and state air quality standards (as shown in Table 4.1-1). Permits also ensure proper operation of control devices, establish recordkeeping and reporting mechanisms, limit toxic emissions, and control dust or odors. In addition, the SBCAPCD and VCAPCD routinely inspect operating facilities to verify that equipment operates in compliance with their respective rules and regulations.

Regulations applicable to Delivery Trucks.

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. On December 12, 2008, the ARB approved a new regulation to reduce emissions from existing on-road diesel vehicles operating in California. The regulation requires affected trucks and buses to meet performance requirements. Heavier trucks were required to be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023 all vehicles must have a 2010 model year engine or equivalent. The regulation is intended to reduce emissions of diesel PM, oxides of nitrogen and other criteria pollutants (ARB "Truck and Bus Regulation, Updated March 22, 2012). All trucks making deliveries of carryout bags in California will be required to adhere to this regulation.

Diesel-Fueled Commercial Motor Vehicle Idling Limit. The regulation applies to diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. The in-use truck requirements require operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engines when idling more than five minutes at any location within California beginning in 2008 (ARB "Heavy-Duty Vehicle Idling Emission Reduction Program", updated March 2009). The purpose of this airborne toxic control measure is to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. All trucks making deliveries in the Study Area are required to comply with the no-idling requirements.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. The Proposed Ordinance does not include any physical development or construction related activities; therefore, the analysis focuses on emissions related to carryout bag manufacturing processes and truck trips associated with delivering carryout bags to Study Area retailers. Operational emissions associated with truck trips to deliver carryout bags to Study Area retailers were calculated using the using the URBEMIS 2007 v. 9.2.4 computer program (Rimpo and Associates, 2007). The estimate of operational emissions by URBEMIS includes truck trips (assumed to be heavy trucks - 33,000 to 60,000 pounds) and utilizes trip generation rates based on the increase in truck trips resulting from implementation of the Proposed Ordinance.



Based on Appendix G of the *CEQA Guidelines*, the Proposed Ordinance would create a significant air quality impact if it would:

1. *Conflict with or obstruct implementation of the applicable air quality plan*
2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)*
4. *Expose sensitive receptors to substantial pollutant concentrations*
5. *Create objectionable odors affecting a substantial number of people*

The Initial Study (see Appendix A) concluded that only the second and third criteria could be applicable to the project potentially resulting in a significant impact. The Proposed Ordinance would result in no impact with respect to applicable air quality plans, emissions from construction emissions, or odors. Hence, only impacts related to long-term emissions are addressed in this section.

Both the SBCAPCD and VCAPCD have adopted significance thresholds for air pollution emissions. As described in the SBCAPCD *Scope and Content of Air Quality Sections in Environmental Documents* (December 2011), a project will have a significant air quality effect on the environment if operation of the project would:

- *Emit (from all sources, both stationary and mobile) more than 240 lbs/day for ROG and NO_x or more than 80 lbs/day for PM₁₀*
- *Emit more than 25 lbs/day of NO_x or ROG from motor vehicle trips only;*
- *Cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);*

The most recent VCAPCD comprehensive publication regarding air quality assessment is the *Ventura County Air Quality Assessment Guidelines* (October 2003). The VCAPCD's *Air Quality Assessment Guidelines* recommend significance thresholds for projects proposed in Ventura County. Under these guidelines, projects that generate more than 25 lbs per day of ROG or NO_x are considered to jeopardize attainment of the federal ozone standard and thus have a significant adverse impact on air quality. The VCAPCD has not established quantitative thresholds for particulate matter.

Both VCAPCD and SBCAPCD have a significance threshold of 25 lbs per day for ROG or NO_x. The SBCAPCD has a threshold of 80 lbs/day for PM₁₀ while the VCAPCD does not have a threshold for PM₁₀. Neither air district has a threshold for PM_{2.5}. Therefore, for this Program EIR, BEACON has determined that 25 lbs/day of ROG or NO_x and 80 lbs/day of PM₁₀ to be most appropriate thresholds for use to determine air quality impacts of the Proposed Ordinance.

The Proposed Ordinance would result in a significant impact if emissions associated with implementation of the Ordinance would exceed any of the following thresholds:



- 25 pounds per day of ROG
- 25 pounds per day of NO_x
- 80 pounds per day of PM₁₀

b. Project Impacts and Mitigation Measures.

Impact AQ-1 **With a shift toward reusable bags, the Proposed Ordinance is expected to substantially reduce the number of single use carryout bags, thereby reducing the total number of bags manufactured and the overall air pollutant emissions associated with bag manufacture, transportation and use. Therefore, air quality impacts related to alteration of processing activities would be Class IV, beneficial.**

The intent of the Proposed Ordinance is to reduce the environmental impacts of single use carryout bags. The Proposed Ordinance would reduce the number of single use carryout bags that are manufactured and used in the Study Area and would increase the number of ~~recycled~~ recyclable paper and reusable bags manufactured and used in the Study Area compared to existing conditions.

As described in the *Setting*, on a per bag basis, emissions associated with single use paper bag production and transportation are equivalent to 1.9 times the impact on atmospheric acidification as the production and transportation of a single use plastic bag. On a per bag basis, the production and transportation of a reusable carryout bag that is made of LDPE plastic results in three times the atmospheric acidification of the production and transportation of a single use plastic bag. Reusable bags may be made of various materials other than LDPE, including cloths such as cotton or canvas. However, because LDPE reusable bags are ~~one of the most~~ common types of reusable bags and are of similar durability and weight (approximately 50 to 200 grams) as other types of reusable bags, this Program EIR utilizes the best available information regarding specific metrics on a per bag basis to disclose environmental impacts associated with the Proposed Ordinance. The emissions from all types of reusable bags are lower than single use plastic and paper carryout bags because reusable bags are usually used at least once per week, or 52² uses per year. On a per bag basis, the production and transportation of a single use paper bag has 1.3 times the impact on ground level ozone formation compared to the production and transportation of a single use plastic bag and the production and transportation of a reusable carryout bag that is made of LDPE plastic would result in 1.4 times the ground level ozone formation compared to the production and transportation of a single use plastic bag (Stephen L. Joseph, 2010; FRIDGE, 2002; and Green Cities California MEA, 2010).

Each individual reusable bag results in greater impacts to ground level ozone formation and atmospheric acidification than each individual use plastic bag on a per bag basis; however, unlike single use plastic bags, reusable carryout bags are intended to be used multiple times (estimated to be at least 52 uses).³ Therefore, fewer total carryout bags would need to be manufactured and transported as a shift toward the use of reusable bags occurs. As described in

² This represents a conservative estimate. According to the March 2010 *MEA on Single-use and Reusable Bags*, reusable bags may be used 100 times or more.

³ For the purposes of this analysis, it is assumed that reusable bags would be used once per week for a year, or 52 times, before being replaced.



Section 2.0, *Project Description*, retail establishments making paper carryout bags available would be required to sell recyclable paper carryout bags that are made with a minimum 40% post-consumer recycled content to customers for \$0.10 per bag. This mandatory charge would create a disincentive to customers to request single use paper bags when shopping at regulated stores and is intended to promote a shift toward the use of reusable bags by consumers in the Study Area. This analysis assumes that as a result of the Proposed Ordinance, 95% of the volume of plastic bags currently used in the Study Area would be replaced by ~~recycled~~ recyclable paper bags (approximately 30%) and reusable bags (approximately 65%) and 5% of the existing single use plastic bags would remain in use (see Section 2.5 and Table 2.2 in Section 2.0, *Project Description*).

No known manufacturing facilities of carryout bags are located within the South Central Coast Air Basin. Nevertheless, for a conservative estimate, emissions associated with both manufacturing and transportation of carryout bags to retailers within the Study Area are estimated in this Program EIR.

Table 4.1-4 estimates post-Ordinance air pollutant emissions from bag manufacturing and transportation that contribute to the development of ground level ozone and atmospheric acidification. As shown, the increased use of reusable carryout bags in the Study Area would reduce emissions that contribute to ground level ozone by approximately 8,915 kg per year (a 54% decrease) and would reduce emissions that contribute to atmospheric acidification by approximately 244,306 kg per year (a 34% decrease).

As discussed in the *Setting*, air pollutant emissions from manufacturing facilities are regulated under the Clean Air Act and would be subject to requirements by the local air quality management district (the SBCAPCD or VCAPCD). Both paper bag manufacturing facilities and reusable carryout bag manufacturing facilities that emit any criteria pollutant or hazardous air pollutant (HAP) at levels equal to or greater than the Major Source Thresholds (MST) of the local air quality management district would need to obtain and maintain compliance with a Title V permit. Adherence to permit requirements would ensure that a manufacturing facility would not violate any air quality standard. Manufacturing facilities would also be required to obtain equipment permits for emission sources through the local air quality management district which ensures that equipment is operated and maintained in a manner that limits air emissions in the region. Compliance with applicable regulations would ensure that manufacturing facilities would not generate emissions conflicting with or obstructing implementation of the applicable air quality plan, violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant.

**Table 4.1-4
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Carryout Bags in Study Area**

Bag Type	# of Bags Used per Year*	Ozone Emission Rate per Bag**	Ozone Emissions (kg) per 1,000 bags***	Ozone Emissions per year (kg)	AA Emission Rate per Bag**	AA Emissions (kg) per 1,000 bags****	AA Emissions per year (kg)
Single use Plastic	32,912,070	1.0	0.023	757	1.0	1.084	35,677
Single use Paper	197,472,422	1.3	0.03	5,924	1.9	2.06	406,793
Reusable	8,228,018	1.4	0.032	263	3.0	3.252	26,758
Total				6,944	Total		469,227
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				(8,195)	Net Change		(244,306)

Source:

* Refer to Table 2.2 in Section 2.0, Project Description.

** Impact rate per bag as stated in Stephen L. Joseph, 2009; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

*** Emissions per 1,000 bags from Ecobilan, 2004; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

**** Emissions per 1,000 bags from FRIDGE, 2002 and Green Cities California MEA, 2010; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

See Appendix D for emissions for each individual municipality

As shown in Table 4.1-4, the Proposed Ordinance would reduce emissions that contribute to ozone formation and atmospheric acidification. Therefore, the Proposed Ordinance would have a beneficial effect in this regard.

Mitigation Measures. Mitigation is not necessary as impacts would be beneficial.

Significance After Mitigation. The impact would be beneficial without mitigation.

Impact AQ-2 With an expected increase in the use of recyclable paper and reusable carryout bags, the Proposed Ordinance would generate air pollutant emissions associated with an incremental increase in truck trips to deliver recycled ~~recycled~~ recyclable paper and reusable carryout bags to local retailers. However, emissions would not exceed SBCAPCD or VCAPCD operational significance thresholds. Therefore, operational air quality impacts would be Class III, less than significant.



Long-term post-Ordinance emissions would include those emissions associated with truck trips to deliver carryout bags (~~recycled~~ recyclable paper and reusable) from manufacturing facilities or distributors to the Study Area retail establishments. The URBEMIS computer program was used to calculate mobile emissions resulting from the number of trips generated by the Proposed Ordinance. Trip generation rates were taken from the traffic analysis contained in the *Transportation* section of the Initial Study (see Appendix A), which estimates that the change in truck traffic as a result of the Proposed Ordinance would be a net increase of 1.87 truck trips per day. Emissions associated with such truck trips are summarized in Table 4.1-5.

**Table 4.1-5
 Operational Emissions Associated with Truck Delivery
 Trips Generated by the Proposed Ordinance**

Emission Source	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Total Emissions	0.08	0.41	0.04
<i>Thresholds</i>	<i>25</i>	<i>25</i>	<i>80</i>
Threshold Exceeded?	No	No	No

Source: URBEMIS version 9.2.4 calculations for Truck Trips. See Appendix D for calculations

As indicated in Table 4.1-6, daily ROG emissions are estimated at 0.08 pounds, daily NO_x emissions are estimated at approximately 0.41 pounds, daily PM₁₀ emissions would be approximately 0.04 pounds. The incremental increases in ROG, NO_x, and PM₁₀ emissions associated with the truck deliveries would be substantially less than the SBCAPCD and VCAPCD thresholds of 25 pounds per day of ROG, and NO_x, and 80 pounds per day of PM₁₀. Because long-term emissions would not exceed SBCAPCD or VCAPCD thresholds, impacts would not be significant.

Mitigation Measures. Operational emissions associated with the increase in truck traffic as a result of the Proposed Ordinance would not exceed SBCAPCD or VCAPCD thresholds. Therefore, mitigation is not required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Adopted and pending carryout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single use carryout bags, and promote a shift toward reusable carryout bags. Similar to the Proposed Ordinance, such ordinances would be expected to generally reduce the overall number of bags manufactured and associated air pollutant emissions, while existing and future manufacturing facilities would continue to be subject to federal and state air pollution regulations (see the *Setting* for discussion of applicable regulations). Similar to the Proposed Ordinance, other adopted and pending ordinances would also be expected to incrementally change the number



of truck trips associated with carryout bag delivery and associated emissions. In the South Central Coast Air Basin, the cities of Ojai and Carpinteria have adopted such ordinances. However, based on the incremental increase in air pollutant emissions associated with the Proposed Ordinance (increase of one half of a pound per day or less of each criteria pollutant), the other ordinances are not expected to generate a cumulative increase in emissions that would exceed SBCAPCD or VCAPCD thresholds or adversely affect regional air quality. Moreover, the increase in truck trips to deliver reusable bags would be at least partially offset by a reduction in trips to deliver single use plastic bags. Therefore, cumulative air quality impacts would not be significant.



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4.2 BIOLOGICAL RESOURCES

This section analyzes the Proposed Ordinance's impacts to biological resources. Both direct impacts associated with the Proposed Ordinance and indirect impacts to off-site biological resources are addressed.

4.2.1 Setting

a. Terrestrial Habitat. The Proposed Ordinance would apply to the geographical limits of unincorporated Santa Barbara and Ventura Counties or any of the following incorporated jurisdictions within both Counties: Buellton, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, Solvang, Camarillo, Fillmore, Moorpark, Oxnard, Port Hueneme, Santa Paula, Simi Valley, Thousand Oaks, and Ventura (the "Study Area").

Santa Barbara County encompasses 2,739 square miles and is bounded by San Luis Obispo County to the north, Ventura County to the east, Kern County to the northeast, and the Pacific Ocean to the south and the west. The coastal zone spans 110 miles of coastline and includes approximately 184 square miles. Santa Barbara County is topographically diverse and its' shorelines, coastal dunes, bluffs, and terraces give way to interior valleys, foothills, and mountains. There are two main river valleys formed by the Santa Maria and Santa Ynez rivers. The primary habitat types found within the County are wetlands, oak woodland, riparian woodland, grassland, chaparral, and coastal sage scrub. Freshwater habitats include vernal pools, Zaca Lake, freshwater marshes and marine intertidal zones.

Ventura County encompasses approximately 1,843 square miles and is bounded by Los Angeles County to the west, Kern County to the north, Santa Barbara County to the east, and the Pacific Ocean to the south. In Ventura County, agricultural and urban development is confined to the fertile valleys and plains, and along the coastline. The diverse topography and climate of Ventura County provide an environment where a range of vegetation communities (from Coastal sage-scrub to subalpine forest, from desert chaparral to riparian woodland) can maintain successful populations. Native vegetation in Ventura County can be categorized into seven general plant communities: grasslands, coastal sage-scrub, chaparral, oak woodland, riparian, pinyon-juniper, and timber-conifer. The naturally vegetated areas of the County provide shelter, food, and nesting areas to create habitats for a wide variety of animal species including rodents, reptiles, raptors, foxes, deer, and bears. Other habitat types in Ventura County include coastal wetlands, lagoons, rivers, and creeks such as the Sespe Creek. Habitat within the coastal zone of Ventura County includes coastal waters, intertidal areas, estuaries, lakes, wetlands, and sand dunes.

b. Special Status Species. Fish and wildlife resources are numerous and diverse due to the wide variety of habitats contained in Santa Barbara County and Ventura County, including wetlands and marshes, sensitive ecological communities, and the Pacific Ocean. The coastal wetlands and lagoons found along the south coast of Ventura County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area.

The Goleta Slough habitat (which includes mudflats, tidal channels, and channel bank microhabitats) in Santa Barbara County supports a larger and more diverse fauna and flora than do any of the other three sloughs or closed bays in the County (Surf, Devereux, and Carpinteria). The Goleta Slough is a major resting point for migratory water-fowl using the Pacific Flyway, with approximately 26 resident bird species and several more nesting summer species. The Black Rail, the light-footed Clapper Rail, and the Belding's Race of the Savanna Sparrow, all rare and endangered birds, may be among the resident species.

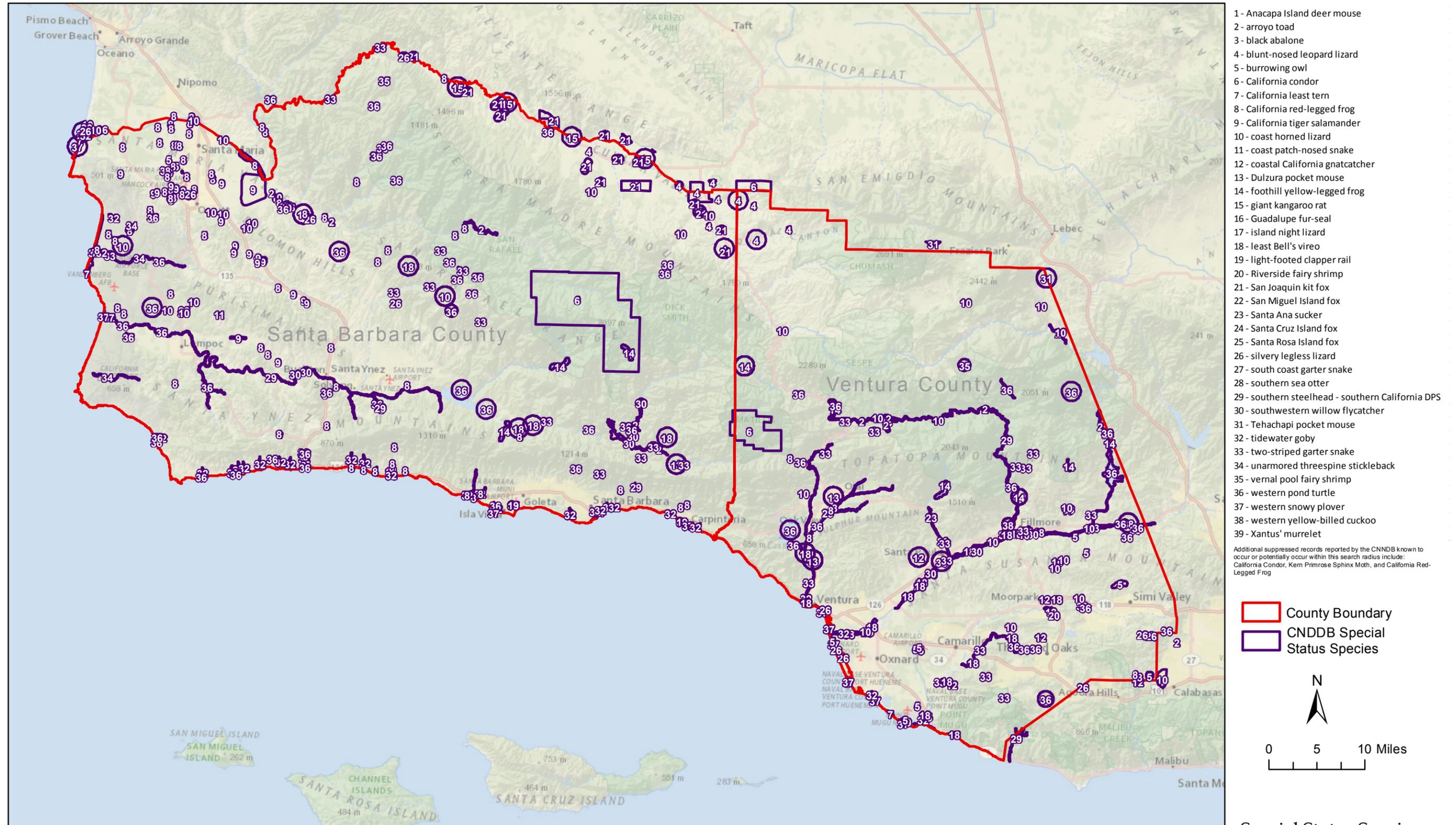
The Study Area is host to numerous species of plants and animals that are *endangered*, *threatened*, *rare*, or considered to be a *candidate species* for one of those designations, including Santa Cruz Island bird's-foot trefoil, the California Condor, the Southern Rubber Boa, the California Least Tern, and the Tidewater Goby. Several special status plant and animal species are known to occur within the marine and nearshore environment throughout the Study Area and have the potential to occur where suitable habitat is present. These include western pond turtle (*Emys marmorata*), western snowy plover (*Charadrius alexandrinus nivosus*), California red-legged frog (*Rana draytonii*), steelhead (*Oncorhynchus mykiss irideus*), Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), and Coastal California gnatcatcher (*Polioptila californica californica*). Furthermore, Northern Coastal Salt Marsh, a sensitive natural community, has been documented along the shore of the Study Area.

While the coastal and marine habitat of the Pacific Ocean has been altered due to human disturbance, a number of additional sensitive species have the potential to occur in these environments. Sensitive species as listed on the California Natural Diversity Database (CNDDDB) and the U.S. Fish and Wildlife Service (USFWS), which may inhabit the coastal and marine environment, are listed in Table 4.2-1 on the following page. Figure 4.2-1 shows the locations of special-status species documented in the Study Area, as listed on the CNDDDB. Figure 4.2-2 shows the locations of critical habitat within the Study Area.

c. Carryout Bags and Biological Resources. Carryout bags can affect biological resources as a result of litter that enters the storm drain system and ultimately coastal and marine environments.

Single use plastic carryout bags enter the biological environment primarily as litter. This can adversely affect terrestrial animal species, and marine species that ingest the plastic bags (or the residue of plastic bags) or become tangled in the bag (Green Cities California MEA, 2010). Based on the data collected for the Ocean Conservancy's Report from September 2009 Ocean Conservancy's International Coastal Cleanup Day, approximately 11% of total debris items collected were plastic bags (Ocean Conservancy, April 2010). Over 260 species of wildlife, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris. Ingestion or entanglement may result in impaired movement and feeding, reduced productivity, lacerations, ulcers, and death (Laist, 1997; Derraik and Gregory, 2009). Ingested plastic bags affect wildlife by clogging animal throats and causing choking, filling animal stomachs so that they cannot consume real food, and infecting animals with toxins from the plastic (Green Cities California MEA, 2010). In addition to affecting wildlife through physical entanglement and ingestion, plastic debris in the marine environment has been known to absorb and transport polychlorinated biphenyls (PCBs), phthalates, and certain classes of persistent organic pollutants (POPs) (Mato, Y., Isobe, T., Takada, H., et al., 2001; and, Moore, C.J.; Lattin, G.L., A.F. Zellers., 2005).

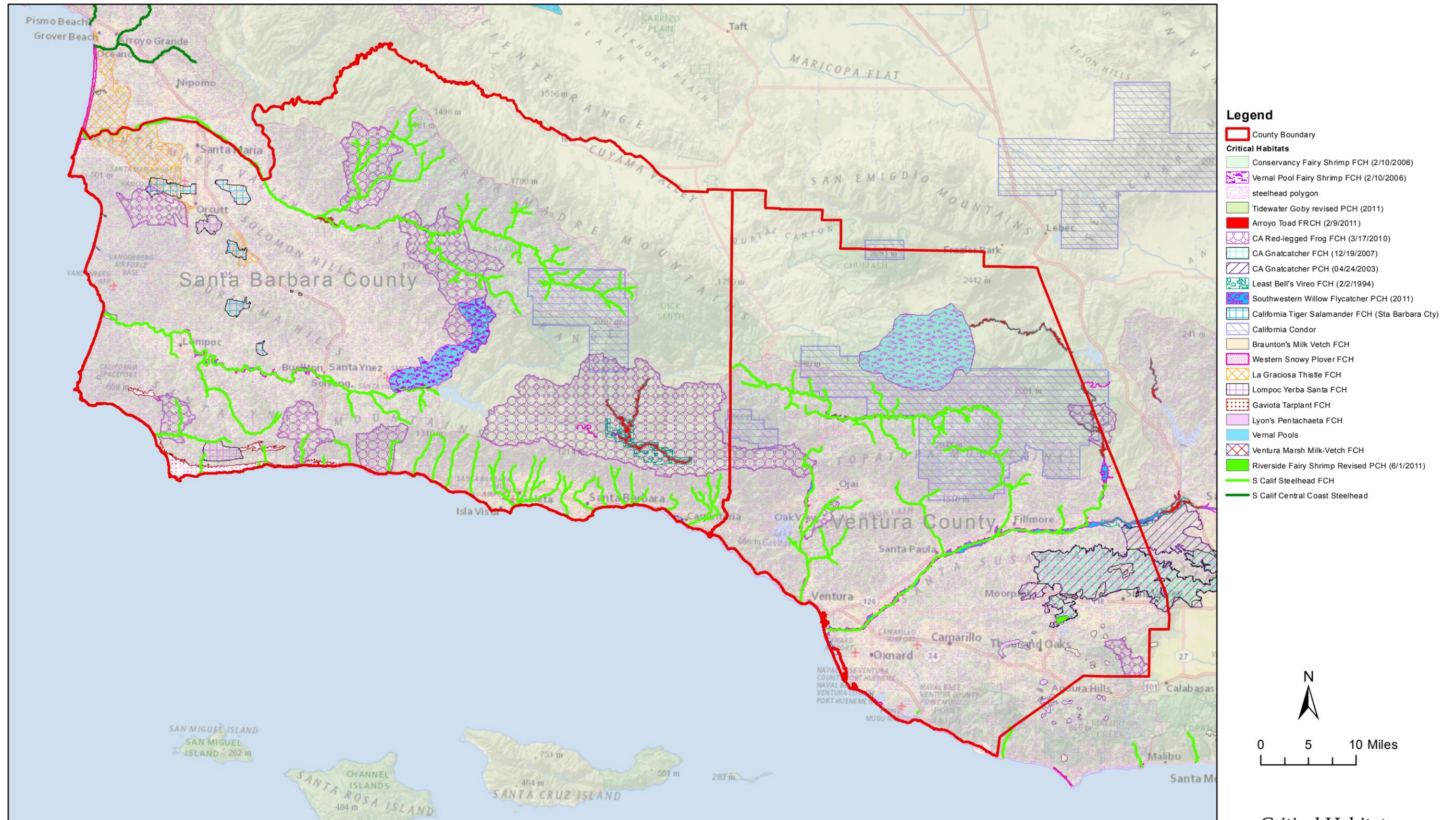




Basemap: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC, California Natural Diversity Database, December, 2012.

Special Status Species
 in the Study Area

Figure 4.2-1



Basemap: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC, U.S. Fish and Wildlife Service, January, 2013. Critical habitat shown is that most recently available from U.S. FWS. Check with U.S. FWS or Federal Register to confirm.

Critical Habitat
 in the Study Area

Figure 4.2-2
 BEACON

Single use paper carryout bags are also released into the environment as litter. However, they generally have less impact on wildlife because they are not as resistant to breakdown as plastic; therefore, they are less likely to cause entanglement. ~~In addition, although not a healthy food source, if single use paper bags are ingested, they can be chewed effectively and may be digested by many animals.~~

Reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to single use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 52 times, reusable bags would be disposed of less often than single use carryout bags. As such, reusable bags are less likely to enter the marine environment as litter, when compared to single use plastic or paper bags.

**Table 4.2-1
 Coastal/Marine Special-Status Species**

Scientific Name	Common Name	Current Federal/State Status
Reptiles		
<i>Salvadora hexalepis virgulata</i>	Coast patched-nose snake	-/SSC
<i>Thamnophis hammondi</i>	Two-striped garter snake	-/SSC
<i>Thamnophis sirtalis ssp.</i>	South coast garter snake	-/SSC
<i>Anniella pulchra pulchra</i>	Silvery legless lizard	-/SSC
<i>Emys marmorata</i>	Western pond turtle	-/SSC
<i>Gambelia sila</i>	Blunt-nosed leopard lizard	FE/SE
<i>Phrynosoma blainvillii</i>	Coast horned lizard	-/SSC
<i>Xantusia riversiana</i>	Island night lizard	FT/-
Amphibians		
<i>Rana draytonii</i>	California red-legged frog	FT/SSC
<i>Ambystoma californiense</i>	California tiger salamander	FT/ST/SSC
<i>Rana boylei</i>	Foothill yellow-legged frog	-/SSC
<i>Anaxyrus californicus</i>	Arroyo toad	FE/SSC
Birds		
<i>Gymnogyps californianus</i>	California condor	FE/SE
<i>Charadrius alexandrinus nivosus</i>	Western Snowy plover	FT/SSC
<i>Sternula antillarum browni</i>	California least tern	FE/SE
<i>Athene cunicularia</i>	Burrowing owl	-/SSC



**Table 4.2-1
 Coastal/Marine Special-Status Species**

Scientific Name	Common Name	Current Federal/State Status
<i>Poliioptila californica californica</i>	Coastal California gnatcatcher	FT/SSC
<i>Brachyramphus marmoratus</i>	Marbled murrelet	FT
<i>Synthliboramphus hypoleucus</i>	Xantus' murrelet	FC/ST
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE/SE
<i>Rallus longirostris levipes</i>	Light-footed clapper rail	FE/SE
<i>Empidonax traillii extimus</i>	Southwestern willow fly-catcher	FE/SE
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC/SE
Crustaceans		
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/-
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT/-
Fish		
<i>Gasterosteus aculeatus williamsoni</i>	Unarmored Threespine stickleback	FE/SE
<i>Oncorhynchus mykiss irideus</i>	Southern Steelhead	FE/SSC
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE/SSC
Mammals		
<i>Enhydra lutris nereis</i>	Southern sea otter	FT/MMPA
<i>Arctocephalus townsendi</i>	Guadalupe fur seal	FT/ST/MMPA
<i>Perognathus alticolus inexpectatus</i>	Tehachapi pocket mouse	-/SSC
<i>Peromyscus maniculatus anacapae</i>	Anacapa Island deer mouse	-/SSC
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	-/SSC

FT = Federally Threatened
 FC = Federally listed as Candidate species
 SSC = California Species of Special Concern
 FE = Federally Endangered
 SE = California Endangered
 ST = California Threatened
 MMPA = Protected by the Marine Mammal Protection Act
 - = no status but included in Rarefind database as deserving of concern

d. Regulatory Setting. Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions. The California Department of Fish and Wildlife (formerly California Department of Fish and Game) (CDFW) is a trustee agency for biological resources throughout the state



under CEQA and also has direct jurisdiction under the California Fish and Game Code (CFGC). Under the State and Federal Endangered Species Acts, the CDFW and the USFWS also have direct regulatory authority over species formally listed as Threatened or Endangered. The U.S. Department of Army Corps of Engineers (USACE) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the federal Clean Water Act (CWA). The USACE also has jurisdiction over rivers and harbors through Section 10 of the CWA. Waters of the State fall under the jurisdiction of the CDFW through the CFGC and the Regional Water Quality Control Board (RWQCB) through Section 401 of the CWA. The RWQCB also has jurisdiction over isolated waters and wetlands through the Porter-Cologne Water Quality Control Act.

~~Some P~~plants or animals ~~have~~ are given “special status” due to declining populations, vulnerability to habitat change, or restricted distributions. Special-status species are classified in a variety of ways, both formally (e.g. State or Federally Threatened and Endangered Species) and informally (“Special Animals”). The USFWS and the National Marine Fisheries Service (NMFS) share responsibility for implementation of the federal Endangered Species Act, with the USFWS focused on terrestrial and freshwater species and the NMFS focused on marine species. The USFWS is also responsible for regulation of bird species listed under the Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

The CDFW protects a wide variety of special status species through the CFGC. Under the CFGC, species may be formally listed and protected as Threatened or Endangered through the California Endangered Species Act (Fish and Game Code Section 2050 *et. seq.*). The CFGC also protects Fully Protected species, California Species of Special Concern (CSC), all native bird species (Fish and Game Code sections 3503, 3503.5, and 3511), and rare plants under the Native Plant Protection Act (Fish and Game Code Section 1900 *et seq.*).

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. Chapter 1, Section 21001(c) of CEQA states that it is the policy of the state of California to: “Prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing checklist questions from the *CEQA Guidelines* and federal, state, and local plans, regulations, and ordinances. Project impacts to flora and fauna may be determined to be significant even if they do not directly affect rare, threatened, or endangered species.

The Proposed Ordinance would create a significant impact to biological resources if it would:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (formerly Department of Fish and Game) or U.S. Fish and Wildlife Service*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the*



- California Department of Fish and Wildlife (formerly Department of Fish and Game) or U.S. Fish and Wildlife Service*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means*
 4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites*
 5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*
 6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan*

The Initial Study (see Appendix A) concluded that only the first criterion could potentially result in a significant impact, while the Proposed Ordinance would result in no impact with respect to the second through sixth criteria. Hence, only the first criterion (direct and indirect impacts to sensitive species and/or their habitat) is addressed in Impact BIO-1.

b. Project Impacts and Mitigation Measures.

Impact BIO-1 **The Proposed Ordinance would incrementally increase the number of ~~recycled~~ recyclable paper and reusable bags within the Study Area. However, the reduction in the amount of single use plastic bags would be expected to reduce the overall amount of litter entering the creeks and coastal habitat, thus reducing litter-related impacts to sensitive wildlife species and sensitive habitats. This is a Class IV, beneficial, effect.**

The Proposed Ordinance would not include any physical activities that would result in direct biological impacts. The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags within the Study Area, which includes unincorporated Santa Barbara and Ventura counties and the 16 incorporated jurisdictions within both counties that are within the Study Area (see the Project Location list in Section 2.0, *Project Description*).¹ The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use plastic bags, and to promote a shift toward the use of reusable bags. It is anticipated that by prohibiting single use plastic carryout bags and requiring a mandatory charge for each paper bag distributed by retailers, the Proposed Ordinance would provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single use plastic and paper bags within the Study Area.

All carryout bags, including single use plastic, paper, and reusable bags, have the potential to affect local creeks and coastal habitats, such as the Pacific Ocean, when improper disposal of

¹ The 16 Study Area jurisdictions do not include Ojai and Carpinteria, which have already adopted carryout bag ordinances.



bags occurs. These bags can become litter that enters the storm drain system and ultimately enters into creeks/rivers and eventually coastal and marine environments. As described above in the *Setting*, litter that enters coastal habitats can adversely affect sensitive species that inhabit coastal and marine environments, including sea turtles, seals, fish, otters, or bird species as a result of ingestion or entanglement. However, each type of carryout bag's potential to become litter varies and is based on the number of bags disposed of as well as the bag's weight and material.

As described in Section 2.0, *Project Description*, typical single use plastic carryout bags are made from petroleum or bio-based plastic (typically made of thin, lightweight high density polyethylene (HDPE)), are less than 2.25 mils (0.00225 inches) thick, and weigh approximately five to nine grams. Post-use from a retail store, a customer may reuse a single use plastic bag at home, but eventually the bags are disposed of in the landfill, recycling facility, or discarded as litter. Although some recycling facilities handle plastic bags, most reject them because they can get caught in the machinery and cause malfunctioning, or are contaminated after use. Only about 5% of the plastic bags in California are currently recycled (US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007). The majority of single use plastic bags end up in a landfill or as litter. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single use plastic bags that become litter can enter storm drains and watersheds from surface water runoff or may be blown directly into the ocean by the wind.

As described in the *Setting*, when single use plastic bags enter coastal habitats marine species can ingest them (or the residue of plastic bags) or may become entangled in the bag (Green Cities California MEA, 2010). Ingestion or entanglement in single use plastic bags can result in choking, reduced productivity, lacerations, ulcers, and death to sensitive species in the marine environment, including sea turtles, seals, fish, otters, or bird species.

Single use paper carryout bags also have the potential to enter the marine environment as litter. Paper grocery bags are typically produced from kraft paper and weigh anywhere from 50 to 100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). A paper bag weighs approximately 90% more (approximately 45 to 90 grams) than single use plastic bags. Because of their weight and recyclability, single use paper bags are less likely to become litter compared to single use plastic bags (Green Cities California MEA, 2010). In addition, because single use paper bags are not as resistant to biodegradation, there would be less risk of entanglement if paper bags enter the marine environment compared to single use plastic bags. Finally, although not a healthy food source, if ingested, a single use paper bag can be chewed effectively and may be digested by many marine animals (Green Cities California MEA, 2010). Thus, although single use paper bag litter may enter coastal habitats and affect sensitive species in the marine environment, the impacts of paper bags would be less than those of single use plastic bags.

Reusable bags may also become litter and enter the marine environment; however, these bags differ from single use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloths such as vinyl or cotton. Built to withstand many uses, reusable bags weigh at least ten times what an HDPE plastic bag weighs and two times what a paper bag weighs, therefore restricting the movement by wind (ExcelPlas Australia, 2004; City of Pasadena, 2008). Reusable bags are typically reused until worn out through washing or

multiple uses, and then typically disposed either in the landfill or recycling facility. Because of the weight and sturdiness of these bags, reusable bags are less likely to become litter or to be carried from landfills by wind compared to single use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used 100 times or more (Green Cities California MEA, 2010), they would be disposed of less often than single use carryout bags. As such, reusable bags are less likely to enter the marine environment as litter and would generally be expected to result in fewer impacts to sensitive species than single use plastic or paper carryout bags.

The Proposed Ordinance would reduce plastic bag usage by approximately 95% compared to existing conditions (from approximately 658 million to approximately 33 million bags annually), and would reduce total bag use by approximately 64% (to approximately 239 million plastic, single use paper, and reusable bags). This reduction in bags would be expected to generally reduce litter-related impacts to sensitive species. Therefore sensitive species such as sea turtles, mammals, and bird species would benefit from the Proposed Ordinance, which would reduce the amount of litter that could enter the marine environment. Impacts would be beneficial.

Mitigation Measures. As the impact would be beneficial, no mitigation is required.

Significance After Mitigation. Impacts to sensitive species as a result of the Proposed Ordinance would be beneficial without mitigation.

c. Cumulative Impacts. Adopted and pending carryout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single use carryout bags, and promote a shift toward reusable carryout bags. This shift would generally have beneficial effects with respect to sensitive biological resources. Other agencies in the region (including the cities of Ojai, Carpinteria, and Malibu, and the County of Los Angeles) have either adopted or are considering such ordinances. Similar to the Proposed Ordinance, these other adopted and pending ordinances could incrementally reduce the number of plastic bags entering the environment, including in creeks/rivers and the Pacific Ocean, as litter. These other ordinances would be expected to have similar beneficial effects. Therefore, there would be no significant adverse cumulative impacts to biological resources.

4.3 GREENHOUSE GAS EMISSIONS

This section analyzes the Proposed Ordinance's impacts related to climate change. The analysis focuses on manufacturing, transportation and disposal of carryout bags, as well as energy use related to washing reusable bags, as these are the largest contributors to greenhouse gas emissions.

4.3.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2007), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (90% or greater chance) that the global average net effect of human activities since 1750 has been one of warming. The prevailing scientific opinion on climate change is that most of the observed increase in global average temperatures, since the mid-20th century, is likely due to the observed increase in anthropogenic GHG concentrations (IPCC, 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as surface water and oceanic evaporation.

Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and sulfur hexafluoride (SF₆) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent"



(CO₂E), and is the amount of a GHG emitted multiplied by its GWP. CO₂ has a GWP of one. By contrast, CH₄ has a GWP of 21, meaning its global warming effect is 21 times greater than CO₂ on a molecule per molecule basis (IPCC, 1997).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, Earth's surface would be about 34° C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO₂ are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [USEPA], April 2011). CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th Century. Concentrations of CO₂ in the atmosphere have risen approximately 40% since the industrial revolution. The global atmospheric concentration of CO₂ has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO₂ concentration growth rate was larger during the last 10 years (1995–2005 average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO₂ represents an estimated 82.8% of total GHG emissions based on Global Warming Potential (Department of Energy [DOE] Energy Information Administration [EIA], August 2010). The largest source of CO₂, and of overall GHG emissions, is fossil fuel combustion.

Methane. CH₄ is an effective absorber of radiation, though its atmospheric concentration is less than that of CO₂ and its lifetime in the atmosphere is limited to 10 to 12 years. It has a global warming potential (GWP) approximately 21 times that of CO₂. Over the last 250 years, the concentration of CH₄ in the atmosphere has increased by 148% (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH₄ include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (USEPA, April 2011).

Nitrous Oxide. Concentrations of nitrous oxide (N₂O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N₂O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N₂O emissions. N₂O's GWP is approximately 310 times that of CO₂.

Fluorinated Gases (HFCS, PFCS and SF₆). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and SF₆, are powerful GHGs that are emitted from a variety of



industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF₆ emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO₂, CH₄, and N₂O, but these compounds have much higher GWPs. SF₆ is the most potent GHG the IPCC has evaluated.

State Greenhouse Gas Inventory. Worldwide anthropogenic emissions of GHG were approximately 40,000 million metric tons (MMT) CO₂E in 2004, including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (i.e., deforestation, biomass decay) (IPCC, 2007). CO₂ emissions from fossil fuel use accounts for 56.6% of the total emissions of 49,000 million metric tons CO₂E (includes land use changes) and all CO₂ emissions are 76.7% of the total. Methane emissions account for 14.3% of GHG and N₂O emissions account for 7.9% (IPCC, 2007).

Total U.S. GHG emissions were 6,633.2 million metric tons CO₂E in 2009 (USEPA, April 2011). While total U.S. emissions have increased by 7.3% from 1990 to 2009, emissions decreased from 2008 to 2009 by 427.9 million metric tons CO₂E, or 6.1% (DOE EIA, Table 12.1, August 2010). This decrease was primarily due to: (1) a decrease in economic output resulting in a decrease in energy consumption across all sectors; and (2) a decrease in the carbon intensity of fuels used to generate electricity due to fuel switching as the price of coal increased, and the price of natural gas decreased substantially. Since 1990, U.S. emissions have increased at an average annual rate of 0.4%. The transportation and industrial end-use sectors accounted for 33% and 26%, respectively, of CO₂ emissions from fossil fuel combustion in 2009. Meanwhile, the residential and commercial end-use sectors accounted for 22% and 19%, respectively, of CO₂ emissions from fossil fuel combustion in 2009 (USEPA, 2011).

Based upon the California Air Resources Board (ARB) *California Greenhouse Gas Inventory for 2000-2009* (ARB, 2011), California produced 453 MMT CO₂E in 2009. The major source of GHG in California is transportation, contributing 38% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 23% of the state's GHG emissions (ARB, June 2011). California emissions are due in part to its large size and large population compared to other states. Another factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. ARB has projected statewide unregulated GHG emissions for the year 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, will be 596 MMT CO₂E (ARB, 2007).

b. Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Scientists have projected that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and the increase may be as high as 2.2-10°F (1.4-5.8°C) in the next century. In addition to these projections, there are



identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Sea Level Rise. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The study identifies a sea level rise on the California coast over the past century of approximately eight inches. Based on the results of various global climate change models, sea level rise is expected to continue. The California Climate Adaptation Strategy (December 2009) estimates a sea level rise of up to 55 inches by the end of this century.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC March, 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050.



Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a \$30 billion agricultural industry that produces half of the country's fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith, 2004).

While the above-mentioned potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general scientific modeling tools are currently unable to predict what impacts would occur locally with a similar degree of accuracy. In general, regional and local predictions are made based on downscaling statewide models (CEC, March 2009).

c. Greenhouse Gas Emissions from Carryout Bags. Carryout bags have the potential to contribute to the generation of GHGs either through emissions associated with manufacturing process, truck trips delivering carryout bags to retailers, through disposal during landfill degradation, or through energy use for washing. Each is summarized below.

Manufacturing Process. The manufacturing process to make carryout bags requires fuel and energy consumption. This creates GHG emissions, including CO₂, CH₄, N₂O_x, fluorinated gases, and ozone. In addition, fertilizers that are used on crops for resources such as cotton or pulp, which are then utilized in the manufacture of carryout bags, also have the potential to

emit N₂O_x. The amount of GHG emissions varies depending on the type and quantity of carryout bags produced. Compared to truck trips and disposal, the manufacturing process is the largest emitter of GHGs due to the high volume of fuel and energy consumption that is used during the process.

Truck Trips. Delivery trucks that transport carryout bags from manufacturers or distributors to Study Area local retailers also create GHG emissions. GHG emissions from truck trips result primarily from the combustion of fossil fuels and include CO₂, CH₄, and N₂O. As discussed in the *Transportation* section of the Initial Study (see Appendix A), retail customers in the Study Area currently use an estimated 658,241,406 plastic bags per year. Assuming 2,080,000 plastic bags per truck load (City of Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011; refer to Appendix A), this number of plastic bags would require approximately 316 truck trips per year (an average of about 0.87 trips per day) to deliver these single use plastic bags in the Study Area.

Disposal/Degradation. Once disposed of by customers, carryout bags that are not recycled are deposited to a landfill where they are left to decompose and degrade. Depending on the type and materials used, a carryout bag will degrade at various rates. When carryout bag materials degrade in anaerobic conditions at a landfill, CH₄ is emitted. This contributes to climate change (Green Cities California MEA, 2010).

Washing/Sanitizing. The energy use to power washing machines and clothes dryers to wash and sanitize reusable carryout bags creates GHG emissions. However, the amount of GHG emissions depends on the method of washing (i.e., hand washing, electric or natural gas-powered washing machine) and on the frequency of washing.

GHG Emission Rates per Bag. Various studies have estimated GHG emissions for the different carryout bags (single use plastic, paper or reusable bags) to determine a per bag GHG emissions rate. The Boustead Report (2007) compared single use plastic and paper carryout bags and assumed that one paper bag could carry the same quantity of groceries as 1.5 plastic bags. Based on the Boustead Report (2007), 1,500 single use plastic bags would generate 0.04 metric tons of Carbon Dioxide Equivalent (CO₂E) as a result of manufacturing, transport, and disposal. Based on the Scottish Report (AEA Technology, 2005), GHG emissions associated with the manufacture, use, and disposal of a single use paper bag are 3.3 times greater than the emissions generated by the manufacture, use and disposal of a single use plastic bag. Thus, based on the single use plastic bag GHG emissions rate of 0.04 metric tons CO₂E per 1,500 bags from the Boustead Report, single use paper bags would emit 0.132 metric tons CO₂E per 1,000 bags (0.04 x 3.3=0.132). If only used once, the manufacture, use and disposal of a reusable LDPE carryout bag results in 2.6 times the GHG emissions of a single use HDPE plastic bag (AEA Technology, 2005). Therefore, reusable LDPE carryout bags would emit 0.104 metric tons CO₂E per 1,000 bags (if used only once) (Stephen L. Joseph, 2010; AEA Technology, 2005; Ecobilan, 2004; Green Cities California MEA, 2010; and, City of Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011).

If used 20 times, a reusable LDPE carryout bag results in 10% the GHG emissions of a single use HDPE plastic bag on a per bag basis (AEA Technology, 2005). The analysis uses the above LDPE carryout bag as a representation of reusable bags in evaluating GHG impacts. There is no



known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential GHG emissions. However, given the high rate of reuse for all types of reusable bags (100 times or more¹), the GHG emissions associated with these bags, are expected to be comparable to an LPDE reusable bag or lower.

Table 4.3-1 lists the current GHG emissions associated with the manufacture, transport, and disposal of single use plastic bags in the Study Area using the per bag GHG emissions rates discussed above and the estimated number of carryout bags currently used. As discussed in Section 2.0, *Project Description*, based on a baseline population estimate of approximately 1,239,626 persons in 2012 and a statewide estimate of approximately 531 plastic bags used per person per year, retail customers in the Study Area currently use an estimated 658,241,406 single use plastic bags per year. As shown in Table 4.3-1, overall GHG emissions associated with Study Area single use plastic bag use are 17,553 metric tons CO₂E per year, or approximately 0.0142 metric tons CO₂E per person.

**Table 4.3-1
 Existing Greenhouse Gas Emissions
 from Single use Plastic Bags in the Study Area**

Bag Type	Existing Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person²
Single use Plastic	658,241,406	1.0	0.04 per 1,500 bags ¹	17,553	0.142
Total				17,553	0.0142

CO₂E = Carbon Dioxide Equivalent units

¹ *Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.*

² *Emissions per person are divided by the current Study Area population – 1,239,626 (California Department of Finance, May 2012)*

d. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International and Federal Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced by the United Nations in 1992. The objective of the treaty is “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called “protocols,” that would identify mandatory emissions limits.

¹ *Green Cities California. March 2010. Master Environmental Assessment on Single-use and Reusable Bags. Prepared by ICF International.*



Five years later, the UNFCCC brought nations together again to draft the Kyoto Protocol (1997). The Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons) to 5.2% below 1990 levels by 2012. The United States is a signatory of the Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007).

The United States is currently using a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (USEPA, December 2007).

The voluntary approach to address climate change and GHG emissions may be changing. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the United States Environmental Protection Agency (EPA) has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

California Regulations. Assembly Bill (AB) 1493 (2002), referred to as "Pavley," requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would achieve a 22% reduction by 2012 and a 30% reduction by 2016.

In 2005, Governor Schwarzenegger issued Executive Order S-3-05, establishing statewide GHG emissions reduction targets. Executive Order (EO) S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80% of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identifies a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the



2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, the ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂E. The Scoping Plan was approved by ARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard (“LCFS”) for transportation fuels be established for California to reduce the carbon intensity of California’s transportation fuels by at least 10% by 2020.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

SB 375, signed in August 2008, enhances the State’s ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. SB 375 directs each of the state’s 18 major Metropolitan Planning Organizations (MPOs) to prepare a “sustainable communities strategy” (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG), which is the MPO for Ventura County, was assigned targets of an 8% reduction in GHGs from transportation sources by 2020 and a 13% reduction in GHGs from transportation sources by 2035. The Santa Barbara County Association of Governments (SBCAG), the MPO for Santa Barbara County, was assigned a target of maintaining per capita 2005 levels of GHG Emissions (ARB, February 2010).

ARB Resolution 07-54 establishes 25,000 metric tons of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005% of California’s total 2004 GHG emissions inventory.

In April 2011, Governor Brown signed SB 2X requiring California to generate 33% of its electricity from renewable energy by 2020.

For more information on the Senate and Assembly bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and <http://www.arb.ca.gov/cc/cc.htm>.



Local Regulations and CEQA Requirements. Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs.

Santa Barbara County released a Climate Action Study in April 2011 that summarizes policies in place in the County to reduce GHG emissions and lists new emission reduction measures that could be implemented in the future. The topic areas for the reduction measures are: air and energy, land use and transportation, green building, and resource conservation. The Climate Action Study also includes a GHG emissions inventory for unincorporated Santa Barbara County. The study has not been formally adopted by the Santa Barbara County Board of Supervisors. Once the study is adopted, the County plans to develop a Climate Action Plan that would implement selected GHG reductions measures and will include significance thresholds for GHG emissions.

In September 2012, the City of Santa Barbara adopted a Climate Action Plan (CAP) with a greenhouse gas reduction target of 1990 levels by 2020. The CAP also has a target of zero increase in annual 2005 average per capita level of carbon emissions from passenger vehicle and light truck travel in 2020 and 2030. The CAP identifies strategies for energy efficiency and green building, renewable energy, travel fuel reduction and land use, vegetation, waste reduction, and water conservation that will reduce carbon emissions. No other cities in Santa Barbara or Ventura counties have adopted a CAP.

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the Proposed Ordinance. Based on the adopted *CEQA Guidelines*, impacts related to GHG emissions would be significant if the Proposed Ordinance would:

- *Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.*



The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project’s contribution towards an impact is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). However, neither VCAPCD nor SBCAPCD have adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has yet been adopted. Therefore, this analysis is based on the County of Santa Barbara’s interim approach to evaluating GHG emissions. The County recommends an interim approach to evaluating GHG emissions, which is summarized in Table 4.3-2.

**Table 4.3-2
 County of Santa Barbara GHG Significance Determination Guidelines**

GHG Emission Source Category	Operational Emissions
Non-stationary Sources	1,100 MT of CO ₂ E/year OR 4.6 MT CO ₂ E/SP/year (residents + employees)
Stationary Sources	10,000 MT/year
Plans	6.6 MT CO ₂ E/SP/year (residents + employees)

*Notes: SP = Service Population.
 Project emissions can be expressed on a per-capita basis as Metric tons of CO₂E/Service Population/year, which represents the project’s total estimated annual GHG emissions divided by the estimated population.*

Therefore, for this Program EIR, the Proposed Ordinance is evaluated based on the project-level threshold of 4.6 metric tons CO₂e per service population per year. A significant impact related to climate change would occur if GHG emissions associated with implementation of the Proposed Ordinance would exceed 4.6 metric tons of CO₂E units per person per year. In addition, impacts would be significant if the Proposed Ordinance would be inconsistent with applicable GHG emissions reductions strategies.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 **The Proposed Ordinance would increase the number of recyclable paper and reusable bags used in the Study Area and would therefore incrementally increase GHG emissions compared to existing conditions. However, emissions would not exceed thresholds of significance. Impacts would be Class III, less than significant.**

The intent of the Proposed Ordinance is to reduce the use of single use carryout bags and promote the use of reusable bags by Study Area retail customers. As such, the Proposed



Ordinance would reduce the number of single use plastic carryout bags that are manufactured and increase the number of recyclable paper and reusable bags that are manufactured, transported, washed (in the case of reusable bags) and disposed of within the Study Area.

As described in the *Setting*, the manufacture, transport, and disposal, of each single use paper bag generates 3.3 times more GHG emissions than the manufacture, transport, and disposal of a single use plastic bag. If only used once, the manufacture, use, and disposal of a reusable LDPE carryout bag results in 2.6 times the GHG emissions of a single use HDPE plastic bag (Stephen L. Joseph, 2009; AEA Technology, 2005; Ecobilan, 2004; and Green Cities California MEA, 2010). Thus, on a per bag basis, single use plastic bags have less impact than single use paper and reusable carryout bags. However, reusable carryout bags are intended to be used multiple times. With reuse of carryout bags, the total carryout bags that would be manufactured, transported and disposed of would be reduced. As described in Section 2.0, *Project Description*, implementation of the Proposed Ordinance would result in replacement of single use plastic bags currently used in the Study Area (estimated at 658,241,406 million annually) with an estimated 197.5 million recyclable paper bags and 8.2 million reusable bags; an estimated 32.9 million single use plastic bags would remain in circulation.

As a result of the increase in reusable bags, the Proposed Ordinance may lead to increased energy use as reusable bags would be machine washable or made from a material that can be cleaned or disinfected, as required by the Proposed Ordinance. Washing reusable bags used in the Study Area would utilize energy or natural gas, depending on the type of washing machine and dryer used, and therefore incrementally increase energy-production related GHG emissions.

As discussed in Section 4.5, *Utilities and Service Systems*, it is anticipated that most reusable bag users would simply include reusable bags in wash loads that would occur with or without the bags. Nevertheless, in order to provide a conservative estimate for impacts related to energy usage resulting from the Proposed Ordinance, this analysis assumes that the demand for energy in the Study Area would increase in order to maintain the hygiene of reusable bags, where bags are cleaned by washing machine and clothes dryers. Assuming half of reusable bags in the Study Area are machine washed (4,114,009 bags) this would create an additional 2,598,321 loads of laundry per year.²

Table 4.3-3 provides an estimate of GHG emissions that would result from the change in the makeup of carryout bags in the Study Area resulting from implementation of the Proposed Ordinance. Although the total number of carryout bags would be reduced by approximately 420 million bags per year, the projected increase in the use of recyclable paper bags is expected to increase overall GHG emissions associated with the manufacture, transport, and disposal of carryout bags by approximately 0.02 CO₂E per person per year. Washing and drying of the additional reusable bags resulting from the proposed ordinance would also increase greenhouse gas emissions by approximately 0.003 metric tons CO₂E per person per year.

² Assumes an average washer capacity of 8 pounds per load and 6.8 ounces per bag, as measured on 8/10/2010 by Rincon Consultants, Inc. See Section 4.5 for more information.



**Table 4.3-3
 Estimated Greenhouse Gas Emissions from Carryout Bags in Study Area
 with Implementation of the Proposed Ordinance**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	197,472,422	2.97	0.1188 per 1,000 bags ³	23,460	0.0189
Reusable	8,228,018	2.6	0.104 per 1,000 bags ⁴	856	0.0007
<i>Subtotal</i>				25,193	0.0203
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,578	3,279	0.0026
<i>Subtotal</i>				3,279	0.0026
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				10,919	0.0088

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

In total, implementation of the Proposed Ordinance would result in a net increase of approximately 0.0088 metric tons CO₂E per person per year within the Study Area. However, both the increase in GHG emissions compared to existing conditions and the total emissions after implementation of the Proposed Ordinance would be less than 4.6 metric tons CO₂E per person per year. Further, this estimate is based on conservative assumptions and the actual GHG emissions may be less. Therefore, impacts related to the GHG emissions would be less than significant.

Mitigation Measures. Mitigation is not required since the impact would not be significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.



Impact GHG-2 The Proposed Ordinance would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Impacts would be Class III, less than significant.

The Proposed Ordinance would be generally consistent with applicable regulations or plans addressing GHG reductions. Of the counties and cities participating in the Proposed Ordinance, only the City of Santa Barbara has adopted a Climate Action Plan. The Santa Barbara CAP, adopted in September 2012, includes strategies to reduce emissions in four sectors: electricity and natural gas, transportation and land use, agriculture and forests, and solid waste. Table 4.3-4 illustrates that the Proposed Ordinance would be consistent with the applicable GHG reduction strategies set forth by the CCAP.

**Table 4.3-4
Proposed Ordinance Consistency with Applicable Policies in the
Santa Barbara Climate Action Plan**

Strategy	Project Consistency
Strategy #49: Communitywide waste diversion goal of 75%	Consistent The Proposed Ordinance would promote reusable carryout bags, thus reducing the amount of solid waste generated in the form of single use carryout bags.
Strategy #53: Single use materials and packaging reduction	Consistent The Proposed Ordinance would shift single use bag consumption to reusable bags.
Strategy #64: Single use bag reduction	Consistent An objective of the Proposed Ordinance is to reduce single use bags.

As indicated in the *Setting*, the CAT published the Climate Action Team Report (the “2006 CAT Report”) in March 2006. The CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change greenhouse gas emissions. The CAT strategies are recommended to reduce GHG emissions at a statewide level to meet the goals of the Executive Order S-3-05. These are strategies that could be implemented by various State agencies to ensure that the Governor’s targets are met and can be met with existing authority of the State agencies.

In addition, in 2008 the California Attorney General published *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level* (Office of the California Attorney General, Global Warming Measures Updated May 21, 2008). This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project. Tables 4.3-5 and 4.3-6 illustrate that the Proposed Ordinance would be consistent with both the GHG reduction strategies set forth by the 2006 CAT Report and the 2008 Attorney General’s Greenhouse Gas Reduction Measures.



**Table 4.3-5
Proposed Ordinance Consistency with Applicable Climate Action
Team Greenhouse Gas Emission Reduction Strategies**

<i>Strategy</i>	<i>Project Consistency</i>
California Air Resources Board	
<p>Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.</p>	<p>Consistent The trucks that deliver carryout bags to and from the Study Area retailers on public roadways would be in compliance with ARB's <u>vehicle standards that are in effect at the time of vehicle purchase.</u> <u>Tractor-Trailer GHG regulation which requires the use of aerodynamic trailers that are equipped with low rolling resistance tires in order to reduce GHG emissions.</u></p>
<p>Diesel Anti-Idling The ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.</p>	<p>Consistent Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to Study Area retailers are subject to this state-wide law.</p>
<p>Alternative Fuels: Biodiesel Blends ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.</p>	<p>Consistent The diesel vehicles that deliver carryout bags to and from the Study Area on public roadways could utilize this fuel once it is commercially available.</p>
<p>Alternative Fuels: Ethanol Increased use of E-85 fuel.</p>	<p>Consistent Truck drivers delivering carryout bags could choose to purchase flex-fuel vehicles and utilize this fuel once it is commercially available regionally and locally.</p>
<p>Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.</p>	<p>Consistent The heavy-duty trucks that deliver carryout bags to and from Study Area retailers on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture.</p>
<p>Achieve 50% Statewide Diversion Goal Achieving the State's 50% waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.</p>	<p>Consistent As of 2006, all participating jurisdictions were diverting at least 50% of solid waste (CalRecycle, Jurisdiction Diversion/Disposal Rate Summary, Accessed December 2012), thereby complying with the standards established by AB 939. Any disposal of carryout bags would be required to adhere to the existing standards. The Proposed Ordinance would also assist by promoting reusable carryout bags, thus reducing the amount of solid waste generated in the form of single use carryout bags.</p>
<p>Zero Waste – High Recycling Efforts to exceed the 50% mandate would allow for additional reductions in climate change emissions.</p>	<p>Consistent As described above, participating municipalities within the Study Area currently exceed the 50% goal of recycling. The Proposed Ordinance would assist by promoting reusable carryout bags, thus reducing the amount of solid waste generated in the form of single use carryout bags. The ordinance would also shift single use bag consumption from plastic to paper. This would increase recycling of single use bags because paper bags are recycled by services provided to each residence and workplace in the Study Area. Consumer access to plastic bag recycling opportunities is limited.</p>
Energy Commission (CEC)	
<p>Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.</p>	<p>Consistent Carryout bag delivery drivers could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.</p>



**Table 4.3-5
Proposed Ordinance Consistency with Applicable Climate Action
Team Greenhouse Gas Emission Reduction Strategies**

<i>Strategy</i>	<i>Project Consistency</i>
<p>Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.</p>	<p>Consistent Carryout bag delivery drivers could purchase alternative fuel vehicles and utilize these fuels once they are commercially available regionally and locally.</p>

**Table 4.3-6
Proposed Ordinance Consistency with Applicable
Attorney General Greenhouse Gas Reduction Measures**

<i>Strategy</i>	<i>Project Consistency</i>
Transportation-Related Emissions	
<p>Diesel Anti-Idling Set specific limits on idling time for commercial vehicles, including delivery vehicles.</p>	<p>Consistent Currently, the ARB's Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling restricts diesel truck idling to five minutes or less. Diesel trucks delivering carryout bags to Study Area retailers are subject to this state-wide law.</p>
Solid Waste and Energy Emissions	
<p>Solid Waste Reduction Strategy Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.</p>	<p>Consistent As described above, all Study Area jurisdictions meet or exceed the 50% waste diversion mandate. An objective of the Proposed Ordinance is to reduce single use plastic and paper bag waste in landfills. The Proposed Ordinance would require reusable bags to be available for sale at retail establishments and would require paper bags to be made from recyclable material.</p>
<p>Recycling Education Provide education and publicity about reducing waste and available recycling services.</p>	<p>Consistent The Proposed Ordinance would require reusable and recyclable paper bags to be available at retail establishments.</p>

The Proposed Ordinance would be consistent with the applicable strategies suggested the Santa Barbara Climate Action Plan as discussed in Table 4.3-4. In addition, the Proposed Ordinance would be consistent with the CAT strategies and measures suggested in the Attorney General's Greenhouse Gas Reduction Report as discussed in tables 4.3-5 and 4.3-6. Therefore, the Proposed Ordinance would be consistent with the objectives of AB 32, SB 97, and SB 375 and would be consistent with applicable plans, policies and regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

Mitigation Measures. Mitigation is not required since the impact would not be significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.



c. Cumulative Impacts. Adopted and pending carryout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single use carryout bags, and promote a shift toward reusable carryout bags. Similar to the Proposed Ordinance, such ordinances would be expected to generally reduce the overall number of bags manufactured and associated GHG emissions. Similar to the Proposed Ordinance, other adopted and pending ordinances could incrementally change the GHG emissions associated with bag manufacturing, transportation and disposal. Within the Study Area, the Cities of Ojai and Carpinteria have adopted such ordinances. In California, the County of Santa Clara, City of San Jose, City of Sunnyvale, County of Santa Cruz, Marin County, City of San Francisco, Alameda County, San Mateo County (including 24 cities in San Mateo County and Santa Clara County), and City of Palo Alto have adopted or are considering such ordinances. However, based on the incremental increase in per capita emissions, the other ordinances are not expected to generate a cumulative increase in GHG emissions. For these reasons, cumulative significant impacts associated with implementation of carryout bag ordinances throughout the state are not anticipated.



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4.4 HYDROLOGY and WATER QUALITY

This section analyzes the Proposed Ordinance's potential to adversely affect hydrology and water quality.

4.4.1 Setting

No known single use bag manufacturers are located in Ventura or Santa Barbara counties and single use bags are assuredly manufactured and/or used elsewhere in California. Therefore, impacts to hydrology and water quality are not limited to the local watershed. However, for this analysis the local watershed and hydrologic conditions are discussed and used as an example of the types of effects that may occur as a result of the manufacturing and disposal of bags.

a. Surface Water Drainage and Single Use Bags.

Existing Hydrological Systems. Santa Barbara County contains four principal watersheds: Santa Maria, which includes the Cuyama and Sisquoc watersheds; San Antonio Creek; Santa Ynez; and South Coast, which is composed of approximately 50 short, steep watersheds. The headwaters of the principal watersheds are generally undeveloped, and the middle and lower sections are often developed with urban or agricultural uses. The four major rivers draining these watersheds are the Santa Maria, Sisquoc, Cuyama, and Santa Ynez. Rainfall is variable, and streamflow is flashy. Streamflow is generated directly from rainfall with little base flow contribution from headwaters. Most rivers and the lower reaches of streams are dry in the summer.

Ventura County contains six watersheds: the Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek, Cuyama River, and Coastal Creeks. Surface water resources in Ventura County are divided into two major hydrologic units (Ventura River and Santa Clara-Calleguas Units) and into four other smaller hydrologic units (Rincon Creek, Cuyama, San Joaquin, and Malibu Hydrologic Units). Streams, in Ventura County, which generally flow for the entire year, include Sespe Creek, Piru Creek, Reyes Creek, Matilija Creek, the North Fork of the Ventura River, the Ventura River below Foster Park, the upper portion of the Santa Clara River, and Calleguas Creek. However, the year-round flow in the Ventura River below Foster Park, the upper reach of the Santa Clara River and the Arroyo Simi/Calleguas Creek are due primarily to wastewater treatment plant discharges. These creeks plus other, small tributaries have extensive riparian zones and provide habitat for a variety of vertebrates such as rainbow trout.

The majority of the watersheds in both counties ultimately drain west to the Pacific Ocean. Therefore, trash in Study Area creeks and rivers can ultimately end up in the Pacific Ocean.

Nearly all of the water bodies in the Study Area have been listed as impaired by the State Water Resources Control Board (State of California Environmental Protection Agency Natural Resources Agency, December 2012).



Single Use Bags. Single use bags that enter the storm drain system as litter may affect storm water flow by clogging drains and redirecting flow. As described in Section 4.2, *Biological Resources*, typical single use plastic bags weigh approximately five to nine grams and are made of thin (less than 2.25 mils or 0.00225 inches thick) high density polyethylene (HDPE) (Hyder Consulting, 2007). Post-use from a retail establishment, a customer may reuse a single use plastic bag at home, but eventually the bags are disposed of in a landfill or recycling facility or discarded as litter. Although some recycling facilities handle plastic bags, most reject them because they get caught in the machinery and cause malfunctioning, or are contaminated after use. Only about 5% of the plastic bags in California are currently recycled (Green Cities California MEA, 2010; and Boustead, 2007). The majority of single use plastic bags end up as ~~litter or~~ in the landfill or as litter. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single use plastic bags that become litter can enter storm drains and may clog catch basins or be transported to the local watershed, the Study Area's river systems, or the Pacific Ocean.

Single use paper grocery bags also have the potential to enter the storm drains as litter. However, as described in Section 4.2, *Biological Resources*, because of their weight and recyclability, single use paper bags are less likely to become litter compared to single use plastic bags (Green Cities California MEA, 2010). In addition, because single use paper bags are not as resistant to biodegradation, there is less potential to clog catch basins compared to single use plastic bags. However, single use paper bags that are improperly disposed of can result in clogged catch basins or storm drains as biodegradation can take a long time to breakdown those types of bags. Thus, although single use paper bag litter may enter storm drains and temporarily affect hydrologic flow of surface water runoff, the potential to enter storm drains and cause long-term hydrologic effects is less than with single use plastic bags.

Reusable bags may also become litter and enter storm drains; however, these bags differ from single use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloths such as vinyl or cotton. Built to withstand many uses, reusable bags typically weigh at least ten times what an HDPE plastic bag weighs and two times what a paper bag weighs. This restricts movement by wind. Reusable bags are typically reused until worn out through washing or multiple uses, and then typically disposed of either in the landfill or recycling facility. Because of the weight and sturdiness of these bags, reusable bags are less likely to become litter or be carried from landfills by wind compared to single use plastic and paper bags (Green Cities California MEA, 2010). Therefore, reusable bags are less likely to enter the storm drain system as litter.

b. Water Quality and Single Use Bags. Various entities in the region are focusing their efforts on poor surface water quality in creeks, rivers, and oceans due to polluted storm water and urban runoff discharges. Runoff pollutants can include pesticides, fertilizers, green waste, animal waste, human waste, petroleum hydrocarbons (gasoline, motor oil), trash, pollutants from the breakdown of plastic products, and other constituents.

One of the primary sources of surface water contamination in Santa Barbara and Ventura Counties is runoff from impervious surfaces in urban areas. Stormwater flowing over roadways and other transportation facilities carries urban pollutants through natural drainage systems or



man-made storm drain facilities to a body of surface water. Such discharges are referred to as “non-point” sources because the pollutants are found everywhere. These discharges are mostly unregulated, resulting in untreated pollutants entering rivers, lakes, and the Pacific Ocean. Pollutants contained within urban runoff primarily include suspended solids, oil, grease, pesticides, pathogens, and air pollutants.

Based on the Ventura Countywide Storm Water Monitoring Program’s Water Quality Monitoring Reports, which were required under NPDES Order No. 00-108, the pollutants of concern in urban stormwater include chloride, fecal indicator bacteria, conventional pollutants, metals, nitrogen, organic compounds, and pesticides. As previously mentioned, nearly all of the water bodies in the Study Area have been listed by the State Water Resources Control Board as impaired, including but not limited to: the San Antonio Creek, the Santa Maria River, the Santa Ynez River, Calleguas Creek, Santa Clara River, and Malibu Creek (State of California Environmental Protection Agency Natural Resources Agency, December 2012).

The most effective way to reduce the level of contamination from surface runoff is through the control of pollutants prior to their discharge to the drainage system. Implementation of point source controls has led to substantial increases in the level of treatment and quality of discharges.

Water quality may be affected by bags in two different ways: litter from bags and the use of materials for processing activities. As described above, litter that enters the storm drain system may clog storm drains and could result in contamination or may be transported into the local watershed or coastal habitat, violating waste discharge requirements (as described below in *Regulatory Setting*). In addition, manufacturing facilities may utilize materials that, if released in an uncontrolled manner, could degrade the water quality in local waterways. While single use plastic bags are more likely to affect water quality as a result of litter, the plastic bag manufacturing process utilizes “pre-production plastic pellets,” which may also degrade water quality if released either directly to a surface water body or indirectly through storm water runoff.

Single use paper bags have fewer litter-related effects on water quality than single use plastic bags; however, the manufacturing process for paper bags may utilize various chemicals and materials and may also require the use of fertilizers, pesticides and other chemicals for production of resources (such as pulp). Discharges of these chemicals and materials into water bodies, either directly or indirectly through storm water runoff, may increase the potential for higher than natural concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus.

Because of the weight and sturdiness, reusable bags are less likely to be carried from landfills by wind compared to single use plastic and paper bags (Green Cities California MEA, 2010). However, similar to single use paper bags, the manufacturing process for reusable bags can utilize materials such as chemicals or fertilizer for production of resources (such as cotton) that if released, either directly to a stream or indirectly via storm water runoff, could degrade water quality in local water bodies.



c. Regulatory Setting. The federal Clean Water Act (CWA) and the California Ocean Plan are the primary mechanisms through which pollutant discharges are regulated in California. The CWA established minimum national water quality goals and created the National Pollutant Discharge Elimination System (NPDES) permit system to regulate the quality of discharged water. All dischargers must obtain NPDES permits. Beginning in 1991, all municipal and industrial storm water runoff is also regulated under the NPDES system. Although the CWA has established 126 “priority contaminants” (metals and organic chemicals), the California Ocean Plan has further established effluent limitations for 21 of these pollutants.

The U.S. Environmental Protection Agency (EPA) is the primary Federal agency responsible for implementing the CWA. The Regional Water Quality Control Board (RWQCB) is the state agency with primary responsibility for implementing the CWA and the state’s Porter-Cologne Water Quality Act. The RWQCB is also responsible for water quality regulation through its work in preparing and adopting the California Ocean Plan. Local agencies also have responsibility for managing wastewater discharges. All are required to meet criteria set forth in their NPDES permits, monitor their discharges, and routinely submit reports to the RWQCB and the EPA. Santa Barbara County is within the area covered by the Central Coastal Regional Water Quality Control Board. A small portion of Santa Barbara County is regulated by the Los Angeles Regional Water Quality Control Board. In Ventura County, the north county is covered by the Central Coast Regional Water Quality Control Board and the south county is covered by the Los Angeles Regional Water Quality Control Board.

Assembly Bill (AB) 258 was enacted in 2008 to address problems associated with releasing "preproduction plastic" (including plastic resin pellets and powdered coloring for plastics) into the environment. The bill enacted Water Code Section 13367, requiring the State Water Resources Control Board and RWQCBs to implement programs to control discharges of preproduction plastic from point and nonpoint sources (Green Cities California MEA, 2010). Program control measures must, at a minimum, include waste discharge, monitoring, and reporting requirements that target plastic manufacturing, handling, and transportation facilities. The program must, at a minimum, require plastic manufacturing, handling, and transportation facilities to implement best management practices to control discharges of preproduction plastics. This includes containment systems, careful storage of pre-production plastics, and the use of capture devices to collect any spills.

The State Water Resources Control Board (SWRCB, 2010) reports that it is taking the following actions to comply with Section 13367:

“State and Regional Water Board staff has conducted and are continuing to conduct compliance inspections of various types and scales of preproduction plastic manufacturing, handling, and transport facilities enrolled under California's Industrial General Permit (IGP) for storm water discharges...Collectively these inspections will help State and Regional Water Board staff to develop cost-effective regulatory approaches (including compliance-evaluation procedures and appropriate best management practices) for addressing this pollution problem.

“The State Water Board has issued an investigative order to all plastic-related facilities enrolled under the IGP to provide the State Water Board with critical information needed to satisfy the legislative mandates in AB 258 (Krekorian). Facilities subject to this order



must complete an online evaluation and assess their points of potential preproduction plastics discharge and means of controlling these discharges. Data gathered as a result of this effort will be used to help the State Board understand the California plastics industry and ultimately develop appropriate regulation of these facilities to ensure compliance with the Clean Water Act."

The Ventura County Watershed Protection District, the County of Ventura, including the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks joined together to form the Ventura Countywide Storm Water Quality Management Program to coordinate improved stormwater quality of the discharge of stormwater and non-stormwater from municipal separate storm sewer systems (MS4s) (California Regional Water Quality Control Board, July 2010).

In Ventura County, several programs and regulations are in place to reduce trash and pollution in local water ways. These programs include:

1. The Ventura River Trash Total Maximum Daily Load (TMDL), (Los Angeles-RWQCB Resolution No. R4-2007-007),
2. The Revolon Slough/Beardsley Wash Trash TMDL (LA-RWQCB Resolution No. R4-2007-008),
3. The Malibu Creek Watershed Trash TMDL (LA-RWQCB Resolution No. R4-2008-007),
4. The Santa Monica Bay Nearshore and Offshore Debris TMDL (LA-RWQCB Resolution No. R10-010), and
5. The Waste Discharge Requirements for Storm Water and Non-stormwater Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein (Ventura MS4 Permit), LA-RWCQB Order R4-2010-0108, NPDES Permit No. CAS004002.

These programs and regulations require implementation of Best Management Practices (BMPs) to achieve the trash load reduction requirements in impaired waterways.

Santa Barbara County's Storm Water Management Program (SWMP) was prepared pursuant to State Water Resources Control Board Water Quality Order No. 2003-005-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS0000004 Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit) (County of Santa Barbara Water Resources Division, March 2012).

The requirements for NPDES permits now include the "California Toxics Rule" and State and Federal criteria for metals, pesticides and other pollutants that could affect aquatic life and human health.

Municipalities are required to obtain municipal separate storm sewer systems (MS4s) permits, which regulate storm water discharges. MS4 permits are issued by Regional Water Quality Control Boards (RWQCB) and are usually issued to a group of co-permittees encompassing an entire metropolitan area. Since the Study Area involves several major watersheds regulated by two RWQCBs, the Study Area has several MS4 permits. In Santa Barbara County, the cities of



Buellton, Carpinteria, Goleta, Santa Barbara, Santa Maria, and Solvang have been identified as MS4s because of their respective population densities and drainage infrastructure. Likewise, the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks are also classified as MS4s for Ventura County. In addition, Santa Barbara County and Ventura County are classified as MS4s.

One municipal permit is a Phase I MS4 Permit for municipalities serving more than 100,000 people and is administered by the Central Coast RWQCB and the Los Angeles RWQCB for their respective jurisdictions. The other municipal permit is a Phase II General MS4 Permit for municipalities serving between 10,000 and 100,000 people and is administered by the aforementioned RWQCB's within their jurisdictions. The County of Ventura is the primary co-permittee with the Ventura County Watershed Protection District for the Phase I and Phase II boundary which includes the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks. Santa Barbara County is the primary co-permittee for the Phase I and Phase II boundaries, which includes the cities of Buellton, Goleta, Lompoc, Santa Barbara, Santa Maria, and Solvang.

The MS4 permits require the discharger to develop and implement a Storm Water Management Program with the goal of reducing the discharge of pollutants to the maximum extent practicable, which includes a trash load reduction requirement. The County of Ventura has developed the Ventura Countywide Storm Water Quality Management Program and the County of Santa Barbara has developed the County's SWMP. The goals of Santa Barbara County's SWMP are to (1) protect the health of the public and the environment, (2) meet Clean Water Act mandates through compliance with the General Permit requirements and applicable regulations, and (3) to increase public involvement and awareness. The unincorporated areas of Santa Barbara County, as well as the cities of Buellton, Goleta, Lompoc, Santa Barbara, Santa Maria, and Solvang are subject to the County's Phase II regulations. The Cities of Carpinteria, Santa Barbara, Goleta, Buellton, Solvang, Lompoc, and Santa Maria have all implemented independent SWMPs within their municipal boundaries. The Ventura Countywide Storm Water Quality Management Program and the Santa Barbara County SWMP specify what BMPs will be used to reduce, control, or eliminate identified pollutants of concern. Ventura County also regulates stormwater quality through the County's Stormwater Quality Management Ordinance (Ordinance No. 4450 of the County's Municipal Code). Santa Barbara County also regulates stormwater quality through the Storm Water Management and Discharge Control Ordinance (Ordinance No. 4654 of the County's Municipal Code).

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. Based on Appendix G of the CEQA Guidelines, the Proposed Ordinance would create a significant hydrology or water quality impact if it would:

1. *Violate any water quality standards or waste discharge requirements*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have*



- been granted)*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site*
 4. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site*
 5. *Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems in a manner which could create flooding or provide substantial additional sources of polluted runoff*
 6. *Otherwise substantially degrade water quality*
 7. *Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map*
 8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows*
 9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam*
 10. *Result in inundation by seiche, tsunami, or mudflow*

The Initial Study (see Appendix A) concluded that only the first, second and sixth criteria could potentially result in a significant impact, while the Proposed Ordinance would result in no impact with respect to the third through fifth and seventh through tenth criteria. Hence, only the first and sixth criteria are addressed in this section. The second criterion is addressed in Section 4.5, *Utilities and Service Systems*.

b. Project Impacts and Mitigation Measures.

Impact HWQ-1 **The Proposed Ordinance would incrementally increase the number of ~~recycled~~ recyclable paper and reusable bags used in the Study Area, but the reduction in the overall number of single use plastic bags used in the Study Area would reduce the amount of litter and waste entering storm drains. This would improve local surface water quality, a Class IV, *beneficial*, effect.**

As a result of the Proposed Ordinance, an estimated 95% of the single use plastic bags currently used annually in the Study Area (658,241,406 plastic bags per year) would be replaced by an estimated 197.4 million ~~recycled~~ recyclable paper bags and approximately 8.2 million reusable bags. About 32.9 million single use plastic bags are expected to remain in circulation (refer to Table 2-2 in Section 2.0, *Project Description*). This represents an estimated 64% reduction in the overall number of carryout bags used annually within the Study Area.

Each type of single use bag's potential to become litter is based on the bag's weight, material and quantity of bags used. As described in Impact BIO-1 in Section 4.2, *Biological Resources*, the majority of single use plastic bags end up as litter or in the landfill. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single use plastic bags that become litter may enter storm drains from surface water runoff or may be blown directly



into local waterways by the wind. Single use plastic bag litter that enters the storm drain system can block or clog drains resulting in contamination (Green Cities California MEA, 2010). Based on statewide data that currently almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (Green Cities California MEA, 2010), Study Area retail establishments currently use an estimated 658,241,406 single use plastic carryout bags per year. The 64% reduction in the overall number of carryout bags used within the Study Area, anticipated to result from implementation of the Proposed Ordinance, is expected to have a commensurate reduction in the potential for carryout bags to enter and clog area storm drains.

Like single use plastic bags, single use paper grocery bags have the potential to enter storm drains and local waterways as litter. However, as described in Impact BIO-1 in Section 4.2, *Biological Resources*, due to their weight and recyclability, single use paper bags are less likely to become litter compared to single use plastic bags (Green Cities California MEA, 2010). In addition, because single use paper bags are not as resistant to breakdown as single use plastic bags, they would be less likely to block or clog drains compared to single use plastic bags. Therefore, paper bags would be less likely to result in storm drain blockage or contamination.

Due to the weight and sturdiness of reusable bags made for multiple uses, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to both single use plastic and paper bags (Green Cities California MEA, 2010). Therefore, shifting toward greater use of reusable bags would not degrade water quality compared to existing conditions as a result of litter, nor would it increase the potential for storm drain blockage.

As described in Section 4.1, *Air Quality*, and Section 4.3, *Greenhouse Gas Emissions*, the Proposed Ordinance is anticipated to reduce the overall amount of single use plastic bags used in the Study Area by approximately 419.6 million bags annually. Therefore, the Proposed Ordinance would be expected to reduce the amount of litter that could enter storm drains and local waterways, thus improving water quality, reducing maintenance and cleanup costs, and reducing the potential for storm drain blockage.

Mitigation Measures. Water quality, the storm drain operation, and associated hydraulic as well as hydrological conditions would benefit from the Proposed Ordinance because reducing the amount of single use plastic bags in the Study Area also results in an incremental reduction in the amount of litter that enters the storm drain system and local waterways, thereby improving water quality. Therefore, mitigation is not required.

Significance After Mitigation. Impacts to water quality and storm drain operation from litter entering storm drains and local waterways would be beneficial without mitigation.

Impact HWQ-2 A shift toward reusable bags and potential increase in the use of recyclable paper bags could increase the use of chemicals associated with their production, which could degrade water quality in some instances and locations. However, bag manufacturers would be required to adhere to existing regulations, including NPDES Permit requirements, ~~AB 258~~, and the California Health and Safety Code. Therefore,

impacts to water quality from altering increasing single use paper and reusable bag processing activities would be Class III, less than significant.

The manufacturing process for single use plastic, single use paper, and reusable bags utilize various chemicals and materials. Single use plastic bag manufacturers utilize “pre-production plastic.” As discussed above in the *Setting*, paper bag manufacturers may utilize various chemicals and materials and may also require the use of fertilizers, pesticides and other chemicals for production of resources (such as pulp or cotton), which may increase the potential for higher natural concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus. Similar to paper bags, the manufacturing process for reusable bags can utilize materials such as chemicals or fertilizer for production of resources (such as cotton) that if released, either directly to a stream or indirectly via storm water runoff, could degrade water quality in local water bodies. If released into the environment, these pollutants could degrade water quality.

The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use plastic carryout bags and promote a shift toward the use of reusable bags. The Proposed Ordinance is anticipated to reduce the overall number of single use plastic bags used in the Study Area by 95% and reduce the use of all types of bags (including plastic, single use paper, and reusable) by 64%. These shifts in the types and amounts of bags used could potentially alter processing activities related to bag production. The manufacturing impacts of each bag type and the anticipated changes in use are described below.

Single Use Plastic Bags. Conventional single use plastic bags are a product of the petrochemical industry and are typically produced by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources. Single use plastic bags begin the manufacturing process with the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers. These polymers are heated to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags (Green Cities California MEA, 2010). As described in Section 4.4.1 (d), *Regulatory Setting*, the plastic resin pellets are a concern when accidentally released (via spilling into storm drains during use or transport) into aquatic environments.

AB 258 was enacted to address these concerns by implementing program control measures that require plastic manufacturing, handling, and transportation facilities to implement best management practices to control discharges (accidental release from spilling) of preproduction plastics. This includes containment systems, careful storage of pre-production plastics, and the use of capture devices to collect any spills.

Products used in the process to manufacture single use plastic bags, such as petroleum and natural gas, also have the potential to be released as result of an accident during transport or use. However, regulatory agencies such as the EPA set forth Preliminary Remediation Goals (PRGs) for various pollutants in soil, air, and tap water (U.S. EPA Region IX, Preliminary Remediation Goals Tables, November 2011). PRG concentrations can be used to screen pollutants in environmental media, trigger further investigation, and provide initial cleanup

goals resulting from an accident or spill of petroleum or natural gas at a single use plastic bag manufacturing facility.

Single Use Paper Bags. The majority of single use paper bags are made from kraft paper bags, which are manufactured from a pulp that is produced by digesting a material into its fibrous constituents via chemical and/or mechanical means. Kraft pulp is produced by chemical separation of cellulose from lignin. Chemicals used in this process include caustic sodas, sodium hydroxide, sodium sulfide, and chlorine compounds (Green Cities California MEA, 2010). Processed and then dried and shaped into large rolls, the paper is then printed, formed into bags, baled, and then distributed to grocery stores. Although it does not directly discharge pollutants, the paper bag manufacturing process may utilize fertilizers, pesticides and other chemicals in the production of resources such as pulp. These pollutants may increase the potential for higher concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus, causing eutrophication as a result of surface water runoff. A single use paper bag has 14 times the impact of one single use plastic bag on eutrophication, which is caused when nitrate and phosphate are emitted into water, stimulating excessive growth of algae and other aquatic life (Green Cities California MEA, 2010). Eutrophication reduces the water quality and causes a variety of problems such as a lack of oxygen in the water (Green Cities California MEA, 2010). However, direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the National Pollutant Discharge Elimination System (NPDES) program established in Section 402 of the Clean Water Act (CWA).

Paper bag manufacturers are required to comply with the local plans and policies of the SWRCB and the RWQCB, which regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. For example, in the Study Area, paper bag manufacturers would be required to adhere to Santa Barbara County's Storm Water Management Plan and Ventura County's Countywide Storm Water Quality Management Program BMPs to reduce the presence of pollutants in stormwater discharges to the maximum extent practicable. Paper bag manufacturing facilities would be required to implement BMPs, reducing the likelihood that pollutants would enter storm drains and other aquatic environments. There are, however, no known bag manufacturers in the Study Area.

Reusable Bags. Reusable bags can be manufactured with various materials, including polyethylene (PE) plastic, polypropylene (PP) plastics, multiple types of cloth (cotton canvas, nylon, etc.), and recycled plastic beverage containers (polyethylene terephthalate, or PET), among others (Green Cities California MEA, 2010). Depending on the type of material used in the manufacturing process, reusable bags have various impacts to water quality. A single reusable low density polyethylene (LDPE) bag has 2.8 times the impact of a single use plastic bag on eutrophication as result of the use of pollutants that are used for materials in the manufacturing process (Green Cities California MEA, 2010). In addition, other types of reusable bags, such as cotton canvas, may require the use of fertilizers, pesticides and other chemicals in the production process. These pollutants may increase the potential for higher natural concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus causing eutrophication as a result of surface water runoff. However, with reuse of a LDPE or cotton canvas bag as intended, impacts



to eutrophication would be lower in comparison to a single use plastic bag and a single use paper bag since reusable bags are intended to be used “hundreds of times” (Green Cities California MEA, 2010). Therefore, each reusable bag would be expected to replace hundreds of single use plastic or paper bags, more than offsetting the increased impacts associated with each individual bag.

As with other types of bags, reusable bag manufacturers would not be allowed to directly discharge pollutants into waters of the United States, except in accordance with the NPDES program established in Section 402 of the CWA. Reusable bag manufacturers may be required to obtain an “Individual” NPDES Permit and/or would need to adhere to an existing “General” NPDES Permit of the local area. An Individual NPDES permit regulates and limits the particular discharge at the manufacturing facility. The permit limits are based on the type of activity, nature of discharge and receiving water quality. Manufacturing facilities would need to apply for and obtain a permit prior to the start of manufacturing operations. In addition, as part of the Individual Permit, a manufacturing facility would be required to monitor and report its discharges to the local Regional Water Quality Control Board to demonstrate that the facility’s discharges are not in violation of any water quality standards.

Manufacturing facilities would also be required to adhere to existing General Permits that specify local discharge requirements for municipal storm water and urban runoff discharges. For example, in Study Area, paper bag manufacturers would be required to adhere to Santa Barbara County’s Storm Water Management Plan and Ventura County’s Countywide Storm Water Quality Management Program BMPs to reduce the presence of pollutants in stormwater discharges to the maximum extent practicable.

Although reusable bags may utilize various materials, reusable bag manufactures who utilize plastics in their production (for example, production of LPDE reusable bags) would also be required to adhere to pending requirements specified in AB 258, which addresses the release of “preproduction plastics” as described in Section 4.4.1 (d), *Regulatory Setting*. In addition, the California Health and Safety Code (Section 25531-25543.3) establishes a program for the prevention of accidental releases of regulated substances. With adherence to Health and Safety Code Section 25531-25543.3, reusable bag manufacturing facilities would be required to prepare and update a Risk Management Plan (RMP). This would further reduce the potential for a release of substances that may be washed into and through the storm drainage systems, local waterways, and ultimately to the Pacific Ocean.

Anticipated Changes in Bag Use. Based on a cost requirement of at least \$0.10 per bag, as outlined in Section 2.0, *Project Description*, it is assumed in this analysis that the total volume of plastic bags currently used in the Study Area (approximately 658,241,406 plastic bags per year) would be replaced by ~~recycled~~ recyclable paper bags (or 197,472,422 paper bags or 30% of the total) and reusable bags (or 8,228,018 reusable bags or 65% of the total) as a result of the Proposed Ordinance (refer to Table 2-2 in Section 2.0, *Project Description*). It is assumed that 5% of the existing total of single use plastic bags used in the Study Area would remain in use since the Proposed Ordinance does not apply to some retailers who distribute plastic bags (e.g. restaurants) and these retailers would continue to distribute single use bags after the Proposed Ordinance is implemented.



Although the Proposed Ordinance would be expected to incrementally increase demand for the manufacturing of ~~recycled~~-recyclable paper bags and reusable bags, it would also reduce demand for single use plastic carryout bags by approximately 625 million bags per year. With implementation of the Proposed Ordinance, approximately 239 million bags (including single use paper, single use plastic, and reusable bags) would be manufactured for use in the Study Area – a decrease of an estimated 64% compared to existing conditions. Consequently, the Proposed Ordinance would reduce the overall impacts to water quality associated with bag manufacturing. Furthermore, as described above, manufacturing facilities would be required to adhere to existing federal, state and local regulations. Therefore, impacts to water quality related to the potential change of processing activities as a result of the Proposed Ordinance would not be significant.

Mitigation Measures. Impacts would be less than significant and no mitigation is required.

Significance After Mitigation. Impacts to water quality related to the potential change of process activities would be less than significant without mitigation.

c. Cumulative Impacts. Adopted and pending bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single use bags, and promote a shift toward reusable bags. As discussed above, the hydrology and water quality impacts associated with the Proposed Ordinance are not considered significant and are generally considered beneficial. Several other agencies in the region (including the cities of Ojai, Carpinteria, and Malibu, and the County of Los Angeles) have either adopted or are considering such ordinances. These ordinances would be expected to result in similar reductions in the amount of litter entering storm drains, local creeks or watersheds, thereby improving water quality. In addition, the overall reduction in bag manufacturing expected to occur as a result of implementation of these ordinances would be expected to generally reduce water quality impacts associated with bag manufacturing. In addition, all ~~recycled~~-recyclable paper and reusable bag manufacturing facilities would be required to comply with applicable regulatory requirements pertaining to preservation of water quality, including AB 258 and the California Health and Safety Code, as discussed in Impact HWQ-2. For these reasons, cumulative significant impacts associated with implementation of bag ordinances throughout the state are not anticipated.

4.5 UTILITIES AND SERVICE SYSTEMS

This section discusses potential impacts of the Proposed Ordinance on utilities, including water supply and distribution, wastewater collection and treatment, and solid waste.

4.5.1 Setting

a. Water Supply and Demand.

County of Santa Barbara. The Proposed Ordinance would apply to the unincorporated areas of Santa Barbara County, as well as the seven participating municipalities within the County. Water service in Santa Barbara County is provided by a mix of cities, special districts, and private utility companies. The majority of the County's water supplies (approximately 77%) are from groundwater. Other water sources include local surface water (Gibraltar Reservoir, Jameson Lake, Fox and Alder Creeks, Lake Cachuma, Twitchell Reservoir) and imported water from the State Water Project. The current average annual water supply for Santa Barbara County is approximately 223,000 acre feet per year (AFY) plus approximately 90,000 in return flows to usable groundwater basins for a total of 313,000 AFY. Total demand is approximately 289,355 AFY. Approximately 75% of demand is for agricultural uses and 25% for urban uses (SBC IRWMP, May 2007).

County of Ventura. The Proposed Ordinance would apply to the unincorporated areas of Ventura County as well as the nine participating municipalities within the County. Water supplies in the County are provided by three wholesale water agencies and over 170 retail water purveyors. The three major wholesale providers are: Calleguas Municipal Water District, Casitas Municipal Water District, and United Water Conservation District. Water supplies and demand for these water agencies are shown in Table 4.5-1. The County's water supplies are primarily groundwater (65%), imported water from the State Water Project (25%) and surface water (8.5%). Water purveyors in the County deliver water through systems of reservoirs, canals, pipelines, groundwater basin recharge facilities, treatment plants, and distribution pipelines. Total water supply in Ventura County is approximately 193,438 AFY.

As shown in Table 4.5-2, the existing total existing water supply for the Study Area (Ventura and Santa Barbara counties combined) is approximately 508,438 AFY, total demand is 469,173, and excess supply is 30,315 AFY.



**Table 4.5-1
Ventura County Water Supply and Demand**

Service Provider	Service Area	Water Sources	Average Year Supply (AFY)	Average Year Demand (AFY)	Excess Supply (AFY)
Casitas Municipal Water District	Western Ventura County	Lake Casitas	20,840	16,571	4,269
United Water Conservation District	Oxnard, Port Hueneme, Ventura, Santa Paula, Fillmore	Groundwater	11,377	10,655	722
Calleguas Municipal Water District	Camarillo, Moorpark, Oxnard, Port Hueneme, Simi Valley, Thousand Oaks, unincorporated communities in Ventura	Local surface water and groundwater, imported water	173,455	171,776	1,679
TOTAL			195,438	179,818	6,670

AFY = acre-feet per year

Sources: Casitas MWD, 2010 UWMP; United WCD, 2010 UWMP; Calleguas MWD, 2010 UWMP

**Table 4.5-2
Total Study Area Water Supply and Demand**

County	Average Year Supply (AFY)	Average Year Demand (AFY)	Excess Supply (AFY)
Santa Barbara	313,000	289,355	23,645
Ventura	195,438	179,818	6,670
TOTAL	508,438	469,173	30,315

AFY = acre-feet per year

Sources: Santa Barbara County IRWMP, 2007; Casitas MWD, 2010 UWMP; United WCD, 2010 UWMP; Calleguas MWD, 2010 UWMP

Water Use Associated with Single Use Plastic Carryout Bags. Various studies have estimated water use related to manufacturing of the different carryout bags (single use plastic, paper or reusable bags) to determine a per bag water use rate. In order to provide metrics to determine environmental impacts associated with the Proposed Ordinance, reasonable assumptions based upon the best available sources of information have been utilized. Specific metrics that compare impacts on a per bag basis are available for single use plastic, single use paper, and LDPE reusable bags. However, water use for paper bags varies depending on which Life Cycle Assessment (LCA) data is utilized. The Ecobilan LCA study determined that per 9,000 liters of groceries, the manufacture of plastic bags uses 52.6 liters of water, paper bags use



173 liters of water, and reusable bags (used 52 times) use 1.096 liters of water (Ecobilan, 2004; County of Los Angeles Final EIR, 2010). Similarly, though using slightly different assumptions and data, the Boustead LCA study determined that the manufacturing of carryout bags would require approximately 58 gallons of water for 1,500 plastic bags and approximately 1,004 gallons of water for 1,000 paper bags (assuming that one paper bag could carry the same quantity of groceries as 1.5 plastic bags). The Boustead data does not include estimates for reusable bags. Utilizing the data from these two different studies, tables 4.5-3 and 4.5-4 summarize the existing water use associated with the manufacture of single use plastic bags used in the Study Area.

Based on the Ecobilan LCA data, water demand associated with the manufacture of the 658.2 million single use plastic carryout bags currently used in the Study Area is approximately 14.23 million gallons per year or 38,981 gallons per day (0.038981 million gallons per day (MGD)). Based on the Boustead LCA data, water demand associated with the manufacture of the 658.2 million single use plastic carryout bags used in the Study Area is approximately 69,732 gallons per day (0.006973 MGD).

No known plastic bag manufacturing facilities are located within either Santa Barbara County or Ventura County; therefore, water demand associated with plastic single use carryout bag manufacturing does not directly affect the existing water supply in either county.

**Table 4.5-3
 Current Water Consumption Associated with Single Use Plastic Carryout Bags
 Based on Ecobilan Data**

Number of Single Use Plastic Carryout Bags**	Water Consumption		
	Liters of Water per 9,000 liters of Groceries	Gallons of Water Per Day*	Millions of Gallons per Year
658,241,406	52.6	38,981	14.23

* Calculations are contained in the Utility Worksheets contained in Appendix E
 ** See Appendix E for the calculations for each individual city.
 Source: Ecobilan, February 2004

**Table 4.5-4
 Current Water Consumption Associated with Single Use Plastic Carryout Bags
 Based on Boustead Data**

Number of Single Use Plastic Carryout Bags**	Water Consumption		
	Gallons of Water per 1,500 plastic bags	Gallons of Water Per Day*	Millions of Gallons per Year
658,241,406	58	69,732	25.45

* Calculations are contained in the Utility Worksheets contained in Appendix E
 ** See Appendix E for the calculations for each individual city.
 Source: Boustead Consulting and Associates Ltd. 2007



b. Wastewater Collection and Treatment.

Wastewater Service in Santa Barbara and Ventura Counties. Multiple service providers deliver wastewater collection and treatment services to the cities and unincorporated areas within Santa Barbara and Ventura Counties. Several service providers operate, own, and maintain sewer mains, collection systems, and sewage treatment plants. Other service providers contract with nearby treatment plants. Table 4.5-4 summarizes the various wastewater treatment plants and the existing capacity at the plants within the counties.

**Table 4.5-5
 Current Treatment Plants, Flow and Remaining Capacity in the Study Area**

Treatment Plant	Service Area	Existing Flow (mgd)	Existing Capacity (mgd)	Remaining Capacity (mgd)
<i>Santa Barbara County</i>				
Buellton Wastewater Treatment Plant	Buellton	0.48	0.65	0.17
Carpinteria Sanitary District Wastewater Treatment Plant*	Carpinteria and unincorporated areas in the Carpinteria Valley	1.325	2.5	3.3
El Estero Wastewater Treatment Plant	Santa Barbara	7.7	11	3.3
Goleta Sanitary District Treatment Plant	Goleta	5.5	11	5.5
Laguna County Sanitation District Wastewater Reclamation Plant	Orcutt and portions of unincorporated Santa Maria	2.4	3.7	1.3
La Purisima Wastewater Treatment Plant	Mission Hills	0.29	0.57	0.28
Lompoc Regional Wastewater Treatment Plant	Lompoc, Vandenberg Village, and Vandenberg Air Force Base	3.0	5.5	2.5
Guadalupe Wastewater Treatment Plant	Guadalupe	0.5	0.96	0.46
Montecito Sanitary District Wastewater Treatment Plant	Montecito	0.974	1.5	0.46
Solvang Wastewater Treatment Plant	Solvang and portions of Santa Ynez Valley	0.68	1.5	0.82
Chumash Wastewater Treatment Plant	Portions of Santa Ynez Valley	0.12	0.2	0.08
Summerland Sanitary District Wastewater Treatment Plant	Summerland	0.13	0.3	0.17
Santa Maria Wastewater Treatment Plant	Santa Maria	7.78	9.0	1.22
Los Alamos Wastewater Treatment Plant	Los Alamos	0.126	0.225	0.099
<i>Subtotal</i>		31.0	48.6	17.6
<i>Ventura County</i>				
Camarillo Sanitary District Wastewater Treatment Plant	Camarillo	4	6.75	2.75
Camrosa Wastewater Reclamation Facility	Southern portion of Ventura County	N/A	1.5	N/A



**Table 4.5-5
 Current Treatment Plants, Flow and Remaining Capacity in the Study Area**

Treatment Plant	Service Area	Existing Flow (mgd)	Existing Capacity (mgd)	Remaining Capacity (mgd)
Fillmore Wastewater Treatment Plant	Fillmore	N/A	1.33	N/A
Oxnard Wastewater Treatment Plant	Oxnard, Port Hueneme	22	31.7	9.7
Santa Paula Water Recycling Facility	Santa Paula	N/A	4.2	N/A
City of Simi Valley's Water Quality Control Plant	Simi Valley	9.7	12.5	2.8
Hill Canyon Wastewater Treatment Plant	Thousand Oaks	9.5	14	4.5
Ventura Water Reclamation Facility	City of Ventura	9	14	5
Ojai Sanitary District Wastewater Treatment Plant*	Ojai	2.0	3.0	1.0
Moorpark Wastewater Treatment Plant	Moorpark	2.2	5	2.8
Piru Wastewater Treatment Plant	Piru	0.24	0.5	0.26
Tapia Water Reclamation Facility**	Southeastern portion of Ventura County	9.5	16	6.5
Saticoy Sanitary District Treatment Facility	Saticoy	0.07	0.25	0.18
Subtotal		68.21	110.73	35.49
TOTAL		99.22	159.34	53.09

mgd = million gallons per day of wastewater N/A = data not available

Sources: Santa Barbara County Integrated Regional Water Management Plan, 2007; Ventura County Integrated Regional Water Management Plan, 2006; City of Santa Barbara, 2011; City of Lompoc, 2010; Goleta Sanitary District, 2009; Laguna County Sanitation District, 2010; City of Guadalupe, 2007; Montecito Sanitary District, 2012; City of Solvang, 2012; City of Santa Maria, 2011; City of Camarillo, 2012; Ventura County Waterworks District No. 8, 2011; City of Thousand Oaks, 2012; City of Ventura, 2012; Las Virgenes Municipal Water District, 2012; Ventura County Waterworks District No. 1, 2011; Personal Communication: Barnard, Riley, Martin, McManus, Moise, Sheets, Bennet, Hess, Coleman, 2012.

* These cities are not included within the scope of the Proposed Ordinance since they do not contain any retailers that would be subject to the proposed Ordinance. However, because residents living within these cities would shop at retailers in the neighboring communities which would be subject to the Proposed Ordinance, these customers' bag use is considered within this analysis as a conservative approach.

** This facility is located in Malibu Canyon, but is operated under a Joint Powers Authority between Las Virgenes Municipal Water District (located in Western LA County) and Triunfo Sanitary District, which serves southeast Ventura County.

Wastewater Generation Associated with Single Use Plastic Carryout Bags. Various studies have estimated wastewater generation associated with the manufacture of different types of carryout bags (single use plastic, paper or reusable bags) to determine a per bag wastewater use rate. The Ecobilan study determined that per 9,000 liters of groceries, the manufacture of plastic bags would generate 50 liters of wastewater, while the manufacture of paper bags would generate 130.7 liters of wastewater and the manufacture of reusable bags (used 52 times) would generate 2.63 liters of wastewater. Based on the Ecobilan data, Table 4.5-6 displays the existing wastewater generation associated with the manufacture of the approximately 658.2 million plastic bags currently used in the Study Area annually. As shown, the manufacture of plastic bags currently generates approximately 37,054 gallons of wastewater per day (or 0.03705 MGD). Since no manufacturing facilities are located in the study,



wastewater generation associated with single use plastic carryout bag use does not directly affect any Study Area wastewater conveyance or treatment facilities.

**Table 4.5-6
 Current Wastewater Generation Associated with Single Use Plastic Carryout Bags
 Based on Ecobilan Data**

Number of Plastic Bags**	Wastewater		
	Liters of Wastewater per 9,000 liters of Groceries	Gallons of Water Per Day*	Millions of Gallons per Year
658,241,406	50	37,054	13.52

* Calculations are contained in the Utility Worksheets contained in Appendix E

** See Appendix E for the calculations for each individual city.

Source: Ecobilan, February 2004.

c. Solid Waste.

County of Santa Barbara. There are currently three active solid waste landfills located in Santa Barbara County (see Table 4.5-6). The largest solid waste disposal site for Santa Barbara County is the Tajiguas Sanitary Landfill, located off Highway 101 in Goleta, approximately 23 miles west of Santa Barbara. The Tajiguas Sanitary Landfill has a permitted daily throughput of 1,500 tons per day, a remaining capacity of 6,660,000 cubic yards, and an estimated closure date of January 1, 2023 (CalRecycle, December 2012).

County of Ventura. Ventura County has two solid waste landfills. The Simi Valley Landfill and Recycling Center has a permitted throughput of 9,250 tons per day (6,000 tons of solid waste and 3,250 tons of recyclables), a remaining capacity of 119,600,000 cubic yards and an estimated closure date of January 31, 2052. This landfill also has a construction debris recycling and processing facility. The Toland Road Landfill has a permitted throughput of 1,500 tons per day, a remaining capacity of 21,983,000 cubic yards, and an estimated closure date of May 31, 2027.

Table 4.5-7 summarizes the permitted throughput, estimated daily throughput, and estimated remaining capacity for facilities that serve the Study Area.

All participating municipalities in the Study Area are required to comply with State Law AB 939, which required every city in California to reduce the waste it sends to landfills by 50% by the year 2000. As of 2006, each of the participating municipalities were diverting at least 50% of their solid waste (CalRecycle, Jurisdiction Diversion/Disposal Rate Summary, Accessed December 2012), thereby complying with the standards established by AB 939.



**Table 4.5-7
Solid Waste Disposal Facilities**

Facility	Permitted Daily Throughput (tons/day)	Estimated Daily Throughput (tons/day)	Estimated Remaining Capacity (tons/day)
Santa Barbara County			
Tajiguas Sanitary Landfill	1,500	600	900
Santa Maria Regional Landfill	858	N/A	N/A
City of Lompoc Sanitary Landfill	400	120	280
Ventura County			
Toland Road Landfill	1,500	1,000	500
Simi Valley Landfill & Recycling Center	6,000	2,100	3,900
Total	14,239	3,820	5,580

N/A = Not Available

Sources: California Department of Resources Recycling and Recovery (CalRecycle), <http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx> accessed on December 13, 2012; Personal Communications: Jensen, Clark, Coleman, Hemingway 2012.

Solid Waste Generation Associated with Single Use Plastic Carryout Bags. Various studies have estimated solid waste rates related to the different types of carryout bags (single use plastic, paper or reusable bags) to determine a per bag solid waste rate. Using EPA recycling rates and the Ecobilan data, it was determined that a plastic bag would generate 0.0065 kilograms (kg) of solid waste per bag, while a paper bag would generate 0.0087 kg of waste per bag, and a reusable bag (used 52 times) would generate 0.001 kg of waste per bag. Similarly, using the Boustead data along with EPA recycling rates, it was determined that plastic bags would produce 0.004 kg waste per bag, while a paper bag would result in 0.021 kg of waste per bag. The Boustead data does not estimate the solid waste from reusable bags. Tables 4.5-8 and 4.5-9 estimate the amount of solid waste associated with plastic bags currently used in the Study Area based on the Ecobilan and Boustead studies.

**Table 4.5-8
Current Solid Waste Associated with Single Use Plastic Carryout Bags
Based on Ecobilan Data**

Number of Single Use Plastic Carryout Bags**	Solid Waste		
	Solid Waste per Bag (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
658,241,406	0.0065	12.97	4,733

* Calculations are contained in the Utility Worksheets contained in Appendix E

** See Appendix E for the calculations for each individual city.

Source: Ecobilan, February 2004



**Table 4.5-9
 Current Solid Waste Generation Associated with Single Use Plastic Carryout Bags
 Based on Boustead Data**

Number of Single Use Plastic Carryout Bags	Solid Waste		
	Solid Waste per Bag (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
658,241,406	0.004	8.22	3,000

* Calculations are contained in the Utility Worksheets contained in Appendix E

** See Appendix E for the calculations for each individual city.

Source: Boustead Consulting and Associates Ltd. 2007

As shown in Table 4.5-7, based on current EPA recycling rates and the Ecobilan data, the use of single use plastic carryout bags within the Study Area generates approximately 12.97 tons of solid waste per day, or 4,733 tons per year. Based on the Boustead data (Table 4.5-8), the use of single use plastic carryout bags within the Study Area generates approximately 8.22 tons of solid waste per day, or 3,000 tons per year.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. To analyze impacts to utilities, the anticipated increase of water, wastewater and solid waste as a result of implementation of the Proposed Ordinance was compared to the available capacity of facilities that serve the Study Area.

Based on Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the Proposed Ordinance would:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
4. Have insufficient water supplies available to serve the Project from existing entitlements and resources, resulting in the need for new or expanded entitlements;
5. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
6. Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs; or
7. Not comply with federal, state, and local statutes and regulations related to solid waste.



The Initial Study (Appendix A) determined that all of the above criteria should be discussed in this EIR except for Criterion 3, which was determined to result in no impact as the Proposed Ordinance would incrementally improve the effectiveness of the stormwater drainage systems in the Study Area. Impacts related to water, wastewater, and solid waste are discussed below.

b. Project Impacts and Mitigation Measures

Impact U-1 **The increase of reusable bags within the Study Area as a result of the Proposed Ordinance would incrementally increase water demand due to washing of reusable bags. However, sufficient water supplies are available to meet the demand created by reusable bags. Therefore, water supply impacts would be Class III, less than significant.**

The Proposed Ordinance would increase the use of reusable bags as a result of prohibiting the distribution of single use carryout plastic bags by specified retailers and requiring a mandatory charge for recyclable paper bags. Manufacturing facilities of carryout bags are not known to be located within Santa Barbara or Ventura Counties. Therefore, manufacturing facilities would not utilize the water supplies of either County.

In addition to water use from the manufacture of carryout bags, the Proposed Ordinance may result in increased water use as reusable bags would be machine washable or made from a material that can be cleaned or disinfected, as required by the Proposed Ordinance. Washing reusable bags used in the Study Area would utilize the water supplies of that municipality. It is anticipated that most bag users would simply include reusable bags in wash loads that would occur with or without the bags. Nevertheless, in order to provide a conservative estimate the Proposed Ordinance's impact with respect to water demand, this analysis assumes that bags would be washed separately. This analysis assumes that approximately half of the reusable bags would be cleaned by rinsing and sanitizing and the other half would be machine washed. Assuming that all new reusable carryout bags require monthly cleaning in either a washing machine or by rinsing, the total increase in Study Area water demand (as shown in Table 4.5-10) would be approximately 470.5 AFY.

As stated in the *Setting* there is approximately 30,315 AFY of excess water supply in the Study Area. Thus, the potential increase in water demand due to implementation of the Proposed Ordinance is within the capacity of the water supplies of the Study Area and would result in a less than significant impact. Furthermore, the estimated water demand associated with implementation of the Proposed Ordinance is conservative, as it assumes that 50% of reusable bags would be washed in separate washing machine loads rather than included in existing wash loads.

**Table 4.5-10
 Water Use From Reusable Bag Cleaning**

# of Additional Reusable Bags from Proposed Ordinance that Require Washing¹	Number of times washed per year (monthly)²	# bags per Wash Load³	# of Loads per Year	Gallons of Water per Wash Load*	Total Water Use (gallons per year)	Total Water Use (AFY)
4,114,009	12	19	2,598,321	40	103,932,840	319.0
4,114,009	12	--	--	1	49,368,108	151.5
TOTAL					153,300,948	470.5

¹ Assumes that 50% of reusable bags would be machine washable and 50% would be hand washed/sanitized.

² Assumes that each bag is washed once a month.

³ Assumes an average washer capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.)

* Source: California Energy Commission: Consumer Energy Center, 2010; City of Santa Monica Carryout Bag Final EIR, January 2011.

Mitigation Measures. Impacts would be less than significant; therefore mitigation is not required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact U-2 Water use associated with washing reusable bags would increase negligibly in the Study Area resulting in an increase in wastewater generation. Projected wastewater flows would remain within the capacity of the wastewater collection and treatment systems in the Study Area, and would not exceed applicable wastewater treatment requirements of the RWQCB. Impacts would be Class III, less than significant.

Although the Proposed Ordinance would not result in additional sewer connections or an increase in the service population, it may incrementally increase water use associated with washing of reusable bags and, therefore, may incrementally increase Study Area wastewater generation. As stated in the *Setting*, the existing remaining capacity for all treatment plants listed in Table 4.5-3 is approximately 53 million gallons per day.

The manufacture of single use carryout bags produces wastewater (as described above in the *Setting*); however, because there are no known manufacturing facilities located within Santa Barbara or Ventura counties, the use of single use plastic carryout bags does not currently affect wastewater conveyance or treatment facilities serving the Study Area.

The use of reusable bags within the Study Area would, however, require periodic washing of bags for hygienic purposes. Assuming that 100% of the water used to wash reusable bags would become wastewater, approximately 470.5 AFY per year (153,300,948 gallons) or approximately 420,003 gallons per day would enter the sewer system and require treatment at the Study Area's treatment plants. As shown in Table 4.5-4, every wastewater treatment plant in



the Study Area (except for those where information is not available) has remaining capacity to treat additional wastewater. Total remaining capacity in the Study Area is approximately 53 million gallons per day. Wastewater generation of 420,003 gallons per day represents 0.8% of the available capacity at all Study Area treatment plants and would not exceed the remaining capacity at any of the treatment plants. Thus, there is adequate capacity to treat the additional wastewater that would result from the Proposed Ordinance and no new facilities would be necessary. Further, this analysis is based on conservative assumptions and actual water use may be lower. Impacts would be less than significant.

Mitigation Measures. Impacts would be less than significant; therefore, mitigation is not necessary.

Significance After Mitigation. Impacts related to wastewater generation would be less than significant without mitigation.

Impact U-3 The Proposed Ordinance would alter the solid waste generation rates in the Study Area due to an increase in paper bag and reusable bag use and reduction in plastic carryout bag use. However, projected future solid waste generation would remain within the capacity of regional landfills. Impacts would therefore be Class III, *less than significant*.

Solid waste generated within the Study Area is taken to various landfills operating within Santa Barbara and Ventura Counties. Solid waste in the County of Santa Barbara is sent to either the Tajiguas, Santa Maria, or Lompoc landfills. Solid waste generated in Ventura County is sent to the Toland Road or Simi Valley landfill.

The Proposed Ordinance does not involve any physical development. However, use of carryout bags would require disposal at the end of use and alter the amount of existing solid waste generation. Tables 4.5-11 and 4.5-12 estimate the anticipated change in solid waste generation that would result from the Proposed Ordinance using the Ecobilan (Table 4.5-11) and the Boustead (Table 4.5-12) data.

As shown in Table 4.5-11, based on the Ecobilan data, the Proposed Ordinance would result in a reduction of approximately 2,596 tons per year of solid waste. However, based on the Boustead data shown in Table 4.5-12, there would be an increase of approximately 1,814 tons per year of solid waste, primarily due to the projected increase in paper bag use.

**Table 4.5-11
Solid Waste Due to Carryout Bags Based on Ecobilan Data**

Type of Bags	Number of Bags	Solid Waste		
		Solid Waste per Bag per day (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
Plastic	32,912,070	0.0065	0.065	237
Paper	197,472,422	0.0087	5.21	1,900
Reusable (used 52 times)	8,228,018	0.001	0.0002	0.075
Total			5.28	2,137
Existing			12.97	4,733
Net Change (Total minus Existing)			(7.69)	(2,596)

* Calculations are contained in the Utility Worksheets contained in Appendix E
Source: Ecobilan, February 2004
See Appendix E for Solid Waste for individual municipalities' bag use

**Table 4.5-12
Solid Waste Due to Carryout Bags Based on Boustead Data**

Type of Bags	Number of Bags	Solid Waste		
		Solid Waste per Bag per day (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
Plastic	32,912,070	0.004	0.41	150
Paper	197,472,422	0.021	12.78	4,664
Total			13.19	4,814
Existing			8.22	3,000
Net Change (Total minus Existing)			4.97	1,814

* Calculations are contained in the Utility Worksheets contained in Appendix E
Source: Boustead Consulting and Associates Ltd. 2007. Note: Boustead data does not estimate solid waste from reusable bags.
See Appendix E for Solid Waste for individual municipalities' bag use

Based on the “worst case” scenario (the Boustead data in Table 4.5-12), the increase of solid waste would be 4.97 tons per day. This increase in solid waste would not exceed the estimated remaining daily capacity for any of the Study Area landfills, including Tajiguas Sanitary Landfill (estimated remaining capacity of 900 tons/day), City of Lompoc Sanitary Landfill (remaining capacity of 120 tons/day), the Toland Road Landfill (remaining capacity of 500 tons/day), or the Simi Valley Landfill (remaining capacity of 3,900 tons/day). Though information for the Santa Maria Regional Landfill was not available, 4.97 tons represents 0.006% of the landfill’s total permitted daily throughput. Therefore, the impact to solid waste facilities as a result of the Proposed Ordinance would be less than significant.

Mitigation Measures. Impacts would be less than significant; therefore, mitigation is not required.



Significance After Mitigation. Impacts related to solid waste generation would be less than significant without mitigation.

c. Cumulative Impacts. Adopted and pending carryout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single use carryout bags, and promote a shift toward reusable carryout bags. Cumulative impacts are discussed below by impact area.

Water. Similar to the Proposed Ordinance, other adopted and pending ordinances could incrementally increase water use associated with washing of reusable bags for hygienic purposes. Two other cities in the region (Carpinteria and Ojai) have adopted such ordinances. In California, the County of Santa Clara, City of San Jose, City of Sunnyvale, County of Santa Cruz, Marin County, City of San Francisco, Alameda County, San Mateo County (including 24 cities in San Mateo County and Santa Clara County), and City of Palo Alto have adopted or are considering such ordinances. However, based on the incremental water use associated with the Proposed Ordinance (increase of approximately 470.5 AFY in the Study Area, which is approximately 0.09% of total water supply), the other ordinances are not expected to generate an increase in water that would exceed water supplies in their respective regions. Therefore, cumulative water impacts would not be significant.

Wastewater. Similar to the Proposed Ordinance, other adopted and pending ordinances could incrementally increase wastewater associated with washing of reusable bags. Two jurisdictions in the region (Carpinteria and Ojai) have adopted such ordinances. In California, the County of Santa Clara, City of San Jose, City of Sunnyvale, County of Santa Cruz, Marin County, City of San Francisco, Alameda County, San Mateo County (including 24 cities in San Mateo County and Santa Clara County), and City of Palo Alto have either adopted or are considering such ordinances. However, based on the incremental increase in wastewater associated with the Proposed Ordinance (approximately 420,003 gallons per day), the other ordinances are not expected to generate an increase in wastewater that would exceed the capacity of a wastewater treatment plant or require new or expanded facilities within their respective regions. Therefore, cumulative wastewater impacts would not be significant.

Solid Waste. Similar to the Proposed Ordinance, other adopted and pending ordinances could incrementally increase solid waste associated with carryout bags. Two jurisdictions in the region (Carpinteria and Ojai) have adopted such ordinances. In California, the County of Santa Clara, City of San Jose, City of Sunnyvale, County of Santa Cruz, Marin County, City of San Francisco, Alameda County, San Mateo County (including 24 cities in San Mateo County and Santa Clara County), and City of Palo Alto have either adopted or are considering such ordinances. As described in Impact U-3, these ordinances may actually result in a reduction of solid waste according to the Ecobilan study. However, using the more conservative Boustead data, based on the incremental increase in solid waste (approximately 4.97 tons per day) associated with the Proposed Ordinance, the other ordinances are not expected to generate an increase in solid waste that would exceed the capacity of a regional landfill or require new or expanded facilities within their respective regions. Therefore, cumulative solid waste impacts would not be significant.



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5.0 OTHER CEQA DISCUSSIONS

This section discusses additional issues required for analysis under CEQA, including growth inducement and significant irreversible environmental effects.

5.1 GROWTH INDUCING IMPACTS

The *CEQA Guidelines* require a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. Therefore, the Proposed Ordinance's growth-inducing potential would be considered significant if it could result in significant physical effects in one or more environmental issue areas. The most commonly cited example of how an economic effect might create a physical change is where economic growth in one area could create blight conditions elsewhere by causing existing competitors to go out of business and the buildings to be left vacant.

5.1.1 Economic and Population Growth

The Proposed Ordinance would prohibit specified retail establishments in the Study Area from providing single use plastic carryout bags to customers at the point of sale and create a mandatory ten cent (\$0.10) charge for each paper bag distributed by these stores. The intent of the Proposed Ordinance is to reduce the environmental impacts of single use carryout bags. The Proposed Ordinance would not facilitate new development, change land use controls or encourage population growth.

Plastic bag production and distribution would reduce as a result of the Proposed Ordinance. However, employment patterns in the region would not be affected as there are no known plastic bag manufacturing facilities in the Study Area. In addition, recyclable paper bag use is anticipated to increase incrementally. However, similar to plastic bag manufacturing, employment patterns in the region would not be affected by the Proposed Ordinance as there are no known paper bag manufacturing plants in the Study Area. Also, demand for reusable bags can be anticipated to increase. Nevertheless, incremental increases in the use of paper and reusable bags in the region is not anticipated to significantly affect long-term employment at these facilities or increase the region's population.

Therefore, the Proposed Ordinance would not be growth-inducing as it would not affect long-term employment opportunities or increase the region's population.

Revenues generated by sales of paper bags would remain with the affected stores. The Proposed Ordinance would not affect economic growth and therefore would not be significant.



5.1.2 Removal of Obstacles to Growth

The Proposed Ordinance would prohibit specified retail establishments in the Study Area from providing single use plastic carryout bags to customers at the point of sale and create a mandatory ten cent (\$0.10) charge for each paper bag distributed by these stores. The intent of the Proposed Ordinance is to reduce the environmental impacts of single use carryout bags. No improvements to water, sewer, and drainage connection infrastructure would be necessary. No new roads would be required. Because implementation of the Proposed Ordinance would not involve or facilitate construction, land use changes or population growth, and would not involve the extension of infrastructure into areas that otherwise could not accommodate growth, it would not remove an obstacle to growth.

5.2 IRREVERSIBLE ENVIRONMENTAL EFFECTS

The *CEQA Guidelines* require that EIRs reveal the significant environmental changes that would occur with project development. CEQA also requires decisionmakers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. This section addresses non-renewable resources, the commitment of future generations to the Proposed Ordinance, and irreversible impacts associated with the Proposed Ordinance.

The Proposed Ordinance would prohibit specified retail establishments in the Study Area from providing single use plastic carryout bags to customers at the point of sale and create a mandatory ten cent (\$0.10) charge for each paper bag distributed by these stores. The intent of the Proposed Ordinance is to reduce the environmental impacts of single use carryout bags. As an ordinance, the project would not include development of any physical structures or involve any construction activity. Therefore, the Proposed Ordinance would not alter existing land uses or cause irreversible physical alterations related to land development or resource use. To the contrary, the express purpose of the Ordinance is to reduce the wasteful use of resources and associated environmental impacts.

The manufacturing of carryout bags and the additional truck trips associated with delivering carryout bags (recyclable paper and reusable bags) to the Study Area would incrementally increase regional air pollutant emissions. As discussed in Section 4.1, *Air Quality*, air pollutant emissions would not be increased beyond existing thresholds and with anticipated reductions in the overall number of plastic bags used in the Study Area, emissions would be reduced compared to existing conditions. Similarly, as discussed in Section 4.3, *Greenhouse Gas Emissions*, although the proposed Ordinance would result in net increase of GHG emissions (approximately 0.006 CO₂e/person/year) compared to existing conditions, this increase would not exceed any thresholds of significance and the Proposed Ordinance would be consistent with applicable plans, policies and regulations related to reducing GHG emissions. Thus, the Proposed Ordinance would not result in any significant impacts related to air quality and GHG emissions.

6.0 ALTERNATIVES

As required by Section 15126.6 of the *CEQA Guidelines*, this section examines a range of reasonable alternatives to the proposed project. The following five alternatives are evaluated:

- *Alternative 1: No Project*
- *Alternative 2: Ban on Single-Use Plastic Bags at all Retail Establishments, Except Restaurants*
- *Alternative 3: Mandatory Charge of \$0.25 for Paper Bags*
- *Alternative 4: Ban on Both Single Use Plastic and Paper Carryout Bags*
- *Alternative 5: Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags*

This section also includes a discussion of the “environmentally superior alternative” among those studied.

6.1 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

6.1.1 Description

The no project alternative assumes that the Single Use Carryout Bag Ordinance is not adopted or implemented. Single-use plastic and paper carryout bags would continue to be available free-of-charge to customers at most retail stores throughout the Study Area. In addition, reusable carryout bags would continue to be available for purchase by retailers. Thus, it is assumed that the use of carryout bags at Study Area retail stores would not change compared to current conditions.

6.1.2 Impact Analysis

No change in environmental conditions would occur under this alternative because neither a ban nor a mandatory charge for carryout bags would be imposed. Thus, Study Area retail customers would have no incentive to alter their existing carryout bag preferences. Because conditions would not change under this alternative, none of the impacts in the studied issue areas associated with the Proposed Ordinance would occur. This alternative would not result in the change in truck trips associated with delivering reusable bags and paper bags that would occur with implementation of the Proposed Ordinance and would therefore eliminate the air quality emissions and greenhouse gas (GHG)/climate change impacts associated with such trips. In addition, because the No Project alternative would not facilitate a shift to reusable bags, the Proposed Ordinance’s less than significant impacts related to water and wastewater demand from washing reusable bags would be eliminated. On the other hand, this alternative would not achieve the Proposed Ordinance’s beneficial effects relative to air quality and biological resources (sensitive species). As discussed in Section 4.4, *Hydrology and Water Quality*, several programs are in place to reduce trash and pollution in Ventura County waterways. These existing programs would be in place in the No Project alternative and may reduce the plastic bag waste that enters and impairs waterways. However, these programs are not expected to reduce litter as much as the Proposed Ordinance and do not apply to the entire Study Area; therefore, this alternative would not result in the general benefits with respect to



litter reduction, hydrology, and water quality that are expected to result from implementation of the Proposed Ordinance. Solid waste generation would not change from existing conditions and, therefore, there would be no impact related to solid waste facilities.

6.2 ALTERNATIVE 2: BAN ON SINGLE-USE PLASTIC BAGS AT ALL RETAIL ESTABLISHMENTS, EXCEPT RESTAURANTS

6.2.1 Description

Similar to the Proposed Ordinance, this alternative would prohibit Study Area retailers from providing single-use plastic carryout bags to customers at the point of sale and create a mandatory \$0.10 charge per paper bag. However, under this alternative, the Ordinance would apply to all categories of retail establishments (i.e., clothing and hardware stores which are not included in the Proposed Ordinance) except for restaurants, fast food, and some take-out food establishments.¹ It should be noted that under this Alternative, the Ordinance would exclude garment bags (a bag without handles that is designed to be placed over articles of clothing on a hanger such as those distributed by department stores or dry cleaners). As a result, under this alternative, only 1% of plastic carry out bags would be distributed at the point of sale anywhere within the Study Area, a reduction of 99% of plastic bags (651,658,992 plastic bags). In contrast, the Proposed Ordinance is expected to reduce the number of single-use plastic carryout bags distributed within the Study Area by 95% or 625,329,336 plastic bags. It is conservatively assumed that the additional plastic bags that would be removed under this alternative would be replaced by recyclable paper bags, such that, in total, 34% of single-use plastic bags currently used within the Study Area would be replaced by recyclable paper bags, and 65% would be replaced by reusable bags.

The total estimate of bag use under this alternative, compared to the Proposed Ordinance, is summarized in Table 6-1.

**Table 6-1
 Estimated Carryout Bag Use: Proposed Ordinance versus Alternative 2**

Bag Type	Carryout Bags Used Annually	
	Proposed Ordinance*	Alternative 2**
Single-Use Plastic	32,912,070	6,582,414
Single-Use Paper	197,472,422	223,802,078
Reusable	8,228,018	8,228,018
Total	238,612,510	238,612,510

* Refer to Table 2.2 in Section 2.0, Project Description

** Based on assumptions of 1% bag use remaining for restaurant use, 34% conversion of the volume of existing plastic bag use in the Study Area to paper bags and 65% conversion to reusable bags (based on 52 uses per year).

¹ Though all restaurants, fast food, and some take-out establishments (those that do not sell grocery items as defined in the Proposed Ordinance) would be exempt from the Proposed Ordinance in this Alternative, it is important to note that not all of these actually provide single-use carryout bags. A survey conducted for the City of Palo Alto found that only 63% of restaurants provide plastic bags.



6.2.2 Impact Analysis

a. Air Quality. As described in Section 4.1, *Air Quality*, it is anticipated that the Proposed Ordinance would replace the total volume of single-use plastic bags currently used in the Study Area with approximately 30% recyclable paper bags and 65% reusable bags, leaving 5% of the plastic bags in circulation (or approximately 32.9 million bags, as shown in Table 6-1 above). This alternative would prohibit all retail establishments, except for restaurants, in the Study Area from providing single-use plastic carryout bags to customers at the point of sale and would therefore eliminate an additional 26.3 million single-use plastic bags as compared to the Proposed Ordinance. Consequently, this alternative would reduce emissions associated with plastic bag manufacturing, transportation, and disposal to a greater extent than the Proposed Ordinance.

**Table 6-2
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 2**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	6,582,414	1.0	0.023	151	1.0	1.084	7,135
Single-use Paper	223,802,078	1.3	0.03	6,714	1.9	2.06	461,032
Reusable	8,228,018	1.4	0.032	263	3.0	3.252	26,758
Alternative 2 Total				7,129	Alternative 2 Total		494,925
Proposed Ordinance Total				6,944	Proposed Ordinance Total		469,227
Difference				184	Difference		25,698
Existing Total (without an Ordinance)				15,140	Existing Total		713,534
Net Change of Alternative 2 (Alternative 2 Total minus Existing Total)				(8,011)	Net Change of Alternative 2		(218,609)

Source: Refer to Table 4.1-5 in Section 4.1, *Air Quality*.
 () = reduction of emissions compared to existing conditions.

However, because the additional 4% of single-use plastic bags captured by this alternative would be replaced by paper bags rather than reusable bags (refer to Table 6-1), the total number of paper bags would increase compared to the Proposed Ordinance. As described in Section 4.1, *Air Quality*, paper bags have an incrementally greater per-bag impact than single-use plastic



bags. Because Alternative 2 would essentially trade 26.3 million single-use plastic bags for the same number of single-use paper bags, air pollutant emissions would incrementally increase as compared to what would occur under the Proposed Ordinance. Table 6-2 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 2, as compared to the Proposed Ordinance and existing conditions.

As compared to the Proposed Ordinance, the contribution to ground level ozone would increase by approximately 184 kg per year under this alternative (a 2.6% increase) and the contribution to atmospheric acidification would increase by approximately 25,698 kg per year (a 5.5% increase) when compared to the Proposed Ordinance. However, this alternative, like the Proposed Ordinance, would reduce emissions of ozone and atmospheric acidification compared to existing conditions.

To estimate mobile emissions resulting from Alternative 2, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-3, Alternative 2 would result in an estimated 1,107 truck trips per year, or 3.03 truck trips per day, which is slightly higher than the Proposed Ordinance rate of 2.74 truck trips per day.

**Table 6-3
 Estimated Truck Trips per Day
 Following Implementation of Alternative 2**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	6,582,414	2,080,000	3	0.01
Single-use Paper	223,802,078	217,665	1,028	2.82
Reusable	8,228,018	108,862	76	0.21
Alternative 2 Total			1,107	3.03
Proposed Ordinance Total			999	2.74
Difference			108	0.30
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 2 (Alternative 2 Total minus Existing Total)			790	2.17

*City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011; and City of Sunnyvale Carryout Bag Ordinance EIR (SCH#2011062032), December 2011.

Based on the estimated truck trips for Alternative 2, mobile emissions were calculated using the URBEMIS model. As shown in Table 6-4, although Alternative 2 would slightly increase truck



trips compared to the proposed Ordinance, this increase is incremental. None of these emissions would exceed VCAPCD or SBCAPCD thresholds.

**Table 6-4
Operational Emissions Associated with Alternative 2**

	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 2	0.09	0.48	0.05
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Source: URBEMIS 2007 calculations for Vehicle. See Appendix F for calculations

Based on the above, impacts resulting from bag manufacturing and use (including ground level ozone and atmospheric acidification) would be slightly greater under this alternative, but would continue to be Class IV, *beneficial*, compared to existing conditions while impacts relating to truck emissions would continue to be Class III, *less than significant*.

b. Biological Resources. Similar to the Proposed Ordinance, this alternative would ban single-use plastic carryout bags, thereby reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of single-use plastic bags by approximately 26.3 million bags and increase the number of paper bags by the same amount. Although this alternative may incrementally increase the use of paper bags in the Study Area as compared to the Proposed Ordinance, the impacts of paper bags on biological resources are less than those of single-use plastic bags. Because of their weight and recyclability, paper bags are less likely to become litter compared to single-use plastic bags (Green Cities California MEA, 2010). In addition, because paper bags are not as resistant to biodegradation, there would be less risk of entanglement if entering the marine environment compared to single-use plastic bags. Therefore, the impact to sensitive species as a result of litter entering the marine environment from Alternative 2 would be reduced compared to the Proposed Ordinance. Similar to the Proposed Ordinance, impacts would be Class IV, *beneficial*. Overall benefits would be somewhat greater than those of the Proposed Ordinance.

c. Greenhouse Gas Emissions. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of single-use plastic bags by approximately 26.3 million bags and increase the number of paper bags by the same amount. The number of reusable bags would not change as compared to the Proposed Ordinance. As noted in Section 4.3, *Greenhouse Gases*, through the manufacturing, transportation, and disposal, each paper bag results in 3.3 times the emissions of a single-use plastic bag. Because this alternative would increase the number of paper bags and reduce the number of single-use plastic bags, it would result in a net increase of GHG emissions compared to the Proposed Ordinance.



Table 6-5 provides an estimate of GHG emissions associated with implementation of Alternative 2.

**Table 6-5
 Estimated Greenhouse Gas Emissions from Alternative 2**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO₂E)	CO₂E per year (metric tons)	CO₂E per Person (metric tons)⁵
Single-use Plastic	6,582,414	1	0.04 per 1,500 bags ²	176	0.0001
Single-use Paper	223,802,078	2.97	0.1188 per 1,000 bags ³	26,588	0.0214
Reusable	8,228,018	2.6	0.104 per 1,000 bags ⁴	856	0.0007
<i>Subtotal</i>				27,619	0.0223
Washing					
Bag Type	# of Loads per Year⁶	Electricity Use Per Load (kW)⁷	Total Electricity Use Per Year (kW)	CO₂E per year (metric tons)⁸	CO₂E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,578	3,279	0.0026
<i>Subtotal</i>				3,279	0.0026
Total GHG Emissions from Alternative 2				30,898	0.0249
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				2,426	0.0020
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				13,345	0.0108

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

Compared to the Proposed Ordinance, GHG emissions under Alternative 2 would increase by approximately 0.02 CO₂E per person per year. Although Alternative 2 would result in slightly greater GHG impacts than the Proposed Ordinance, emissions as a result of this alternative would



not exceed the 4.6 metric tons CO₂E per person per year threshold. Therefore, impacts would remain Class III, *less than significant*.

d. Hydrology and Water Quality. Similar to the Proposed Ordinance, this alternative would reduce the number of single-use plastic bags used within the Study Area, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. Although this alternative would be expected to replace an estimated 26.3 million single-use plastic bags with the same number of paper bags, single-use paper bags are not as resistant to breakdown and would therefore be less likely to block or clog drains compared to single-use plastic bags (refer to Section 4.4, *Hydrology and Water Quality*). Because paper bags would be less likely to result in storm drain blockage or contamination, this alternative would reduce litter compared to the Proposed Ordinance. As with the Proposed Ordinance, an incremental reduction in the amount of litter that could enter storm drains and local waterways would improve water quality and reduce the potential for storm drain blockage. Therefore, like the Proposed Ordinance, this alternative would result in generally Class IV, *beneficial*, effects to water quality, and overall benefits would be somewhat greater under this alternative.

This alternative would be expected to result in the use of more paper carryout bags in the Study Area than would implementation of the Proposed Ordinance. However, as with the Proposed Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, ~~AB 258~~ and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as under the Proposed Ordinance and would remain Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of single-use plastic bags by approximately 26.3 million bags and increase the number of paper bags by same amount. The number of reusable bags would not change under this alternative. Because the same number of reusable bags would be used under this alternative as under the Proposed Ordinance, water demand and wastewater generation related to washing reusable bags would be roughly the same. This includes 471 AFY of water and approximately 420,513 gallons per day of wastewater. As discussed in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies available to meet this demand, as well as capacity within the existing wastewater distribution and treatment system. Therefore, impacts related to water and wastewater would be similar to the Proposed Ordinance and would continue to be Class III, *less than significant*.

Using the more conservative solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), implementation of this alternative would generate an estimated 6.34 tons/day of solid waste (calculations are contained in Appendix F). In comparison, implementation of the Proposed Ordinance would generate an increase of 4.97 tons/day. Therefore, Alternative 2 would generate 1.37 tons/day more solid waste than the Proposed Ordinance (a 28% increase). However, like the Proposed Ordinance, this increase would not exceed the available capacity at Study Area landfills. Therefore, solid waste impacts would be greater when compared to the Proposed Ordinance, but would remain Class III, *less than significant*.



6.3 ALTERNATIVE 3: MANDATORY CHARGE OF \$0.25 FOR PAPER BAGS

6.3.1 Description

This alternative would continue to prohibit Study Area retail establishments included in the Proposed Ordinance from providing single-use plastic bags to customers at the point of sale, but would increase the mandatory charge for a single-use paper bag from \$0.10 to \$0.25. As a result of the \$0.15 mandatory charge increase per paper bag, it is anticipated that this alternative would further promote the use of reusable bags since customers would be deterred from purchasing paper bags due to the additional cost.

Based on a cost requirement of \$0.25 per bag, it is assumed that the total volume of plastic bags currently used in the Study Area (approximately 658,241,406 plastic bags per year) would be replaced by approximately 6% paper bags and 89% reusable bags² under Alternative 3 (compared to 30% paper and 65% reusable assumed for the Proposed Ordinance). It is assumed that 5% of existing single-use plastic bags would remain in use, similar to the Proposed Ordinance, since the alternative would not apply to some retailers who distribute single-use plastic carryout bags (e.g., restaurants). Table 6-6 summarizes the anticipated changes in bag distribution as a result of a \$0.25 mandatory charge under this alternative compared to the \$0.10 charge under the Proposed Ordinance.

**Table 6-6
 Estimated Bag Use: Proposed Ordinance versus Alternative 3**

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 3**
Single-Use Plastic	32,912,070	32,912,070
Single-Use Paper	197,472,422	39,494,484
Reusable	8,228,018	11,266,055
Total	238,612,510	83,572,609

* Refer to Table 2.2 in Section 2.0, Project Description.

** Based on an assumption of 5% existing plastic bag use in Study Area to remain, 6% conversion of the volume of existing plastic bag use in Study Area to paper bags and 89% conversion to reusable bags (based on 52 uses per year).

6.3.2 Impact Analysis

a. Air Quality. As described in Section 4.1, *Air Quality*, it is anticipated that the Proposed Ordinance would replace the total volume of single-use plastic bags currently used in the Study Area with approximately 30% recyclable paper bags and 65% reusable bags, leaving 5% of the plastic bags in circulation (or approximately 32.9 million bags, as shown in Table 6-6 above).

² Rates from City of San Jose Final EIR, SCH # 2009102095, October 2010.



This alternative would increase the mandatory charge on paper bags by fifteen (\$0.15) cents and would therefore promote a greater shift toward reusable bags. Consequently, this alternative would reduce the number of paper bags and increase the number of reusable bags compared to the Proposed Ordinance. Because this alternative would apply to the same retailers as the Proposed Ordinance, the number of single-use plastic bags remaining in circulation would be the same. In total, Alternative 3 would result in approximately 155 million fewer bags (including single-use plastic, paper, and reusable) than the Proposed Ordinance. Air pollutant emissions associated with bag manufacturing, transportation, and disposal would therefore be reduced when compared to the Proposed Ordinance.

Table 6-7 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 3, as compared to the Proposed Ordinance. Because this alternative would reduce the number of paper bags in the Study Area, the contribution to ground level ozone would decrease by approximately 4,642 kg per year (a 67% decrease) and the contribution to atmospheric acidification would decrease by approximately 315,555 kg per year (a 67% decrease) when compared to the Proposed Ordinance.

**Table 6-7
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 3**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	32,912,070	1.0	0.023	757	1.0	1.084	35,677
Single-use Paper	39,494,484	1.3	0.03	1185	1.9	2.06	81,359
Reusable	11,266,055	1.4	0.032	361	3.0	3.252	36,637
Alternative 3 Total				2,302	Alternative 3 Total		153,673
Proposed Ordinance Total				6,944	Proposed Ordinance Total		469,227
Difference				(4,642)	Difference		(315,555)
Existing Total (without an Ordinance)				15,140	Existing Total (without an Ordinance)		713,534
Net Change of Alternative 3 (Alternative 3 Total minus Existing Total)				(12,837)	Net Change		(559,861)

Source: Refer to Table 4.1-5 in Section 4.1, Air Quality.
 () = reduction of emissions compared to existing conditions.



To estimate mobile emissions resulting from Alternative 3, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-8, Alternative 3 would result in an estimated 301 truck trips per year, or 0.82 truck trips per day, which is lower than truck trips with the Proposed Ordinance and also slightly lower than the existing number of truck trips related to delivering single-use plastic bags.

**Table 6-8
 Estimated Truck Trips per Day
 Following Implementation of Alternative 3**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	32,912,070	2,080,000	16	0.04
Single-use Paper	39,494,484	217,665	181	0.50
Reusable	10,952,280	108,862	103	0.28
Alternative 3 Total			301	0.82
Proposed Ordinance Total			999	2.74
Difference			(698)	(1.91)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 3 (Alternative 3 Total minus Existing Total)			(16)	(0.04)

*City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.
 Refer to Appendix A
 () = reduction of emissions compared to existing conditions.

**Table 6-9
 Operational Emissions Associated with Alternative 3**

	Emissions (lbs/day)		
	ROG	NO_x	PM₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 3	(<0.01)	(0.01)	(<0.01)
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Source: URBEMIS 2007 calculations for Vehicle. See Appendix F for calculations
 () = reduction of emissions compared to existing conditions.



Based on the estimated truck trips for Alternative 3, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-9, this alternative would reduce daily emissions compared to the Proposed Ordinance. In addition, because mobile emissions would be reduced compared to existing conditions, these emissions would not exceed VCAPCD or SBCAPCD thresholds.

Based on the above, Alternative 3 would reduce air quality impacts compared to the Proposed Ordinance. Impacts resulting from bag manufacturing and use (ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, and impacts relating to an increase in truck trips would be reduced to a Class IV, *beneficial*, impact since truck trips and the associated emissions would actually be reduced under this alternative compared to existing conditions.

b. Biological Resources. Similar to the Proposed Ordinance, this alternative would prohibit certain Study Area retailers from distributing single-use plastic carryout bags, thereby incrementally reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the Proposed Ordinance, this alternative would result in approximately 155 million fewer bags (including single-use plastic, paper, and reusable). Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 158 million bags and increase the number of reusable bags by approximately 3 million bags. Therefore, this alternative would further reduce the amount of paper bag litter that could enter the marine environment. Although paper bags are less likely to become litter compared to single-use plastic bags (refer to Section 4.2, *Biological Resources*), the net reduction of overall bags associated with this alternative would result in overall less litter entering the marine environment. As a result, the Class IV, *beneficial*, effects to marine species from Alternative 3 would be increased as compared to the Proposed Ordinance.

c. Greenhouse Gas Emissions. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 155 million bags and increase the number of reusable bags by approximately 3 million. The number of single-use plastic bags would not change compared to the Proposed Ordinance. As noted in Section 4.3, *Greenhouse Gases*, the manufacturing, transportation, and disposal of each paper bag results in 3.3 times the emissions of a single-use plastic bag, while the manufacturing, transportation, and disposal of each reusable bag results in approximately 2.6 times the emissions of a single-use plastic bag. Although this alternative would increase the number of reusable bags by approximately 3 million, which would slightly increase GHG emissions, it would reduce number of paper bags to a greater extent (approximately 158 million bags). Table 6-10 provides an estimate of GHG emissions that would result from the reduction of carryout bags as a result of implementation of Alternative 3.

Compared to the Proposed Ordinance, GHG emissions under Alternative 3 would decrease by approximately 0.0139 CO₂E per person per year. In addition, compared to existing conditions without an Ordinance, this alternative would reduce GHG emissions by approximately 6,323 metric tons per year or approximately 0.005 CO₂E per person per year. Therefore, GHG impacts from Alternative 3 would be reduced when compared to the Proposed Ordinance, and would be Class IV, *beneficial*, compared to existing conditions.



**Table 6-10
 Estimated Greenhouse Gas Emissions from Alternative 3**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	39,494,484	2.97	0.1188 per 1,000 bags ³	4,692	0.0038
Reusable	11,266,055	2.6	0.104 per 1,000 bags ⁴	1172	0.0009
<i>Subtotal</i>				6,741	0.0054
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	3,557,702	3.825	9,938,578 <u>13,608,208</u>	4,489	0.0036
<i>Subtotal</i>				4,489	0.0036
Total GHG Emissions from Alternative 2 & 3				11,230	0.0091
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(17,242)	(0.0139)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(6,323)	(0.0051)

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

d. Hydrology and Water Quality. Similar to the Proposed Ordinance, this alternative would reduce the number of single-use plastic bags used in the Study Area, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would further reduce the number of paper bags compared to the Proposed Ordinance (by approximately 158 million bags), replacing them instead with approximately 3 million reusable bags. Compared to the Proposed Ordinance, this alternative would result in



approximately 155 million fewer total bags (including single-use plastic, paper, and reusable). As a result, overall, this alternative would reduce litter compared to the Proposed Ordinance. As with the Proposed Ordinance, an incremental reduction in the amount of litter that could enter storm drains and local waterways would improve water quality and reduce the potential for storm drain blockage. Therefore, like the Proposed Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative since fewer paper bags would be used in the Study Area.

This alternative would be expected to result in the use of fewer single-use paper carryout bags in the Study Area as compared to the Proposed Ordinance. However, it would not completely eliminate paper bags. As with the Proposed Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, ~~AB-258~~ and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as the Proposed Ordinance and would continue to be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 158 million and increase the number of reusable bags by approximately 3 million. The number of single-use plastic bags would not change under this alternative. Because 36% more reusable bags would be used under this alternative as compared to the Proposed Ordinance, water demand and wastewater generation related to washing reusable bags would also increase by 36%. This equates to a net increase of an estimated 170 AFY of water and a net increase of 151,384 gallons per day of wastewater compared to the Proposed Ordinance. As noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater facility capacity to meet this demand. Therefore, impacts would be slightly greater than those of the Proposed Ordinance, but would remain Class III, *less than significant*.

Using the more conservative solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a net decrease of 5.25 tons/day of solid waste (calculations are contained in Appendix F) compared to existing conditions. In comparison, the Proposed Ordinance would generate a net increase of 4.97 tons/day compared to existing conditions. Therefore, Alternative 3 would generate less solid waste than the Proposed Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing capacity at area landfills. Solid waste impacts would be reduced when compared to the Proposed Ordinance, and would be Class IV, *beneficial*.

6.4 ALTERNATIVE 4: BAN ON BOTH SINGLE-USE PLASTIC AND PAPER CARRYOUT BAGS

6.4.1 Description

This alternative would prohibit specified Study Area retail establishments, as defined by the Proposed Ordinance, from providing single-use plastic and paper carryout bags to customers at the point of sale. It is anticipated that by also prohibiting paper carryout bags, this alternative ordinance would substantially reduce single-use paper carryout bags within the Study Area, and further promote the shift to the use of reusable bags by retail customers. By banning both



single-use plastic and paper bags, customers would be forced to use reusable carryout bags. This may increase the number of reusable bags purchased within the Study Area.

It is assumed that banning both single-use plastic and paper bags would result in replacement of the total volume of single-use plastic carryout bags currently used within the Study Area (approximately 658,241,406 plastic bags per year) with approximately 12 million reusable bags (compared to 197.5 million paper and 8.2 million reusable bags assumed for the Proposed Ordinance). It is assumed that 5% of existing single-use plastic bags would remain in use, similar to the Proposed Ordinance, since the alternative would not apply to some retailers who distribute plastic bags (e.g., restaurants). Table 6-11 summarizes the changes in bag distribution as a result of banning both single-use plastic and paper under this alternative compared to the Proposed Ordinance.

**Table 6-11
 Estimated Bag Use: Proposed Ordinance versus Alternative 4**

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 4**
Single-Use Plastic	32,912,070	32,912,070
Single-Use Paper	197,472,422	0
Reusable	8,228,018	12,025,564
Total	238,612,510	44,937,634

* Refer to Table 2.2 in Section 2.0, Project Description

** Based on an assumption of 5% existing plastic bag use in the Study Area to remain, and 95% conversion to reusable bags (based on 52 uses per year).

6.4.2 Impact Analysis

a. Air Quality. As described in Section 2.0, *Project Description*, it is anticipated that the Proposed Ordinance would replace the total volume of single-use plastic bags currently used in the Study Area with approximately 197.5 million paper and 8.2 million reusable bags assumed for the Proposed Ordinance (or 95% of the plastic bags), leaving 5% of the plastic bags in circulation (or approximately 32.9 million bags, as shown in Table 6-11 above). This alternative would prohibit specified retail establishments from providing single-use plastic or paper carryout bags to customers at the point of sale, and would therefore promote a greater shift toward reusable bags. Consequently, this alternative would reduce the number of paper bags and increase the number of reusable bags compared to the Proposed Ordinance. Because this alternative would apply to the same retailers as the Proposed Ordinance, the number of single-use plastic bags remaining in circulation would be the same. In total, Alternative 4 would result in approximately 193.6 million fewer total bags (including single-use plastic, paper, and reusable) than the Proposed Ordinance. Air pollutant emissions associated with bag manufacture, transportation, and disposal would therefore be reduced when compared to the Proposed Ordinance. Table 6-12 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 4, as compared with the Proposed Ordinance.



As shown in Table 6-12, because this alternative would reduce the number of paper bags and the total number of bags used in the Study Area, the contribution to ground level ozone would decrease by approximately 5,803 kg per year (an 84% decrease) and the contribution to atmospheric acidification would decrease by approximately 394,444 kg per year (an 84% decrease) when compared to the Proposed Ordinance.

**Table 6-12
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 4**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	40,996,774 <u>32,912,070</u>	1.0	0.023	757	1.0	1.084	35,677
Single-use Paper	0	1.3	0.03	0	1.9	2.06	0
Reusable	12,025,564	1.4	0.032	385	3.0	3.252	39,107
Alternative 4 Total				1,142	Alternative 4 Total		74,784
Proposed Ordinance Total				6,944	Proposed Ordinance Total		469,227
Difference				(5,803)	Difference		(394,444)
Existing Total (without an Ordinance)				15,140	Existing Total (without an Ordinance)		713,534
Net Change of Alternative 4 (Alternative 4 Total minus Existing Total)				(13,998)	Net Change of Alternative 4 (Alternative 4 Total minus Existing Total)		(638,750)

Source: Refer to Table 4.1-5 in Section 4.1, Air Quality.
 () = reduction of emissions compared to existing conditions.

To estimate mobile emissions resulting from Alternative 4, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-13, Alternative 4 would result in an estimated 126 truck trips per year, or 0.35 truck trips per day, which is lower than the Proposed Ordinance and would also be lower than the existing number of truck trips related to delivering single-use plastic bags.

Based on the estimated truck trips for Alternative 4, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-14, this alternative would reduce truck trips and reduce daily emissions compared to the Proposed Ordinance. In addition, because truck trips and the associated mobile emissions would be reduced compared to existing conditions, these emissions would not exceed SBCAPCD or VCAPCD thresholds.



**Table 6-13
 Estimated Truck Trips per Day
 Following Implementation of Alternative 4**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	32,912,070	10,996,771 <u>2,080,000</u>	16	0.04
Single-use Paper	0	0 <u>217,665</u>	0	0.00
Reusable	4,724,475	12,025,564 <u>108,862</u>	110	0.30
Alternative 3 Total			126	0.35
Proposed Ordinance Total			999	2.74
Difference			(872)	(2.39)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 4 (Alternative 4 Total minus Existing Total)			(190)	(0.52)

*City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.
 Refer to Appendix A.
 () = reduction of emissions compared to existing conditions.

**Table 6-14
 Operational Emissions Associated with Alternative 4**

	Emissions (lbs/day)		
	ROG	NO_x	PM₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 4	(0.02)	(0.12)	(0.01)
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Source: URBEMIS 2007 calculations for Vehicle. See Appendix F for calculations
 () = reduction of emissions compared to existing conditions.

Based on the above, Alternative 4 would reduce air quality impacts compared to the Proposed Ordinance. Impacts resulting from bag manufacturing and use (ground level ozone and



atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts related to truck trips would be reduced to Class IV *beneficial*, since truck trips and the associated emissions would actually be reduced under this alternative compared to existing conditions.

b. Biological Resources. This alternative would ban both single-use plastic and paper carryout bags from certain retailers, thereby reducing the amount of single-use plastic and paper bag litter that could enter the marine environment and affect sensitive species. Compared to the Proposed Ordinance, this alternative would further reduce the amount of paper bag litter that could enter the marine environment. Although paper bags are less likely to become litter compared to single-use plastic bags (refer to Section 4.2, *Biological Resources*), the net reduction of overall bag use associated with this alternative would result in overall less litter entering the marine environment. As a result, the Class IV, *beneficial*, effects to marine species from Alternative 4 would be increased as compared to the Proposed Ordinance.

c. Greenhouse Gas Emissions. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 197.5 million bags and increase the number of reusable bags by approximately 3.8 million. The number of single-use plastic bags would not change under this alternative. As noted in Section 4.3, *Greenhouse Gases*, the manufacture, transport, and disposal of each paper bag results in 3.3 times the emissions of a single-use plastic bag, while the manufacturing, transportation, and disposal of each reusable bag results in approximately 2.6 times the emissions of a single-use plastic bag. The increased use of reusable bags would slightly increase GHG emissions, while the significantly reduced use of paper bags would more than offset this impact.

Table 6-15 provides an estimate of GHG emissions that would result from the reduction of carryout bags as a result of implementation of Alternative 4.

Compared to the Proposed Ordinance, GHG emissions under Alternative 4 would decrease by approximately 0.017 CO₂E per person per year. In addition, compared to existing conditions without an Ordinance, this alternative would reduce GHG emissions by approximately 10,633 metric tons per year or approximately 0.0086 CO₂E per person per year. Therefore, GHG impacts associated with Alternative 4 would be reduced when compared to the Proposed Ordinance, and would be Class IV, *beneficial*, compared to existing conditions.

**Table 6-15
 Estimated Greenhouse Gas Emissions from Alternative 4**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	0	2.97	0.1188 per 1,000 bags ³	0	0.0000
Reusable	12,025,564	2.6	0.104 per 1,000 bags ⁴	1251	0.0010
<i>Subtotal</i>				2,128	0.0017
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	3,557,702 3,797,547	3.825	9,938,578 14,525,616	4,792	0.0039
<i>Subtotal</i>				4,792	0.0039
Total GHG Emissions from Alternative 2 <u>4</u>				6,920	0.0056
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(21,552)	(0.0174)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(10,633)	(0.0086)

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

d. Hydrology and Water Quality. Similar to the Proposed Ordinance, this alternative would reduce the number of single-use plastic bags used in the Study Area, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would reduce the number of paper bags compared to the Proposed Ordinance (by approximately 197.4 million bags), replacing them instead with approximately 12 million



reusable bags. In total, Alternative 4 would result in approximately 193.6 million fewer total bags (including single-use plastic, paper, and reusable) than the Proposed Ordinance. As a result, this alternative would reduce overall litter compared to the Proposed Ordinance. As with the Proposed Ordinance, an incremental reduction in the amount of litter that could enter storm drains and local waterways would improve water quality and reduce the potential for storm drain blockage. Therefore, like the Proposed Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative since fewer paper bags would be used in the Study Area.

This alternative would prohibit retailers (except restaurants) from providing paper carryout bags within the Study Area. This alternative would actually reduce the number of paper bags manufactured for use in the region. Thus, impacts to water quality from altering bag processing activities would be reduced under this alternative compared to the Proposed Ordinance which would increase paper bag use. In addition, under this alternative, paper bag use would be reduced compared to existing conditions since single-use paper bags are currently used throughout the Study Area. Thus, this alternative would result in a Class IV, *beneficial impact*.

e. Utilities and Service Systems. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 197.5 million and increase the number of reusable bags by approximately 3.8 million. The number of single-use plastic bags would not change under this alternative. Because 46% more reusable bags would be used under this alternative as compared to the Proposed Ordinance, water demand and wastewater generation associated with washing reusable bags would also increase by 46%. This equates to an increase of an estimated 688 AFY of water and 613,948 gallons per day of wastewater compared to existing conditions, or a net increase of 217 AFY of water and 193,435 gallons of wastewater compared to the Proposed Ordinance. However, as noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater treatment capacity to meet this demand. Therefore, impacts would be slightly greater than those of the Proposed Ordinance, but would remain Class III, *less than significant*.

Using the more conservative solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a reduction of 7.81 tons/day of solid waste compared to existing conditions (calculations are contained in Appendix F). In comparison, the Proposed Ordinance would generate 4.97 tons/day. Therefore, Alternative 4 would generate less solid waste than the Proposed Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing capacity at area landfills. Therefore, solid waste impacts would be reduced when compared to the Proposed Ordinance, and would be Class IV, *beneficial*.

6.5 ALTERNATIVE 5: MANDATORY CHARGE OF \$0.10 FOR PLASTIC AND PAPER CARRYOUT BAGS

6.5.1 Description

Under this alternative the Proposed Ordinance would continue to allow Study Area retail establishments to provide single-use carryout plastic and paper bags to customers at the point of sale, but would create a mandatory charge for a single-use plastic and paper bags of \$0.10.



The provision in AB 2449 which restricted the ability of cities and counties to regulate single-use plastic grocery bags through imposition of a fee expired on January 1, 2013 (see Section 2.0 for further discussion). As a result of the \$0.10 mandatory charge for plastic and paper bags, compared to existing conditions it is anticipated that this alternative would reduce the use of plastic and paper bags and promote the use of reusable bags since customers would be deterred from purchasing plastic and paper bags due to the additional cost.

With a cost requirement of \$0.10 per single-use carryout bag, it is assumed that total bag use would be 22% plastic bags, 14% paper bags, and 64% reusable bags.³ Table 6-16 summarizes the anticipated changes in bag distribution as a result of a \$0.10 mandatory charge for carryout bags under this alternative compared to the ban on plastic bags and charge for paper bags under the Proposed Ordinance.

Table 6-16
Estimated Bag Use: Proposed Ordinance versus Alternative 5

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 5**
Single-Use Plastic	32,912,070	144,813,109
Single-Use Paper	197,472,422	92,153,797
Reusable	8,228,018	8,101,433
Total	238,612,510	245,068,339

* Refer to Table 2.2 in Section 2.0, Project Description

** Based on an assumption of 22% of plastic bag use in the Study Area to remain, 14% conversion to paper and 64% conversion to reusable bags (based on 52 uses per year).

6.5.2 Impact Analysis

a. Air Quality. As described in Section 2.0, *Project Description*, it is anticipated that the Proposed Ordinance would replace the total volume of single-use plastic bags currently used in the Study Area with approximately 197.5 million paper and 8.2 million reusable bags assumed for the Proposed Ordinance (or 95% of the plastic bags), leaving 5% of the plastic bags in circulation (or approximately 32.9 million bags, as shown in Table 6-16 above). This alternative would allow all retail establishments to provide single-use plastic or paper carryout bags to customers at the point of sale for a charge of \$0.10. This alternative assumes that some plastic and paper bags would still be used, though fewer paper bags would be used than if plastic bags were banned. Also, because of a charge for paper and plastic bags, a shift towards reusable bags would occur. Alternative 5 would result in the use of approximately 6.5 million more total bags (including single-use plastic, paper, and reusable) than the Proposed Ordinance because plastic bags, although regulated with a \$0.10 charge, would still be permitted for use at all retail establishments. However, because Alternative 5 assumes fewer paper bags will be used

³ Rates from Herrera Environmental Consultants, 2010. The Herrera report assumes that if there is a \$0.10 charge on plastic and paper bags, bags use would be 10% paper, 22% plastic, and 64% reusable. They also assume 4% would switch to no bag. For the purposes of this analysis, we conservatively assume that instead of no bag, the remaining 4% would convert to paper bags.



compared with a ban on plastic bags, air pollutant emissions associated with bag manufacture, transportation, and disposal would be decreased when compared to the Proposed Ordinance. Table 6-17 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 5, as compared to the Proposed Ordinance.

**Table 6-17
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 5**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	144,813,109	1.0	0.023	3,331	1.0	1.084	156,977
Single-use Paper	92,153,797	1.3	0.03	2,765	1.9	2.06	189,837
Reusable	8,101,433	1.4	0.032	259	3.0	3.252	26,346
Alternative 5 Total				6,355	Alternative 5 Total		373,160
Proposed Ordinance Total				6,944	Proposed Ordinance Total		469,227
Difference				(590)	Difference		(96,067)
Existing Total (without an Ordinance)				15,140	Existing Total (without an Ordinance)		713,534
Net Change of Alternative 5 (Alternative 5 Total minus Existing Total)				(8,785)	Net Change of Alternative 5 (Alternative 5 Total minus Existing Total)		(340,374)

Source: Refer to Table 4.1-5 in Section 4.1, Air Quality.

() = reduction of emissions compared to existing conditions.

As shown in Table 6-17, because this alternative would reduce the number of paper bags used in the Study Area, the contribution to ground level ozone would decrease by approximately 590 kg per year (an 8% decrease) and the contribution to atmospheric acidification would decrease by approximately 96,067 kg per year (a 15% decrease) when compared to the Proposed Ordinance.

To estimate mobile emissions resulting from Alternative 5, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-18, Alternative 5 would result in an estimated 567 truck trips per year, or 1.55 truck trips per day, which is lower than the Proposed Ordinance but would be more than the existing number of truck trips related to delivering single-use plastic bags.



**Table 6-18
 Estimated Truck Trips per Day
 Following Implementation of Alternative 5**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	144,813,109	2,080,000	70	0.19
Single-use Paper	92,153,797	217,665	423	1.16
Reusable	8,101,433	108,862	74	0.20
Alternative 5 Total			567	1.55
Proposed Ordinance Total			999	2.74
Difference			(431)	(1.18)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 5 (Alternative 5 Total minus Existing Total)			251	0.69

*City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.
 Refer to Appendix A.
 () = reduction of emissions compared to existing conditions.

Based on the estimated truck trips for Alternative 5, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-19, this alternative would reduce truck trips and reduce daily emissions compared to the Proposed Ordinance. Though truck trips and the associated mobile emissions would be increased compared to existing conditions, these emissions would not exceed SBCAPCD or VCAPCD thresholds.

**Table 6-19
 Operational Emissions Associated with Alternative 5**

	Emissions (lbs/day)		
	ROG	NO_x	PM₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 5	0.03	0.15	0.02
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Source: URBEMIS 2007 calculations for Vehicle. See Appendix F for calculations



Alternative 5 would reduce air quality impacts compared to the Proposed Ordinance. Impacts resulting from bag manufacturing and use (ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to truck emissions would be Class III, *less than significant* compared to existing conditions.

b. Biological Resources. This alternative would implement a mandatory \$0.10 charge for both single-use plastic and paper carryout bags at certain retailers, thereby reducing the amount of single-use plastic and paper bag litter that could enter the marine environment and affect sensitive species. Compared to the Proposed Ordinance, this alternative would further reduce the amount of paper bag litter that could enter the marine environment. However, this alternative would result in an increase in plastic bag use (from 5% under the Proposed Ordinance, to 22% under Alternative 5), as compared to the Proposed Ordinance. As a result, the Class IV, *beneficial*, effects to marine species from Alternative 5 would be slightly reduced as compared to the Proposed Ordinance.

c. Greenhouse Gas Emissions. Compared to the Proposed Ordinance, this alternative would be expected to reduce the paper bags by approximately 105 million bags and the number of reusable bags by approximately 127,000. The number of plastic bags would increase by approximately 112 million compared to the Proposed Ordinance. As noted in Section 4.3, *Greenhouse Gases*, the manufacture, transport, and disposal of each paper bag results in 3.3 times the emissions of a single-use plastic bag. The increased use of paper bags would increase GHG emissions. Table 6-20 provides an estimate of GHG emissions that would result from the reduction of carryout bags as a result of implementation of Alternative 5.

Compared to the Proposed Ordinance, GHG emissions under Alternative 5 would decrease by approximately 9,592 metric tons CO₂E per year or 0.0077 metric tons CO₂E per person per year. Compared to existing conditions without an Ordinance, this alternative would increase GHG emissions by approximately 1,327 metric tons per year or approximately 0.0011 CO₂E per person per year. Therefore, GHG impacts associated with Alternative 5 would be reduced when compared to the Proposed Ordinance, and would be Class III, *less than significant*, compared to existing conditions.

**Table 6-20
 Estimated Greenhouse Gas Emissions from Alternative 5**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year¹	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO₂E)	CO₂E per year (metric tons)	CO₂E per Person (metric tons)⁵
Single-use Plastic	144,813,109	1	0.04 per 1,500 bags ²	3,862	0.0031
Single-use Paper	92,153,797	2.97	0.1188 per 1,000 bags ³	10,948	0.0088
Reusable	8,101,433	2.6	0.104 per 1,000 bags ⁴	843	0.0007
<i>Subtotal</i>				15,652	0.0126
Washing					
Bag Type	# of Loads per Year⁶	Electricity Use Per Load (kW)⁷	Total Electricity Use Per Year (kW)	CO₂E per year (metric tons)⁸	CO₂E per Person (metric tons)
Reusable	3,557,702 2,558,347	3.825	9,938,578 9,785,678	3,228	0.0026
<i>Subtotal</i>				3,228	0.0026
Total GHG Emissions from Alternative 2 5				18,880	0.0152
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(9,592)	(0.0077)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				1,327	0.0011

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

d. Hydrology and Water Quality. Similar to the Proposed Ordinance, this alternative would reduce the number of single-use plastic bags used in the Study Area, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would reduce the number of paper bags compared to the Proposed Ordinance (by approximately 105 million bags) and would incrementally reduce the number of reusable bags compared to the Proposed Ordinance (a reduction of approximately 126,585 reusable



bags). However, the decrease in paper and reusable bag use is offset by an increase in plastic bag use as compared to the Proposed Ordinance (an increase of approximately 112 million single-use plastic bags. As a result of the increase in plastic bag use, this alternative would increase overall litter compared to the Proposed Ordinance. An incremental increase in the amount of plastic bag litter that could enter storm drains and local waterways would incrementally degrade water quality and incrementally increase the potential for storm drain blockage. However, like the Proposed Ordinance, Alternative 5 would result in an overall reduction in the quantity of single-use plastic bags used in the Study Area, compared to existing conditions. Therefore, like the Proposed Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. However, overall benefits would be somewhat less under this alternative since more plastic bags would be used in the Study Area.

This alternative would implement a mandatory \$0.10 fee for each single-use paper and plastic carryout bag distributed by retailers (except restaurants) within the Study Area. This alternative would actually reduce the number of paper and reusable bags manufactured for use in the region. However, Alternative 5 would increase the number of single-use plastic bags manufactured for use in the region compared to the Proposed Ordinance. Thus, impacts to water quality from altering bag processing activities would be slightly increased under this alternative compared to the Proposed Ordinance which would reduce plastic bag use. In addition, under this alternative, the use of single-use plastic bags would be reduced by 40% compared to existing conditions. Furthermore, as described in Section 4.4, *Hydrology and Water Quality*, manufacturing facilities would be required to adhere to existing federal, state and local regulations. Thus, this alternative would result in a Class III, *less than significant* impact. However, overall benefits would be somewhat less under this alternative as more plastic bags would be used in the Study Area compared to the Proposed Ordinance.

e. Utilities and Service Systems. Compared to the Proposed Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 105 million and reduce the number of reusable bags by approximately 126,585. The number of single-use plastic bags would increase by approximately 112 million bags as compared to the Proposed Ordinance. Because 1% fewer reusable bags would be used under this alternative as compared to the Proposed Ordinance, water demand and wastewater generation associated with washing reusable bags would also decrease by 1%. This equates to a net decrease of an estimated 4.7 AFY of water and a net decrease of an estimated 4,200 gallons per day of wastewater compared to the Proposed Ordinance. Though this alternative would increase water and wastewater generation compared to existing conditions, as noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater treatment capacity to meet this demand. Therefore, impacts would be slightly reduced than those of the Proposed Ordinance, but would remain Class III, *less than significant*, compared to existing conditions.

Using the more conservative solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a reduction of 0.45 tons/day of solid waste compared to existing conditions (calculations are contained in Appendix F). In comparison, the Proposed Ordinance would generate 4.97 tons/day. Therefore, Alternative 5 would generate less solid waste than the Proposed Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing capacity at area



landfills. Therefore, solid waste impacts would be reduced when compared to the Proposed Ordinance, and would be Class IV, *beneficial*.

6.6 ALTERNATIVES CONSIDERED BUT REJECTED

As required by Section 15126.6 (c) of the *CEQA Guidelines*, this subsection identifies those alternatives that were considered but rejected by the lead agency because they either did not meet the objectives of the project or could not avoid or substantially lessen one or more of the significant effects. Five alternatives were considered and were rejected as infeasible for not meeting the basic project objectives.

No Charge for Paper Bags

The first alternative that was considered but rejected is to ban single-use plastic carryout bags, but not charge for paper bags at retailers in the Study Area. *CEQA Guidelines* § 15126.6 requires that an EIR consider a range of reasonable alternatives to a proposed project, which would feasibly obtain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. This alternative was rejected because it would not deter customers from using paper bags, which have greater impacts related to air quality, GHG emissions, and water quality than plastic bags on a per bag basis. In addition, this alternative would not achieve the Proposed Ordinance's objective of promoting a shift toward the use of reusable carryout bags by retail customers to as great a degree as would occur with the Proposed Ordinance. Objectives of the Proposed Ordinance are outlined in Section 2.0, *Project Description*.

Exception for Biodegradable or Compostable Bags

The second alternative considered, but ultimately rejected, involved incorporating an exception into the Proposed Ordinance for plastic bags made with biodegradable or compostable additives. This alternative was rejected from consideration because the environmental impacts associated with using biodegradable and compostable additives are uncertain at this time. Researchers at California State University Chico Research Foundation tested the degradation of biodegradable bags in composting conditions, and found that they did not degrade (CIWMB 2007; Green Cities California MEA, 2010). Furthermore, these bags reduce the quality of recycled plastics when introduced into the recycling stream and so must be kept separate to avoid contaminating the recycling stream (CIWMB 2007; Green Cities California MEA, 2010). Therefore it is unclear what environmental impacts may be associated with switching to plastic bags made with biodegradable additives or water soluble bags. In addition, this alternative would not achieve the objectives of reducing the amount of single-use plastic and paper bags in trash loads (e.g., landfills), in conformance with the trash load reduction requirements of the NPDES Municipal Regional Permit, promoting a shift toward the use of reusable carryout bags by retail customers, and avoiding litter and the associated adverse impacts to stormwater systems, aesthetics and the marine environment.

Mandated Retailer Incentives

The third alternative considered, but ultimately rejected, would require retailers to offer incentives for customers to use reusable bags (such as paying customers) rather than banning



single-use bags. While this alternative may deter some customers from using single-use plastic and paper bags, it may not promote the shift to reusable carryout bags by retail customers as effectively and would place a financial burden on the Study Area retailers.

Plastic Bag Deposit Program

The fourth alternative considered but rejected would involve establishing a deposit program for plastic bags instead of a ban. This deposit program would be similar to California's "Bottle Bill" that places a \$0.05 to \$0.10 charge on beverage containers that is returned to customers when they recycle their containers. This alternative was rejected because it would not achieve the Ordinance's objectives, including deterring the use of paper bags and promoting a shift toward the use of reusable bags. Though AB 2449 currently requires applicable retail stores to provide a plastic bag collection bin, only about 5% of plastic bags are actually recycled. Further, although some recycling facilities handle plastic bags, most recycling facilities reject plastic bags because they get caught in the machinery and cause malfunctioning or are contaminated after use (Green Cities California MEA, 2010; Boustead, 2007).

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This subsection identifies the environmentally superior alternative. Alternative 4, the Ban on Both Single-use Plastic and Paper Carryout Bags alternative, would be considered environmentally superior among the alternatives, as it would have greater overall environmental benefits compared to the Proposed Ordinance. In addition, this alternative would result in beneficial effects to the environment compared to existing conditions in the areas of air quality, biological resources, GHG emissions, hydrology/water quality and utilities and service systems. This alternative would also meet the project objectives, including:

- *Reducing the environmental impacts related to single use plastic carryout bags, such as impacts to biological resources (including marine environments), water quality and utilities (solid waste equipment and facilities)*
- *Deterring the use of paper bags by retail customers*
- *Promoting a shift toward the use of reusable carryout bags by retail customers*
- *Reducing the amount of single-use bags in trash loads to reduce landfill volumes*
- *Reducing litter and the associated adverse impacts to stormwater systems, aesthetics and marine and terrestrial environments*

It should be noted that the Proposed Ordinance would not result in any significant impacts; therefore, adopting the environmentally superior alternative, Alternative 4, rather than the Proposed Ordinance would not avoid any significant environmental effects.

Table 6-21 compares the impacts for each of the alternatives with the impacts associated with the Proposed Ordinance.



**Table 6-21
 Impact Comparison of Alternatives with the Proposed Ordinance**

Issue	Proposed Ordinance	Alt 1: No Project	Alt 2: Ban on Plastic Bags at all Retail Establishments	Alt 3: Mandatory Charge of \$0.25 for Paper Bags	Alt 4: Ban on Both Single-use Plastic and Paper Carryout Bags	Alt 5: Mandatory Charge of \$0.10 for Plastic and Paper Bags
Air Quality	=	-	= / -	+	+	= / +
Biological Resources	=	-	= / +	= / +	= / +	= / -
Greenhouse Gas Emissions	=	= / +	= / -	+	+	+
Hydrology/Water Quality	=	-	= / +	= / +	+	= / -
Utilities and Service Systems	=	+	= / -	= / +	= / +	= / +

+ Superior to the proposed project (reduced level of impact)
 - Inferior to the proposed project (increased level of impact)
 = / + slightly superior to the proposed project in one or more aspects, but not significantly superior
 = / - slightly inferior to the proposed project in one or more aspects, but not significantly inferior
 = Similar level of impact to the proposed project



7.0 REFERENCES AND REPORT PREPARERS

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Martin, Bobbie. General Manager. Santa Ynez Community Services District. Personal Communication. December 19, 2012.

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Riley, Michael. General Manager. Mission Hills Community Services District. Personal Communication. October 29, 2012.

Ronald, Sheets. Operations Superintendent. Ojai Valley Sanitary District. Personal Communication. December 19, 2012.

7.3 REPORT PREPARERS

This EIR was prepared by Rincon Consultants, Inc., under contract to BEACON. Consultant staff involved in the preparation of the EIR are listed below.



Rincon Consultants, Inc.

Joe Power, AICP CEP, Principal

Matt Maddox, MESM, Project Manager

Megan Jones, Senior Planner

Jessica Tibbett Hamill, MAIEP, Associate Environmental Planner

Karly Kaufman, MESM, Associate Environmental Planner

Carie Wingert, Associate Biologist

Katherine Warner, Graphics Technician

Katie Stanulis, Production Coordinator



8.0 RESPONSES TO COMMENTS ON THE DRAFT EIR

CEQA Guidelines Section 15088 requires that the lead agency evaluate public comments on environmental issues included in a Draft EIR and prepare written responses to those comments. Pursuant to *CEQA Guidelines* Section 15088(b), “[t]he written responses shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the lead agency’s positions are at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted.” The *CEQA Guidelines* call for responses that contain a “good faith, reasoned analysis” with statements supported by factual information. Corrections or additional text discussed in the responses to comments are also shown in the text of the Final EIR in ~~strikethrough~~ (for deleted text) and underline (for added text) format.

BEACON received 12 comment letters on the Draft EIR for the Single Use Carryout Bag Ordinance. The comment letters are listed below. The letters and responses follow.

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1. Anthony van Leeuwen	8-3
2. Anthony van Leeuwen	8-63
3. Kathi King, Community Environmental Council	8-84
4. Stephen L. Joseph, Counsel, Save the Plastic Bag Coalition	8-87
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7. Das Williams, Assemblymember, 37 th District	8-251
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9. Bill Hickman, Rise Above Plastics Coordinator, Surfrider Foundation; Kirsten James, Water Quality Director, Heal the Bay; and, Leslie Mintz Tamminen, Ocean Program Director, Seventh Generation Advisors	8-257
10. Nathan G. Alley, Staff Attorney, Environmental Defense Center	8-273



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11. Dave Singleton, Program Analyst, Native American Heritage Commission	8-277
12. Stephen L. Joseph, Counsel, Save the Plastic Bag Coalition	8-283



Letter 1

4 March 2013

Mr. Gerald Comati, P.E.
Program Manager
Beach Erosion Authority for Clean Oceans and Nourishment
206 East Victoria Street
Santa Barbara, CA 93101

Subj: Comments on the Draft Environmental Impact Report (DEIR)

Ref: (a) Notice of Availability of a Draft Environmental Impact Report BEACON Single Use Carryout Bag Ordinance dated 12 February 2013

Encl: (1) "A Discussion On Project Objectives and Goals", by Anthony van Leeuwen, dated 4 march 2013
(2) "Bag Quantity Assumptions", by Anthony van Leeuwen, dated 4 march 2013
(3) "Detailed Comments on BEACON Draft EIR", by Anthony van Leeuwen, dated 4 march 2013
(4) "Recommendations On The Proposed Model Ordinance", by Anthony van Leeuwen dated 4 march 2013

1. In accordance with reference (a) the following information is submitted as public input regarding the content of the Draft EIR and the proposed project.
 - a. Enclosure (1) recommends wording and structural changes to the project objectives and goals for completeness and accuracy. These recommendations should be evaluated by BEACON as there may be a minor impact to the final EIR and the proposed project.
 - b. Enclosure (2) recommends that the quantity of plastic carryout bags assumed to be used by Californians be reduced to a reasonable number that correspond more closely with actual observations. The current Draft EIR overstates the estimated quantity of plastic carryout bags and the resulting impact ripples throughout the EIR including inflated numbers for paper bags and reusable carryout bags. An alternative methodology is provided to determine a reasonable quantity for both plastic carryout bags, paper bags, and reusable carryout bags. The smaller quantity of bags will have a beneficial impact on environmental calculations in various sections of the EIR.
 - c. Enclosure (3) provides a list of detailed comments on the Draft EIR.
 - d. Enclosure (4) is submitted for consideration by BEACON and involve changes to the proposed project, the proposed model ordinance, and/or deal with issues that might be deemed outside the scope of the EIR. These issues will need to be addressed by BEACON or decision makers who implement the proposed ordinance or one of the recommended alternatives.
2. The Draft EIR fails to adequately discuss the impact of ongoing projects and their overlap and duplication with the proposed project and ordinance. The Trash Total Maximum Daily Loads (TMDL) program requires municipalities to install trash screens on storm drain outfalls that discharge into area rivers. The trash screens will prevent trash, including plastic carryout bags, from being discharged into the river and to the ocean. It is well documented that 80% of plastic bags and plastic debris in the ocean originate from land based sources and are conveyed to the ocean by storm drains and rivers. In other words, the TMDL program solves a major part of the

1.1

environmental problem that the proposed project attempts to solve. Hence, project overlap and duplication. In addition, it should be noted that the installation of trash screens on storm drain outfalls is a far more effective solution than banning a single product as the proposed ordinance intends to do. Furthermore, the descriptions of the environmental damage in the EIR that describe plastic bags flowing out of storm drains into the river and ocean are statements that were true in the past. These descriptions of environmental damage should be modified to reflect conditions following the installation of trash screens on storm drain outfalls and the completion of all ongoing projects in 2012 and 2013. An accurate and complete statement of the remaining environmental damage by plastic carryout bags should be included since the merit and justification of the project depends upon this statement. Since the TMDL program has eliminated the most serious of the environmental impacts of plastic carryout bags, the problem that remains is basically a roadside litter and aesthetics problem. That problem would be better addressed as a litter problem because plastic carryout bags comprise less than 1% of roadside litter. The public and their elected representatives deserve an accurate and clear understanding of the overlapping TMDL projects and the proposed project and ordinance and the specific environmental problems that each project solves or intends to solve.

3. This memorandum and enclosures are submitted in accordance with reference (a) and should become part of the official record regarding the preparation of this EIR and development of model ordinances. For more information, please feel free to contact Mr. Anthony van Leeuwen at 805-647-4738 or by email at vanleeuwenaw@roadrunner.com.

Respectfully,

Anthony van Leeuwen

1.1

A DISCUSSION ON PROJECT OBJECTIVES AND GOALS

BEACON Single Use Bag Ordinance

By

Anthony van Leeuwen

4 March 2013

The BEACON objectives identified in the Draft EIR for the Single Use Bag Ordinance are not only poorly worded and formulated but are overly restrictive so as to limit the full range of potential solutions to a single pre-conceived solution. Therefore, it is imperative that BEACON, in the public interest, re-examine the proposed objectives and consider adopting the new wording recommended in this paper. This new wording will not impact the substance of the proposed ordinance but may result in the consideration of one or more alternatives and the possibility of adding of new features. The purpose of this paper is to show how the project objectives should be structured and worded. The following are the objectives as stated in the Draft EIR except they are numbered in order to refer to them as objectives 1 through 5.

1.2

1. Reducing the environmental impacts related to single use plastic carryout bags, such as impacts to biological resources (including marine environments), water quality and utilities (solid waste equipment and facilities)
2. Deterring the use of paper bags by retail customers
3. Promoting a shift toward the use of reusable carryout bags by retail customers
4. Reducing the amount of single-use bags in trash loads to reduce landfill volumes
5. Reducing litter and the associated adverse impacts to storm water systems, aesthetics and marine and terrestrial environments

Objective 1 is overly broad with the reference to “utilities (solid waste equipment and facilities)” and this wording should be removed. The environmental elements of objective 5 should then be incorporated as follows: “Reduce or eliminate the environmental impacts related to single use plastic carryout bags as litter including impacts to biological resources and marine and terrestrial environments, water quality, storm water systems, and aesthetics.” As restated the objective is concrete, specific, and measurable. In addition, the restated objective is valid because it is supported by past environmental impacts from single-use plastic carryout bags. As restated the objective provides a better focus to the scope of the intended project which is to protect the environment.

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Objective 2 is not a valid objective because there is no negative documented environmental impact associated with use of paper carryout bags that has any significance that would mandate elimination or a reduction in use. The use of paper carryout bags is one of the alternatives specified, although not the

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recommended solution, to the elimination or reduction of plastic carryout bags. The use of paper carryout bags is increased in the proposed ordinance from the status quo, and either stays the same or increases or decreases in the five recommended alternatives. Hence, objective 2 is really an optional goal. Desired but not required.

1.4

Objective 3 is also not a valid objective. Objective 3 states that it “promotes a shift” from one product to another. This objective has already been achieved since some people have shifted from plastic carryout bags to reusable carryout bags. This should be rephrased to *encourage* the use of reusable bags or no bag at all. In the proposed ordinance the consumer has three choices: a recyclable paper bag, a reusable bag, or no bag. If consumers all choose either recyclable paper bags or no bags ,or a combination of the two, the objective would fail. Again the use of reusable carryout bags would increase in the proposed ordinance, but not necessarily in all of the five recommended alternatives. Hence, objective 3 is really an optional goal. Desired but not absolutely required.

1.5

Objective 4 is valid because California State Law establishes a goal of 50% for the reduction in the amount of material going to the landfill. Some municipalities in the study area have set much higher goals for waste reduction. This is accomplished through combination of diversion through recycling and reuse, or by reduction and prevention. Objective 4 focuses on reduction of waste by prevention. Again, the volume of material going to the landfill increases with the proposed ordinance and either stays the same or increases or decreases with the five alternatives. Hence objective 4 is also an *optional* goal. Desired but not absolutely required.

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Furthermore, Objective 4 is incomplete in that it does not consider diversion of material to recycling activities or to potential reuse as a method to achieve reduction of material headed to the landfill. Hence a related goal should be to encourage the recycling of plastic, paper, and reusable bags vice disposal in the landfill. This addition is needed for completeness.

Objective 5 is valid but the items mentioned here were included in the restatement of Objective 1.

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At this point the original objectives are reformulated as a primary objective and optional secondary goals and summarized as follows:

Objectives:

- a. Reduce or eliminate the environmental impacts related to single use plastic carryout bags as litter including impacts to biological resources and marine and terrestrial environments, water quality, storm water systems, and aesthetics.

Goals:

- a. (*Optional*) Discourage the use of paper bags by retail customers.
- b. (*Optional*) Encourage the use of reusable carryout bags or no bags by retail customers.
- c. (*Optional*) Reduce the amount of material in trash loads to reduce landfill volumes.
- d. (*Optional*) Increase the diversion of material to recycling activities to reduce landfill volumes.

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The question you might be asking is why change the original BEACON objectives to a single objective and several optional goals? First, the objective should be narrow, precise, tangible, concrete and one whose achievement can be validated. The optional goals reflect desired outcomes but their achievement will vary depending upon whether decision makers choose the proposed ordinance or one of the alternatives specified in the EIR. Second, by reformulating the original objectives into a single objective with four optional goals we increase the universe of alternative solutions that can achieve the objective and potentially provide a better project outcome. In addition, we have the option of adding a recycling component to the proposed project and ordinance.

For example, the public will ask the question “If plastic carryout bags are bad for the environment, why not just ban plastic carryout bags and leave it at that?” This alternative to ban plastic bags and not charge for paper bags is listed as “No Charge for Paper Bags” in the section **Alternatives Considered but Rejected** because it did not meet the original project objectives. This alternative will meet the reformulated objectives and goals and therefore could be evaluated, after all it is a return to conditions prior to the introduction of plastic carryout bags. The public interest will then be well served, if this alternative is evaluated and decision makers can intelligently discuss with the public the environmental pros and cons in comparison with the proposed ordinance or the alternatives that have already been considered.

Another example, is the proposed ordinance to ban plastic carryout bags will also see an increase in the use of single-use plastic produce bags to package produce, meat, and frozen foods to prevent contamination of reusable bags or to preserve the integrity of paper bags. These single-use bags are also lightweight and could become windblown litter if not properly disposed of. Hence, a recycling component needs to be added to the proposed ordinance.

↑
1.8

BAG QUANTITY ASSUMPTIONS

BEACON Single Use Carryout Bag Ordinance

By

Anthony van Leeuwen

4 March 2013

Plastic Carryout Bags

The BEACON Single Use Carryout Bag Ordinance Draft Environmental Impact Report (EIR) assumes that Californians use 20 billion plastic carryout bags per year or 531 bags per capita (Draft EIR, paragraph 2.3.1.a and 2.3.1.b) . While this number is widely accepted it is important to determine if this number is reasonable and in the ball park. The quantity of plastic carryout bags used in the EIR will affect a number of assumptions and environmental calculations throughout the document. If the quantity is understated or overstated and outside the ballpark the quantitative results in the EIR will be skewed and the document will be of little value since the numbers would be bogus. Decision makers will then make decisions based on bogus data that could potentially result in further harming of the environment. My contention is that this number is unreasonable and overstated and needs to be changed to a lower number.

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Is 20 Billion Plastic Carryout Bags A Reasonable Number?

First, let's do a quick sanity check. The draft EIR assumes that Californians use 20 billion plastic carryout bags per year or 531 plastic carryout bags for every man, women, and child. A family of four would use 4 x 531 or 2,124 bags per year or about 41 plastic carryout bags per week. This number is simply too large. A more appropriate number might be in the range of 15 to 20 bags per week. Especially, if the family does most of their shopping at the big box stores, like Costco and Sam's Club. So, the 20 billion number does NOT pass the quick sanity check.

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Where Does The 20 Billion Plastic Carryout Bag Number Come From?

Many people will be surprised to learn that the 20 billion plastic carryout bag number comes straight from the landfill. The California Integrated Waste Management Board (CIWMB), a now defunct agency, published a report titled "California 2008 Statewide Waste Characterization Study" wherein they identified the composition of material dumped in California's landfills by different material classes. The material class we are interested in is called "Plastic Grocery and Other Merchandise Bags." The weight of material in each class was determined by sampling and extrapolating the results to the weight of all material dumped in the landfill during the reporting period. The report contains tables for overall, residential, commercial, and various miscellaneous categories such as self-haul, etc.

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How Are the Quantity Of Plastic Carryout Bags Determined?

Table 1, below, shows the quantity of plastic carryout bags calculated for both California and United States as a whole. The California data was obtained from CIWMD and the United States data was obtained from a report published by the United States Environmental Protection Agency (EPA). The quantity of bags is calculated by dividing the estimated weight in landfills by the weight per bag. The weight per bag used is the average weight of an HDPE plastic carryout bag. As you can see, for California in the Overall Category a quantity of 20,347,073,372 plastic carryout bags are calculated for a per capita quantity of 535 bags. These number are very close to the quantities assumed in the Draft EIR.

Table 1. Plastic Carryout Bags Calculated From Landfill Contents

Jurisdiction	Category or Sector	Estimated Weight (tons)	Weight Per Bag	Quantity	Population (2012)	Bags Per Capita
California ⁱ	Overall	123,405	0.01213 lbs.	20,347,073,372	38,041,430	535
	Residential	77,736	0.01213 lbs.	12,817,147,568	38,041,430	337
	Commercial	45,669	0.01213 lbs.	7,529,925,804		
	Grocery Store	54,298	0.01213 lbs.	8,952,679,307	38,041,430	235
USA ⁱⁱ	Overall	770,000	0.01213 lbs.	126,958,000,000	313,914,040	404

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Similarly, for the United States a quantity of 126,958,000,000 plastic carryout bags are calculated for a per capita quantity of 404 bags.

Are The Quantities Calculated From Estimated Landfill Weights Accurate?

In Table 1, the estimated weight for the California “Overall” category is derived from the “Plastic Grocery and Other Merchandise Bags” material class in the California 2008 Statewide Waste Characterization Study. This material class is defined in the Waste Characterization Study as follows:

Plastic Grocery and Other Merchandise Bags means plastic shopping bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase. This type includes dry cleaning bags intended for one-time use. Does not include produce bags.

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In other words, the estimated weight of 123,405 tons for the “plastic grocery and other merchandise bags” material class is corrupted by the inclusion of the weight of dry cleaning bags! Since the proportion of dry cleaning bags cannot be determined, there is no way to adjust the estimated weight to remove the effect of the dry cleaning bags. Since dry cleaning bags are not regulated in the proposed ordinance or alternatives, and since dry cleaning bags weigh more than HDPE plastic carryout bags, the result of any calculation will result in an inflated and skewed number of plastic carryout bags.

Other Factors That Undermine Calculating Bag Quantities From Landfill Weights

First, the estimated weight for the “plastic grocery and other merchandise bags” material class represents less than 0.3% of the total weight of all material deposited in the landfill in 2008. Therefore,

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the number's accuracy should be questioned even though the CIWMB report claims a 90% confidence factor.

Second, the "plastic grocery and other merchandise bags" material class contains not only grocery store bags but also other plastic merchandise bags from other retailers. These bags are made not only from different plastic resins but also have different weights. For example, Target's LDPE bag weighs 9.3 grams, an LDPE dry cleaning bag weighs 36 grams, and HDPE bags from a variety of grocery stores and retailers can weigh between 4.0 and 6.5 grams each. The average weight of an HDPE bag is 5.5 grams. The average weight of plastic carryout bags in the landfill is unknown. Therefore calculating the quantity of bags from landfill weights using the average weight of an HDPE bag will provide an inflated and incorrect quantity.

Third, from Table 1, we see that California has 12% of the nation's population and yet uses 16% of the nation's plastic carryout bags. Again this is an indication that this methodology does not provide a reasonable quantity.

Fourth, if you compare the quantities calculated for the residential sector to the commercial sector you will find that for every 5 plastic carryout bags used by the residential sector, the commercial sector uses 3 bags. This does not make sense. Again, this is an indication that the data from the California Integrated Waste Management Board (CIWMB) is not a reliable source of information to use in determining a reasonable quantity for the total number of carryout bags used by Californians.

How To Determine A Reasonable Number Of Plastic Carryout Bags

In 2006, the California legislature passed AB 2449. AB 2449 among other things, required grocery and retail stores subject to AB 2449, to report the total weight of plastic carryout bags purchased and the total weight of plastic carryout bags that were recycled on annual basis. CalRecycle then compiled the data submitted and published it. Table 2 contains the weight of bags purchased and the number of bags was calculated in a manner similar to what was done above. Note the quantities are much more reasonable.

Table 2. Quantity of Bags Purchased

Year	Bags Purchased (tons)	Weight Per Bag	Bags Purchase
2007 (1 Jul to 31 Dec)	24,600	0.01213 lbs.	4,056,059,357
2008	54,000	0.01213 lbs.	8,903,544,930
2009	53,000	0.01213 lbs.	8,738,664,468
2010	39,570	0.01213 lbs.	6,524,319,868
2011	31,258	0.01213 lbs.	5,153,833,471

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It should be noted that in Table 2 the quantity of plastic carryout bags purchased in 2008 is very similar the quantity of plastic carryout bags in the Table 1 Grocery Store category. It should be noted that the Table 1 grocery store category was derived from a comment in the California 2008 Statewide Waste Characterization Study denoting the fractional part that consisted of grocery store bags.

If we use the 8.9 billion bag figure from Table 1 with 235 bags per capita, a family of four would use 940 bags per year or 18 bags per week. This number is more reasonable and corresponds closely with reality.

Even if the number was bumped up to 10 billion plastic carryout bags per year, in order to ensure that all bags were accounted for by retailers not subject to AB 2449, the per capita quantity would compute to 263 bags. For a family of four this would mean 1052 bags per year or 20 bags per week. This number is more reasonable than the 20 billion bags estimated from landfill quantities.

Are These Quantities Any More Accurate?

The quantity of plastic carryout bags calculated from the total weight of plastic carryout bags purchased also has a number of issues. Retailers purchased both HDPE and LDPE bags. The average weight of bags purchased is unknown. Hence, dividing the weight by the average weight of an HDPE bag also will result in an inflated number. So the question becomes – since both methods to calculate the number of bags from landfill weights or purchased weights are inflated – which numbers appear to provide a more reasonable per capita and per week quantity for an average family that correlates with actual observations.

Plastic Bag Quantity Recommendation

It is recommended that BEACON revise the assumption for the quantity of plastic carryout bags used by Californians. A number such as **9** or **10 billion** would be more in the ball park than the 20 billion plastic carryout bags cited in the Draft EIR.

Paper Bags

The study area has a population of 1,239,626 who use 658,241,406 plastic carryout bags per year based upon 531 bags per capita (Draft EIR page 2-7). The Draft EIR assumes that 30% of these bags would be replaced on a one for one basis by paper bags or a total of 197,472,422 paper bags.

By revising the total number of plastic carryout bags for California, as discussed above, to a reasonable and lower number, the number of paper bags estimated in the EIR will also be decreased to around 97,806,492. This would be beneficial to environmental calculations in the EIR.

Reusable Bags

The study area has a population of 1,239,626 who use 658,241,406 plastic carryout bags per year based upon 531 bags per capita (Draft EIR page 2-7). The proposed ordinance assumes that 65% of the plastic carryout bags in the study area would be replaced by reusable bags. The number of reusable bags is



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calculated by multiplying the number of plastic carryout bags in the study area by 65% and then dividing by 52 yielding a quantity of 8,228,018 reusable bags in the study area. ↑ 1.20

Is 8,228,018 Reusable Bags A Reasonable Number?

Let's do a quick sanity check on this number. If 100% of the plastic carryout bags are used by 100% of the study area population, then it follows that 65% of the plastic carryout bags would be used by 65% of the study area population or 805,757 people. This means that the 8,228,018 reusable bags would be used by 805,757 people or 10.2 reusable bags per capita. For a family of four this would equate to 41 reusable bags. Again, the number is unreasonable since a family of four would have 8-15 reusable bags. Hence the number cited in the Draft EIR is **unreasonable**. 1.21

Assumptions From The Initial Study

In the Initial Study for the Single Use Carryout Bag Ordinance located in Appendix A of the Draft EIR, the number of reusable bags is calculated by dividing 65% of the estimated plastic carryout bags used in the study area by 52 resulting in 8,228,018 bags. The Initial Study then assumes that the 8,228,018 reusable bags are used by the study area population of 1,239,626 people for approximately 6.6 or 7 bags per capita. In addition, the assumption is made each person in the study area would purchase 7 reusable bags per year. So that begs the question "***If everyone in the study area is using reusable bags, then who is using the 197, 472,422 paper bags?***" Overlooking that conceptual error, the question is the total quantity of reusable carryout bags and the number of bags per capita reasonable? Again for a quick sanity check, a family of four would use 4 x 7 or 28 reusable bags per year. Again, the number is unreasonable since a family of four would have 8-15 reusable bags. Hence the number and assumptions cited in the Initial Study are **unreasonable** as well. 1.22

How To Determine A Reasonable Number Of Reusable Bags

The proper way to determine the number of reusable bags is to tie the quantity to the number of households in the study area. For the proposed ordinance it was assumed that 65% of the study area population or 805,757 people would use reusable bags. The average household size in California is 3 people (2.91 persons rounded up). We then calculate the number of households by dividing 805,757 by 3 and then multiplying by the average number of reusable carryout bags per household. The average number per household is between 8 and 15 reusable bags. If you assume that the average number is 12 then you would obtain a quantity of 3,223,028 reusable bags. If we convert that household of 3 people to bags-per-capita we would obtain 4 bags per capita and then that means are family of four would have 16 reusable bags. This number is more reasonable and because it is a lower number it will have a beneficial impact on environmental calculations in the EIR. 1.23

Summary

Using the number of 20 billion plastic carryout bags used by Californians is **unreasonable**. As stated, the origin of the number as calculated from the estimated weight of plastic bags in the landfill is fraught with error of one type or another. Only the weight of plastic carryout bags purchased by California ↓ 1.24

grocery and retail stores under AB 2449 provides a more reasonable ball park estimate for the total number of plastic carryout bags purchased and distributed by retailers in California.

Once the EIR reduces the number of plastic carryout bags assumed to be used by Californians the number of paper bags in the study area will also be reduced.

The methodology used to determine the number of reusable bags in the study area must be modified as noted above to produce a more reasonable number.

Using smaller bag quantities will be beneficial to the environmental calculations in the EIR. The smaller quantities will ripple throughout the EIR including the proposed ordinance and the recommended alternatives.



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ⁱ California Integrated Waste Management Board, August 2009. "California 2008 Statewide Waste Characterization Study". Produced by: Cascadia Consulting Group. Available at:

<http://www.calrecycle.ca.gov/Publications/Documents/General%5C2009023.pdf>

ⁱⁱ United States Environmental Protection Agency, December 2011. "Municipal Solid Waste Generation, Recycling, and Disposal in the United States Tables and Figures for 2010". Available at:

http://www.epa.gov/osw/nonhaz/municipal/pubs/2010_MSW_Tables_and_Figures_508.pdf

Detailed Comments On Draft EIR

BEACON Single Use Carryout Bag Ordinance

By

Anthony van Leeuwen

4 March 2013

The following comments are submitted on the Draft Environmental Impact Report Draft EIR dated 12 February 2013:

1. Page ES-2, 1st Paragraph, Line 7. The phrase “and (6) displaces” should be “and (6) places” or “and (6) display”. 1.25
2. Page ES-2, 2nd Paragraph. This paragraph states: “Retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction.” This requirement adds an expense to the cost of doing business on the part of both the retail establishment and the governing jurisdiction. It is recommended that this requirement be removed and/or to add a sunset provision in order to avoid indefinite long term taxpayer costs. See Enclosure (4) titled “Recommendations On The Proposed Model Ordinance” for additional information. 1.26
3. Page ES-2, Project Objectives. The statements “Deterring the use of paper bags by retail customers” and “Promoting a shift toward the use of reusable carryout bags by retail customers “ are not valid project objectives and are really optional goals. A valid project objective must be tied to the detrimental impact of plastic carryout bags to the environment and as litter and to reduce the volume of material that ends up in the landfill. Reusable bags and paper bags as well as no bags are all valid alternatives to using plastic carryout bags in the proposed ordinance and the environmental impact of using these should be analyzed. Revise the project objectives as recommended in Enclosure (1) titled “A Discussion of Project Objectives and Goals” for additional information. 1.27
4. Page ES-4, Impact BIO-1. This ordinance will have minimal impact on reducing the amount of litter entering the coastal and bay habitats. The installation of trash excluders on storm drains that empty in waterways will have a greater impact on reducing litter in these sensitive areas. It is said that 80% of the litter in the ocean comes from land based sources and conveyed to coastal and bay habitats via the storm drain. The remaining 20% comes largely from marine sources and by visitors at area beaches when litter is improperly disposed of. The quantity of plastic carryout bags that are windblown into these sensitive habitats are a small fraction compared to the quantity of plastic bags and litter originating from storm drains in the past. Request that you amend this impact statement to reflect environmental conditions post installation of the trash excluders on area storm drains. 1.28
5. Page ES-5, Impact U-1. At the present time there are sufficient water supplies to account for the increased demand expected to be created by consumers washing their reusable bags for hygienic reasons. However, future water supplies cannot be guaranteed due to cyclical drought and extended drought conditions in Southern California. Paragraph 4.3-4 which states: “Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, **including a pattern of recurring and extended droughts**. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California.” The impact statement should be amended 1.29

to reflect the uncertainty of future water supplies. In addition, the impact should be reevaluated in terms of uncertain future supplies.

6. Page 1-1, 1st Paragraph, Line 6. The statement “*The intent of the Proposed Ordinance is to reduce waste by decreasing the use of single use carryout bags*” appears meant to reduce both plastic carryout bags and paper carryout bags. The Environmental Impact Report (EIR) documents damage to environment by plastic carryout bags, but not by paper carryout bags that is of any significance. While the impact of paper bags to the environment from manufacture to disposal is analyzed, this is no different than any other product manufactured for human use. Absent a direct detrimental impact or significant effect to the environment means that paper carryout bags should not be targeted for reduction or elimination on the basis of environmental damage. This poses the classic “bait and switch” situation. The reduction of paper bags is warranted by the goal to reduce the volume of material dumped in the landfill. In addition, the proposed ordinance assumes there would be an increase in paper carryout bag usage. Therefore the proposed ordinance contains a fee designed to discourage paper carryout bag use and motivate (coerce) people to use reusable bags. Except, the proposed ordinance also contains an exemption to the fee by those who are on specific public assistance programs. The problem with this approach is that the class of people who are exempt will not be motivated to use reusable bags, since the retail store will always supply a paper bag without charge. Thereby creating a permanent class of people who will use paper bags. See Enclosure (1) titled “A Discussion of Project Objectives and Goals” and Enclosure (4) titled “Recommendations On The Proposed Model Ordinance” for additional information.

7. Page 1-1, Last Paragraph, Line 1. The word “realted” should be “related”.

8. Page 1-3, Topic No. 9. **The impact of trash excluders on trash discharges into area rivers is not discussed in the Initial Study located in Appendix A. Although there is some discussion in the section 4.4 of the Draft EIR but fails to discuss the impact of the Trash TMDL programs in relationship to this project.** The installation of trash excluders or trash screens on storm drains outfalls that empty into rivers was to eliminate litter including plastic bags and other plastic debris harmful to marine wildlife and marine habitats. These trash excluders are being installed in both Santa Barbara and Ventura Counties in order to meet the objectives of the Trash Total Maximum Daily Loads (TMDL) program required under the federal Clean Water Act. The EIR describes harm by plastic bags and other litter to rivers and sensitive habitat areas prior to the installation of the trash excluders and not afterwards. It is said that 80% of the litter in the ocean comes from land based sources and conveyed to coastal and bay habitats and rivers via storm drains. The remaining 20% comes largely from marine sources and by visitors to area beaches when litter is improperly disposed of. In other words, the TMDL program has already eliminated the primary source of plastic carryout bags in the marine environment meaning that the objectives of the proposed ordinance overlaps the Trash TMDL and hence is a duplication of effort. Furthermore, statements of harm to the physical environment are therefore descriptions of harm that occurred in the past and not in the present or future. Since the Trash TMDL program has already eliminated harm to rivers, the ocean, and critical habitat areas is really reduced to an anti-litter ordinance and can no longer be grounded upon environmental damage. Therefore, the public and their elected representatives need to have a clear understanding of the effectiveness of the TMDL program in order to determine if the proposed ordinance or one of the alternatives has sufficient merit and should be adopted, or modified to narrowly target remaining litter issues.

9. Page 1-4, Topic No. 12. The proposed ordinance requires the retail store to offer to customers a reusable bag for sale that has a specific volume and when filled could weigh as much as 22 lbs. This is simply too heavy for the elderly and young children and people with back problems. Therefore, decision makers should consider recommending to retail stores that they also offer a smaller bag

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- that when filled would weigh only about 10-12 lbs. See also Enclosure (4) "Recommendations On The Proposed Model Ordinance" for more information. 1.33
10. Page 1-4, Topic No. 17. Contrary to the statement in the right column, information in the "No Project" alternative does not contain the beneficial impact of trash excluders on **improving** the river, coastal habitat areas, and the ocean and preventing harm to marine wildlife by trapping plastic carryout bags and other plastic debris. See comment 8 above for more information. 1.34
11. Page 2-5, Paragraph 2.3.1.a, Plastic Bags. The Draft EIR states that 20 billion plastic carryout bags are used in California every year. This number is overstated and exaggerated. See Enclosure (2) titled "Bag Quantity Assumptions" for more information. 1.35
- i. The 20 billion number is calculated from the estimated weight of plastic merchandise bags in California landfills by the estimated weight of a single HDPE plastic carryout bag. The estimated weight of merchandise bags in landfills is determined by sampling of trash dumped in all California landfills. A similar calculation for the entire United States yields 126 billion bags. That means California uses 16% of the nation's plastic carryout bags while only having 12% of the nation's population. Obviously, this demonstrates that the methodology used to calculate the number of bags is faulty.
 - ii. Based upon the overstated quantity of 20 billion plastic carryout bags and California's population, the Draft EIR correctly computes the bags per capita as 531 bags. This means that a family of four (Father, Mother, and two children) would use 41 plastic carryout bags per week. Since most families do the bulk of their grocery shopping at the big box stores such as Costco or Sam's Club, 20 plastic carryout bags per week is more than enough to account for all retail and grocery store shopping. In other words, the 20 billion number of plastic carryout bags is unreasonable and should be cut in half.
 - iii. AB 2449 requires retail stores that issue plastic carryout bags at checkout to report to the State of California the quantity (weight) of plastic carryout bags purchased and to report the weight of plastic carryout bags and the weight of other plastic recycled through the in-store recycling bins. According to the State of California, stores subject to AB 2449 reported purchasing in 2008 a total of 54,000 tons of plastic carryout bags or a total of 8.9 billion bags. In 2009, 53,000 tons or 8.7 billion bags. In 2010, 39,570 tons or 6.5 billion bags. In 2011, 31,258 tons or 5.1 billion bags. The decreasing quantity of bags purchased reflect the slowdown in the economy and the fact that many municipalities have banned or sharply curtailed the use of plastic carryout bags. Even if you round up the 2008 figure of 8.9 billion bags to 10 billion bags, to cover retail establishments not subject to the requirements of AB 2449, the number would be more than adequate and more closely reflect the national average based upon population.
 - iv. Based upon the information presented in the above paragraphs, it is recommended that the quantity of bags used in California be reduced by 50% to 10 billion per year.
 - v. **By overstating the number of plastic bags in use, the results of analysis will provide false and misleading data from calculations and present false and misleading data to decision makers. See also comments 34 and 35 below.**
12. Page 2-5, Paragraph 2.3.1.a, Plastic Bags. This paragraph serves to provide background information to the reader and the decision maker regarding plastic carryout bags. Recommend that this paragraph be expanded to cover both the low density polyethylene (LDPE) bags and the high density polyethylene (HDPE) bags as a matter of completeness. The intent of the proposed ordinance is to ban plastic carryout bags made from both LDPE and HDPE plastic resins! 1.36
13. Page 2-5, Paragraph 2.3.1.a, Paper Bags. The Draft EIR does not take into account an increase in plastic bag use when a shift to paper bag use occurs. For example, in coastal areas such as Santa Barbara and Ventura Counties, the humidity is much higher than in desert areas such as Palm 1.37

- Springs. When a consumer purchases a frozen food item, such as Ice Cream, the package will sweat (condensed water vapor) making the paper bag wet, and when lifted will tear and spill the contents. Therefore, items like ice cream will have to be placed in plastic bags and then placed in the paper bag to preserve the integrity of the paper bag. These plastic bags are also single use and very lightweight, and will end up in the landfill unless recycled. These plastic bags can also become windblown litter even though they do not have the familiar “handles”. **This is why the proposed ordinance should have an integral recycling component**; otherwise, we will be back to where we started from. See also Enclosure (4) titled “Recommendations On The Proposed Model Ordinance” for additional information. 1.37
14. Page 2-5, Paragraph 2.3.1.a, Paper Bags. Prior to the introduction of plastic carryout bags, when only paper carryout bags were available, paper bags came in different sizes. If the proposed ordinance or alternative is adopted, and a shift to paper bags is allowed, one can expect that bags will be provided in different sizes. Is there any intent to account for the different size bags by different fees? 1.38
15. Page 2-5, Paragraph 2.3.1.a, Paper Bags. The description of the manufacture of the paper bags, indicate the use of paper made from virgin material. The description should be updated to show paper manufactured from a combination of virgin raw material and recycled content. 1.39
16. Page 2-5, Paragraph 2.3.1.a, Biodegradable Bags. An advantage of using a biodegradable bag is that if swallowed or eaten by a marine mammal, the bag would disintegrate in the digestive system and be eliminated, whereas the HDPE plastic carryout bag would not. In addition, biodegradable bags do degrade and break apart in the environment more in line with the paper bag. I do not believe a commercial composting facility is an absolute requirement. If so, the paragraph should address this. 1.40
17. Page 2-6, Paragraph 2.3.1.b. Same comment as comment 11 above. Reduce the quantity of bags used in California to a more reasonable number. 531 bags for every man, woman, and child is an unreasonable number! 1.41
18. Page 2-7, Table 2-1. The table should be updated and the **Total Bags Used Annually** recalculated using a more reasonable per capita number for plastic carryout bags. See comment 11 above. 1.42
19. Page 2-9, 2nd To Last Paragraph. Same comment as Comment 2 above. 1.43
20. Page 2-10, 1st Paragraph. The shift to paper bag use should include a corresponding increase in small single-use plastic bags used to wrap frozen food items. In addition, the shift to reusable bags would also see an increase in single-use produce bags or other single-use plastic bags to prevent contamination of the reusable bags. See comment 13 above. 1.44
21. Page 2-10, 1st Paragraph. The quantity of plastic carryout bags, paper bags, and reusable bags should be modified to more reasonable numbers. See comment 11 above. 1.45
22. Page 2-10, 1st Paragraph. Paper bags come in different sizes. The assumption about bag volume holds true only for the primary bag that will replace the plastic carryout bag. For example, grocery stores will more than likely have at least two different paper bag sizes, this was the situation prior to the introduction of plastic carryout bags. Also other retail stores that utilize a variety of plastic bag sizes for different products may switch over to multiple sizes of paper bags if the proposed ordinance is applied to retail stores that do not sell groceries. It is obvious, from the discussion in this paragraph, that the Draft EIR analysis is focused solely on “grocery” stores and not on other retail establishments and naively assumes only one size of paper bag. In the event the ordinance is applied to all retail stores, then the analysis should include the different sizes of carryout bags from those establishment. For example, an exemption for very large plastic carryout bags such as those that can hold bedding, pillows, clothes, etc. should be included in the final ordinance because these bags do not present the same kind of problems that HDPE plastic carryout bags present. 1.46
23. Page 2-10, 1st Paragraph and Table 2-2. The EIR assumes that 5% of plastic carryout bags remain, 30% are replaced by paper carry bags, and 65% is replaced by reusable carryout bags. The impact of 1.47

- the proposed ordinance will also increase the consumption of single-use plastic garbage bags that will replace the up to 40% of plastic carryout bags previously used as wastebasket liners and trash bags. Because the increased consumption of plastic trash bags is a direct consequence of the proposed ordinance, the environmental impact of manufacturing and disposal of those bags should be accounted for in the environmental calculations throughout this EIR. 1.47
24. Page 2-10, Table 2-2. The quantity of bags used Post-Ordinance should be reviewed in concert with comment 13 above. In addition, the statement is made that the reusable bag is used once per week for 52 weeks. In a number of other places in this EIR the lifetime of this reusable bag is conservatively assumed to be one year. Should that projected lifetime not be mentioned here? 1.48
25. Page 2-11, Paragraph 2.6. Same comment as comment 3 above. These objectives should be reformulated and reworded as recommended in Enclosure (1) titled “A Discussion of Project Objectives and Goals” for additional information. 1.49
26. Page 3-2, Paragraph 3.1.2, 4th Sub-Paragraph. The paragraph mentions Ventura County’s transportation system to include “pedestrian rail service” and four airports. What is not mentioned is freight rail service or Ventura County’s three harbors: Port Hueneme deep seawater port, Oxnard harbor, and Ventura harbor. The Oxnard Harbor District, Port of Hueneme, is the commercial deep water seaport located within Ventura County supporting regional freight transportation mobility to all of California, the Pacific Northwest, the western region of the United States and the western Provinces of Canada. Please update the description of Ventura County’s transportation system. 1.50
27. Page 3-2, Paragraph 3.1.2, 4th Sub-Paragraph. “Pedestrian” rail service could be better stated as “passenger” rail service. “Scout Coast Area Transit” should be “South Coast Area Transit”. 1.51
28. Page 3-2, Paragraph 3.2. The cumulative impact of the Trash TMDLs in both Santa Barbara and Ventura Counties should be discussed with respect to the proposed ordinance. Both the proposed ordinance and the Trash TMDLs for county waterways impact the amount of trash conveyed by storm drains to waterways, to the ocean, and other critical habitat areas. Both the proposed ordinance and the Trash TMDLs overlap in the problems they intend to solve. Harm to marine wildlife and habitats by plastic bags and plastic debris that originate from land based sources and conveyed to rivers and the ocean via the storm drain is well documented. However, those statements and that documentation point a largely past condition, prior to the installation of trash excluders on storm drains via the Total Maximum Daily Loads Program. Those trash excluders were installed in 2012 and continuing in 2013. Decision makers need to know how effective the trash excluders are in preventing plastic bags and other plastic debris from entering county waterways and subsequently the ocean and coastal bays and habitats. Information from other areas in California should be available that document the environmental conditions before and after installation of trash excluders on storm drains. That information could be used to project the future state of county rivers and the degree of environmental damage that is avoided by installation of trash excluder on storm drain outfalls. Decision makers need to be fully informed when making the decision to adopt the proposed ordinance or one of the alternatives. 1.52
29. Page 3-5, Table 3-1, City of San Francisco. The minimum ten cent charge applies to checkout bags: compostable, recycled paper bags, or reusable bags. 1.53
30. Page 4.1-4, 6th Paragraph, Truck Trips. The number of truck trips should be adjusted to be more closely aligned with reality. The number of bags should also be adjusted. See also comment 11 above. 1.54
31. Page 4.1-5, 2nd Paragraph, Line 11, 12, and 13. Is the reference to a “single use plastic bag” a reference to an HDPE plastic carryout bag? It appears that the Draft EIR addresses only HDPE plastic carryout bags and not LDPE plastic carryout bags. How does the LDPE single use plastic carryout bag compare to the LDPE plastic reusable bag? You may want to update this paragraph to include carryout bags of both resin types. As is, it is a little confusing. Nowhere does it say that single use 1.55

- plastic bag refers to both HDPE and LDPE bags. The EIR must address both types of single use carryout bags, those made from HDPE and LDPE plastic. This comment applies in other places as well. Are there plastic bags made from other resin types as well? See also comment 12 above. 1.56
32. Page 4.1-6, Table 4.1-3. The table for current emissions assume that 100% of the population of Santa Barbara and Ventura Counties are using plastic carryout bags. While this baseline condition may have been true prior to the impact of California State Law AB 2449, the impact of this law was voluntarily shift people from plastic carryout bags to reusable bags. Today, there is significant percentage of environmentally conscientious people who use reusable bags. In addition, there is a small percentage of people who insist on paper bags. The remainder continue to use plastic carryout bags. The baseline condition should be updated to reflect current conditions in accordance with CEQA guidelines. Are there any statistics of the percentage of the population that uses paper and/or reusable bags in Ventura and Santa Barbara counties so that the baseline condition can be stated to reflect actual conditions. The public and their elected representatives deserve to know the baseline conditions assumed for this project. Assuming that 100% of the people use plastic carryout bags when that is obviously not the case is unrealistic assumption. 1.57
33. Page 4.1-9, Middle of Page. Similar to comment 31. Is the “single use plastic bag” an HDPE or LDPE bag? Are the emissions for both the same with respect to the paper bag? 1.58
34. Page 4.1-10, 3rd Paragraph. The reduction in kilograms per year of ground level ozone and atmospheric acidification is overstated and misleading because the values computed are dependent on the estimated quantity of plastic carryout bags, paper bags, and reusable bags used in the study area. See comment 11 above. 1.59
35. Page 4.1-11, Table 4.1-4. The quantity of reusable bags is calculated by taking 65% of the plastic bags used in the study area and dividing by 52. This calculation yields a number of 8,228,018 as shown in the table. If you divide this number by 65% of the people in the study area you get 10.2 reusable bags per capita. Or 41 reusable bags for a family of four. Obviously the number is incorrect. Double check your assumption on the number of plastic carryout bags used in the study area. See Enclosure (2) for more information. 1.60
- i. Recommendation: The number of reusable bags should be calculated from the number of **households** in the study area vice from the number of plastic bags used in the study area.
 - ii. The number of people per household in the State of California averages 2.91 which can be rounded up to 3.0 for purposes of this Program EIR. The population of the study area is 1,239,626 people or 413,209 households.
 - iii. The average number of reusable bags per household can be estimated to be 12.
 - iv. Multiply 65% of the households in the study area by 12 reusable bags per household. This calculation yields 3,223,028 reusable bags.
36. Page 4.2-2, Paragraph 4.2.1.c. The statement that “carryout bags can affect biological resources as a result of litter that enters the storm drain system and ultimately coastal and marine environments” is a statement of a past condition. The installation of trash excluders on storm drains in 2012 and 2013 through the Total Maximum Daily Loads (TMDL) Program will prevent plastic bags and plastic debris from entering the riverbed and the ocean. In other words, this paragraph needs to be updated to identify damage to the environment post trash excluder installation. Decision makers need to know how effective the Total Maximum Daily Loads Program is in solving the environmental problems identified in the Draft EIR before making a decision to adopt the proposed ordinance or one of the alternatives. See also comment 28 above. 1.61
37. Page 4.2-2, Last Paragraph. The paragraph should clarify that wildlife is entangled by discarded fishing lines and fishing nets and NOT by plastic bags. The United Nations has published reports that show that discarded fishing gear is responsible for entangling wildlife which often results in death. Entanglement by plastic carryout bags if it occurs, occurs as seldom as branches from a bush or tree 1.62

- entangle a small or large animal. The subject of entanglement needs to remain focused on discarded fishing gear and not plastic bags. 1.62
38. Page 4.2-2, Last Paragraph, Line 7. The phrase “have been reported to ingest or become entangled in plastic debris” suggest that a ban on a single product will not prevent the harm to marine wildlife. Plastic bags and Plastic debris can be stopped by trash excluders installed on storm drains through the Total Maximum Daily Loads (TMDL) Program. It should be noted that banning plastic bags will not prevent harm to marine wildlife by plastic debris. Only the Trash TMDL and the installation of trash excluders present a comprehensive solution to preventing harm to marine wildlife. Please update the paragraph to reflect that plastic bags do not cause entanglement, but fishing gear does. 1.63
39. Page 4.2-7, 1st Paragraph. The statement that because paper bags are less resistant to breakdown than plastic bags and therefore are less likely to cause entanglement is a phony issue. Even people can become entangled by the sheets on their bed when they get up in the morning. The type of material the bag is made of, the design of the bag with handles, or even the length of time that it takes for a bag to degrade has nothing to do with entanglement. Bags do not cause entanglement any more often than branches of a tree or bush entangles animals. Entanglement by discarded fishing lines and nets has been well documented and has been shown to harm marine wildlife. Please update the paragraph. 1.64
40. Page 4.2-10, Last Paragraph. The statement “ These bags can become litter that enters the storm drain system and ultimately enters into creeks/rivers and eventually coastal and marine environments” is a statement that reflects a past condition prior to the installation of Trash Excluders on storm drains through the Total Maximum Daily Loads Program. Please update the paragraph to reflect harm done to the environment post trash excluder installation, if any. See also comment 28. 1.65
41. Page 4.2-11, 2nd Paragraph. The paragraph should be expanded to include better definitions of recycling and to clarify several issues: 1.66
- i. Curbside Recycling bins – Some allow and some reject plastic bags, plastic wrap, etc.
 - ii. Retail In-Store Recycling bins – This is the only recycling facility currently available for recycling plastic carryout bags and a lot of other plastic bags and wraps. This facility could be lost in the event of a plastic carryout bag ban! Which would result in more plastic going to the landfill.
 - iii. Plastic Carryout Bags – Can enter the landfill, as a trash bag filled with trash or as a discarded carryout bag. In the case where a plastic carryout bag is filled with trash it serves a useful purpose and would be replaced by a paper or other plastic bag in the event plastic carryout bags are banned. The discarded carryout bag is a problem because it can become windblown litter due to their light weight and these bags should have been recycled.
 - iv. Plastic Carryout Bags – that become litter can enter storm drains but then get caught in the trash excluder and is then removed and properly disposed of by agency personnel on a regular maintenance schedule.
42. Page 4.2-11, 3rd Paragraph. Same comment as 36 and 40. This paragraph reflects harm to the environment prior to the installation of trash excluders on storm drains and hence represents a past condition. 1.67
43. Page 4.2-12, 2nd Paragraph, line 6 and 7. The proposed ordinance would not reduce the amount of litter that enters the marine environment since installation of trash excluders under the Trash TMDL project will prevent all trash from entering the marine environment. The proposed ordinance might prevent a few windblown plastic carryout bags from the marine environment but not else. Please update the paragraph. 1.68
44. Page 4.2-12, Last Paragraph. The beneficial impact of trash excluders installed on area storm drains is that they interrupt the flow of trash to creeks/rivers and to the ocean and have a beneficial 1.69

- impact that overlaps and duplicates the benefits of the proposed ordinance. The proposed ordinance will not have any beneficial impact on the marine environment. See comment 42. ↑ 1.69
45. Page 4.3-1, Paragraph 4.3.1.a. The statement “The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe” does not appear to jive with facts about the past climate. In the 1960’s climatologists were saying we are headed towards another ice age then in the 1990’s it was global warming then when that stopped they changed the term to climate change since there has been no warming in the last 16 years. Even the United Nations has admitted that Global Warming is not occurring and that climate models overstated expected impacts. Please reword the sentence or remove it. 1.70
46. Page 4.3-5, Paragraph 2. It should be noted that as the ocean water temperatures and terrestrial temperatures rise, the amount of water that evaporates will increase resulting in more rapid cloud formation which in turn will result in cooling and increased rainfall. Please include this information in the text of the paragraph. 1.71
47. Page 4.3-6, 2nd Paragraph, Line 1. The paragraph talks about “carryout bags” but only describes the truck trips required for Plastic Carryout Bags. The carryout bags used in the study area include paper and reusable bags, why are truck trips for these not included? Should this not be included in the baseline condition? Also, the number of plastic carryout bags need to be adjusted. See comment 11 above. 1.72
48. Page 4.3-6, 3rd Paragraph. Not all bags are headed to the landfill. Why is recycling not covered in this paragraph? For example, the EIR mentions that 40% of paper bags are projected to be recycled. Reusable bags can also be recycled. For completeness we need to know the percentages of bags of each type that are expected to be recycled compared to the amount expected to be disposed in the landfill. 1.73
49. Page 4.3-6, 3rd Paragraph. There are several problems in this paragraph. First, does “carryout bags” refer to all three types, plastic, paper, and reusable? Second, we know that landfills generate methane, CH₄, as a result of the decomposition of organic materials. In the article¹ titled “Why Not To Ban Plastic Carryout Bags” it is stated that plastic and paper do not necessarily decompose in modern landfills due to a lack of air, water, and sunlight. Rather than decompose the materials are mummified. Therefore the assertion that carryout bags in the landfill generate methane is questionable. Please verify this issue and correct the paragraph if needed. 1.74
50. Page 4.3-6, 4th Paragraph. Are GHG emissions for HDPE and LDPE plastic carryout bags the same? Or different? 1.75
51. Page 4.3-6, Last Paragraph. This paragraph is confusing. The first sentence should say that the reusable LDPE bag if used 20 times, the reusable LDPE bag has 10% of the GHG emissions of a single use HDPE plastic bag on a “per use basis”. Is this correct? If so, please modify the statement. 1.76
52. Page 4.3-6, Last Paragraph and Page 4.3-7, 1st Paragraph. The statement “There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential GHG emissions” is partially true. The analysis in the Draft EIR includes an analysis of an LDPE reusable bag. At the very minimum, the cotton reusable bag should be evaluated as more than likely that this is the type of bag that is machine washable and dryable. The following documents can provide Life Cycle Analysis data for both the polypropylene reusable bag and cotton bags. These documents can be found on the internet by searching for the document titles: 1.77
- i. UK Environment Agency, “Life cycle assessment of supermarket carrier bags: a review of bags available in 2006”.

¹ Van Leeuwen, Anthony. 12 December 2012. “Why Not To Ban Plastic Carryout Bags” in “BEACON Single Use Carryout Bag Ordinance, Draft Environmental Impact Report”, February 2013, Page 223 and 224.

ii. Green, Joseph., California State University Chico Research Foundation, January 2011, “Life Cycle Assessment of Reusable and Single-use Plastic Bags in California”.	1.77
iii. Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, China. “An Exploratory Comparative Life Cycle Assessment Study of Grocery Bags – Plastic, Paper, Non-Woven and Woven Shopping Bags.”	
53. <u>Page 4.3-7, 1st Paragraph, Last Line.</u> Is “LDPE bag” a LDPE reusable bag or an LDPE single use bag?	1.78
54. <u>Page 4.3-7, 2nd Paragraph and Table 4.3-1.</u> Same comment as 11 above. The overstatement of the number of plastic carryout bags will provide incorrect results in GHG calculations. The number of metric tons of CO ₂ e and CO ₂ e per Person are overstated.	1.79
55. <u>Page 4.3-10; 2nd Paragraph, line 3; 3rd Paragraph, line 6.</u> These paragraphs identify strategies for reduction in GHG emissions and specifically energy and water use. Since the State of California has adopted the position that Climate Change is <u>real</u> and has put in place a statewide cap and trade program to reduce GHG emissions in order to avert a future climate catastrophe, does this mean that reduction of energy and water use have higher priority than other considerations in evaluating the environmental impact?	1.80
56. <u>Page 4.3-12, 2nd Paragraph.</u> The number of plastic, paper, and reusable bags are overstated. See comments 11 and 35 above.	1.81
57. <u>Page 4.3-12, 4th Paragraph.</u> The number of reusable bags should be revisited that will result in a revised number of laundry loads. See Comment 35 above.	1.82
58. <u>Page 4.3-13, Table 4.3-3.</u> Update the number of bags to more reasonable numbers. See comments 11 and 35 above.	1.83
59. <u>Page 4.3-15, Table 4.3-5.</u> The table item on “Alternative Fuel: Ethanol” is wrong.	
i. E85 is a blend of gasoline with 51%-83% Ethanol. A gallon of E-85 has 27% less energy than a gallon of regular gasoline with a corresponding decrease in mileage.	
ii. A gallon of No. 2 diesel fuel has 113% of the energy content of a gallon of gasoline.	
iii. A gallon of E-85 would then have 40% less energy than a gallon of No. 2 diesel.	
iv. Trucks that deliver carryout bags from manufacturer to distribution centers and to retail outlets are long haul semi-trucks that use No. 2 diesel fuel. These trucks can carry loads that weigh up as much as 80,000 lbs.	1.84
v. The use of a flex fuel vehicle for long haul semi-trucks would not be practical even if E85 is widely available. The trucks would need larger fuel tanks and consume more fuel per mile with reduced acceleration than existing diesel powered trucks. Operation of a flex fuel truck for long haul use would not appear to be practical.	
vi. The only alternative fuels for trucks is Compressed Natural Gas (CNG) and Propane that are not necessarily universally available and like E-85 would be applicable to short range trucks operating in a small local area.	
vii. Most trucks are owned by large corporations or trucking companies. Truck drivers are usually assigned the truck they drive based upon their commercial driver’s license and what the company has available. Truck drivers are assigned the load to haul which will vary from load to load.	
viii. The statement that “Truck drivers delivering carryout bags could choose to purchase flex-fuel vehicles” borders on fantasy. This is not the real world. Delete this item.	
60. <u>Page 4.3-15, Table 4.3-5.</u> The item on “Zero Waste – High Recycling” mentions limited availability for consumers to access plastic bag facilities. Currently all retail stores subject to the requirements of California State Law AB 2449 and SB 1219 are required to have recycle bins for the recycling plastic carryout bags and other plastic bags and plastic wraps. In the event, that the proposed ordinance is adopted, and that plastic carryout bags are banned, the retail store will no longer be required to retain a recycle bin. As a result, consumers will no longer be able to recycle “other”	1.85

- plastic bags and plastic wraps resulting in more plastic going to the landfill. See my paper titled “Plastic Carryout Bag Ban – More Plastic Headed Towards The Landfill” located in the Draft EIR Appendix A, page 242. 1.85
61. Page 4.3-15, Table 4.3-5. Item on Fuel-Efficient Replacement Tires & Inflation Programs. There is no such thing as a “Carryout bag delivery driver” see comment 59.vii. Truck drivers are responsible to ensure that truck and trailer tires are properly inflated. Tires are an expensive item and cost between \$350 to \$500 or more each. A set of 8 drive tires could cost between \$3000 and \$4000. Both the drive tires and the trailer tires when replaced could be replaced by a retreaded tire. Only the front tires that steer the truck must be replaced by *new* tires. In the event the truck driver encounters a tire failure while on the road, he would call for assistance and a special maintenance team would come and replace the tire. There is no guarantee that the replacement tire is a “Fuel-Efficient” Replacement Tire. In the real world, chances are that the lowest cost tire is chosen, which might be a retread. Therefore the strategy is **Not Consistent**. 1.86
62. Page 4.3-16, Table 4.3.5. Item on “*Alternative Fuels: Non-Petroleum Fuels*”. Trucks are more than likely owned by large companies rather than by individual drivers. Drivers have little to say about the type of trucks purchased by their companies. Drivers receive assignments to pick up and deliver that freight from and to a specific location. Truck drivers have no say about the type of freight carried by the truck and it will vary from load to load. In other words, there is no such thing as a “Carryout bag delivery driver”. While non-petroleum-based fuels such as compressed natural gas (CNG) or Liquefied Natural Gas (LNG) or bio-diesel could be used in semi-trucks for short haul deliveries in local areas, it doubtful these fuels would be suitable for or have the availability required for long haul trucks. Therefore the strategy is **Not Consistent**. 1.87
63. Page 4.3-16, Table 4.3-6. Item on “*Solid Waste Reduction Strategy*”. Confusing. The paragraph in the left column talks about recycling and the paragraph in the right column talks about reducing waste deposited in the landfill? In the right column it states that the “objective of the proposed ordinance is to reduce single use plastic and paper bag waste in landfills”. The proposed ordinance if adopted, will actually reduce the single use plastic carryout bags while increasing paper bag waste to the landfill. A secondary effect of the proposed ordinance will be an increase in the quantity of small, lightweight, plastic bags that also single use to protect the integrity of paper bags and to protect the reusable bag from contamination. These lightweight single use bags if not disposed of properly will also become windblown litter. In addition, the loss of plastic carryout bags will result in consumers purchasing small trash can liners e.g. Costco’s Office & Home Wastebasket Liners. These wastebasket liners are less likely to become windblown litter. See comments 13 and 20 for more information. It should be obvious from the discussion that the proposed ordinance required a recycling component, that includes the recycling of plastic bags (not used for trash), paper bags, and reusable bags that are disposed. 1.88
64. Page 4.4-1, Last Paragraph. Here is the point where you could discuss that the Trash TMDLs and the installation of trash excluders to prevent trash and plastic bags from entering water bodies. Please do so. 1.89
65. Page 4.4-2, 1st Paragraph. Request that you clarify curbside recycling verses in-store recycling bins – see comment 41 above. 1.90
66. Page 4.4-2, 1st Paragraph Line 9. It might be beneficial as a matter of completeness to include the fact that up to 40% of plastic carryout bags consumers take home are used as trash bags, in lieu of another plastic bag. If plastic carryout bags are banned, then plastic bag manufacturers will have to produce plastic trash bags which impacts the environment. This has not been considered in the EIR. **Therefore, the EIR is incomplete**. Just as the EIR assumes that 30% of plastic carryout bags will be replaced by paper bags, the EIR should also assume that 40% of plastic bags will be replaced by plastic trash bags and the environmental impact of manufacturing and disposal of these bags should 1.91

<p>be evaluated as part of the EIR Environmental calculations. It should be noted that consumption of the additional plastic trash bags is direct consequence of the proposed ordinance.</p>	↑ 1.91
<p>67. <u>Page 4.4-2, 1st Paragraph, Line 13</u>. While plastic carryout bags can clog catch basins or trash excluders and cause local flooding, this seldom happens because municipal employees regularly clean out catch basins and trash excluders. Furthermore, in the event of a major rainstorm municipal employees will be on duty to ensure that flood control channels and storm drains are clear and not impeding water flow resulting in flooding. This is more of a theoretical problem than an actual problem.</p>	1.92
<p>68. <u>Page 4.4-2, 3rd Paragraph</u>. Reusable bags can under high wind conditions become windblown litter (personally observed this) and if it enters a storm drain could cause clogging due to the fact that these bags are heavy duty and resistant to biodegradation.</p>	1.93
<p>69. <u>Page 4.4-7, Impact HWQ-1</u>. The installation of trash excluders on storm drains in response to the Trash TMDLs listed on page 4.4-5 will eliminate plastic carryout bags and other plastic debris and trash from entering streams/rivers and the ocean. See comment 8.</p>	1.94
<p>70. <u>Page 4.4-7, 2nd To Last Paragraph</u>. The assumptions on the number of plastic, paper and reusable bags are overstated. See comment 11.</p>	1.95
<p>71. <u>Page 4.4-8, Top Paragraph</u>. The statement “Single use plastic bag litter that enters the storm drain system can block or clog drains resulting in contamination” is not exactly correct. Plastic bags that the enter the storm drain are trapped by trash excluders or rubbish traps that are cleaned out on regular basis by agency personnel to remove and properly dispose of plastic bags, plastic debris, fast food trash, and leaves. By trapping plastic bags, water quality is maintained. See comment 8.</p>	1.96
<p>72. <u>Page 4.4-8, Top Paragraph</u>. The assumption on the number of plastic bags is overstated. See comment 11.</p>	1.97
<p>73. <u>Page 4.4-8, 2nd Paragraph</u>. The paragraph <u>omits</u> the fact that paper bags when they degrade in the environment or in waterways release trace amounts of chemicals that were used in their manufacture. Hence, paper bags have a greater impact on degrading water quality than plastic carryout bags that are essentially inert. Although plastic carryout bags deteriorate in the sun and break into small pieces and could impact the water quality of runoff water they are not as apt to release chemicals into the environment like paper bags. See page 4.4-3 2nd To Last Paragraph.</p>	1.98
<p>74. <u>Page 4.4-8, 2nd Paragraph</u>. The concept expressed in the paragraph that because paper bags are less resistant to breakdown that they are less likely to block or clog drains compared to single use plastic carryout bags is <u>not exactly true</u>. Plastic carryout bags because they are thin, lightweight, and very flexible have an easier time to run down storm drains with water flow. While paper bags can float they soon become wet and begin to dissolve into smaller pieces that can run down a storm drain and block a rubbish trap along with other debris. Since rubbish traps are cleaned out on a regular basis, clogging and flooding are relatively minor problems particularly in dry Southern California.</p>	1.99
<p>75. <u>Page 4.4-8, 3rd Paragraph</u>. As reusable bags become more common, people will use these bags as totes for picnics and to carry clothes or other materials on outings. These reusable bags have the potential to end up as litter just as plastic carryout bags but perhaps less often. These bags with their handles makes them convenient totes for picnics and other outings.</p>	1.100
<p>76. <u>Page 4.4-9, 2nd Paragraph</u>. The phrase “promoting a shift” is not part of a proper objective. See Enclosure (1) titled “A Discussion of Project Objectives and Goals” for additional information.</p>	1.101
<p>77. <u>Page 4.4-10, 2nd Paragraph</u>. The description of the manufacture of paper bags in this paragraph appears to omit the inclusion of recycled content and that these paper bags made from virgin materials! Recommend that the paragraph be updated to include the recycled content, since this is an important component of the proposed ordinance.</p>	1.102
<p>78. <u>Page 4.4-10, 2nd Paragraph</u>. The paragraph describes the chemicals used in the manufacture of paper bags. It should be noted that trace amounts of these chemicals will remain in the paper bag</p>	↓ 1.103

and cannot be 100% removed. In other words paper bags will have trace amounts of these chemicals which are released when a littered paper bag breaks down and contaminates the environment . See page 4.4-3 2 nd To Last Paragraph.	↑ 1.103
79. <u>Page 4.4-10, 3rd Paragraph, Line 4.</u> The phrase “in Study Area” should say “in the Study Area”.	1.104
80. <u>Page 4.4-10, Last Paragraph.</u> What is the impact of chemicals used to wash and sanitize reusable bags on a recurring basis?	1.105
81. <u>Page 4.4-11, 4th Paragraph, Line 7.</u> Reusable bag manufacturing facilities may or may not manufacture reusable bags from raw materials but may purchase the materials from other manufacturers. For example, a reusable bag manufacturer may purchase cotton from a textile mill and sews the cotton material into a reusable bag. So the term manufacturing facilities should include manufacturers of the raw materials used to construct the reusable bag. There may be a better way to phrase it. In addition, some reusable bags may be made at home by a seamstress or hobbyist.	1.106
82. <u>Page 4.4-11, Last Paragraph.</u> Same comment as comment 11 and 35 above.	1.107
83. <u>Page 4.4-12, 1st Paragraph.</u> Same comment as comment 11 and 35 above.	1.108
84. <u>Page 4.4-12, Last Paragraph.</u> The cumulative impact of the trash excluder installation in area storm drains will overlap the proposed ordinance in that it will remove plastic bags and other plastic debris and other trash from area creeks and rivers. See comment 8 above.	1.109
85. <u>Page 4.5-3, 2nd Paragraph.</u> Reference to the quantity of plastic carryout bags. Same comment as comment 11 above.	1.110
86. <u>Page 4.5-3, Table 4.5-3 and Table 4.5-4.</u> Reference to the quantity of plastic carryout bags. Same comment as comment 11 above. Overstating the quantity of plastic bags used in the study area distorts the water consumption quantities calculated in the tables.	1.111
87. <u>Page 4.5-5, Last Paragraph.</u> Same comment as comment 11.	1.112
88. <u>Page 4.5-6, Table 4.5-6.</u> The overstated quantity of plastic bags used in the study area results in an overstatement of waste water generated by plastic carryout bag use. See comment 11 above.	1.113
89. <u>Page 4.5-7, Table 4.5-8 and Page 4.5-8, Table 4.5-9.</u> The quantity of plastic carryout bags used are overstated. See comment 11 above. Overstating the quantity of bags results in an overstated amount of solid waste.	1.114
90. <u>Page 4.5-10, Table 4.5-10.</u> The following comments apply: <ul style="list-style-type: none"> i. See Comment 35 for a better method of analyzing the number of reusable bags. Adjusting the number of bags will reduce the consumption of water calculated in the table. ii. Assume at least 2 gallons of water per bag for hand washing and rinsing as identified on page 20 of “Life Cycle Assessment of Reusable and Single-use Plastic Bags in California”, published January 2011, by California State University Chico Research Foundation by author Joseph Greene. iii. Because water is a scarce resource – even though the Draft EIR assumes that only 65% of households will use reusable bags, the table should include a worst case calculation assuming 100% of the households using reusable bags. This means that the number of reusable bags will have to be recalculated. In other words show water use with the current assumption for 65% of households and also for 100% of households (worst case). This information is needed by decision makers. 	1.115
91. <u>Page 4.5-11, Last Two Paragraphs and Page 4.5-12, Tables 4.5-11 and 4.5-12.</u> The number of plastic bags, paper bags, and reusable bags should be adjusted based on previous comments. In addition, the assumption is that a reusable bag is used once per week for 52 weeks with a lifespan of one year. This means that we must assume that all reusable bags will disposed of after 1 year of use. Therefore Table 4.5-11 should show the annual waste generated in one year to be the entire lot of 8.2 million(overstated number) reusable bags. Therefore you need to check your figures.	1.116

92. <u>Page 4.5-12, Tables 4.5-11 and 4.5-12, 2nd To Last Paragraph.</u> It appears from the information presented on this page, that all of the waste generated by the different type of bags, end up in the landfill. There needs to be a discussion including tables that would show the volume and weight of waste generated for each type of bag and the amounts that would be diverted from the landfill by recycling. The EIR includes several estimates and projections for recycling e.g. 5% for plastic carryout bags, and 40% for paper bags. More information needs to be supplied. Decision makers need to know the volume and weight of material projected to go to the landfill and how much material is expected to be diverted as a result of recycling.	1.117
93. <u>Page 6-1, Paragraph 6.1.2.</u> Alternative 1 would see a difference in the environment because trash excluders would interrupt the flow of trash from the storm drain to the river and to the ocean. This trash which would include plastic bags, plastic debris, fast food trash and other materials and would be properly disposed of in landfills vice flowing to the ocean and potentially harming wildlife. It is well known fact that up to 80% of plastic bags and plastic debris that flow into the ocean originate from land based sources and conveyed to the ocean via storm drains and area rivers.	1.118
94. <u>Page 6-1, Paragraph 6.1.2.</u> Alternative 1 is the status quo. The draft EIR assumes that the baseline condition is that everyone is using plastic carryout bags. The EIR should identify the actual baseline which includes a large number of people in Ventura and Santa Barbara counties that use reusable bags. In addition there is small segment that uses paper bags. The baseline should be adjusted to reflect the real world. Decision makers need to know what the current breakdown is in order to determine the amount of improvement that will be achieved with adoption of the proposed ordinance or one of the alternatives. It should be noted that some environmentally conscientious consumers use paper bags or reusable bags in order to avoid using plastic carryout bags.	1.119
95. <u>Page 6-2, Paragraph 6.2.1 and Table 6-1.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.120
96. <u>Page 6-3 and Page 6-4.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.121
97. <u>Page 6-5, 2nd Paragraph, Line 11.</u> Discarded fishing line and nets are the primary cause of entanglement of marine mammals. Plastic bags do not cause entanglement.	1.122
98. <u>Page 6-6, Table 6-5.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.123
99. <u>Page 6-7, Last Paragraph.</u> In this alternative, there would be an increase in paper bag use. The use of paper bags and reusable bags that are disposed would either be recycled or end up in the landfill. Decision makers need to know the impact to landfill volumes and diversion.	1.124
100. <u>Page 6-8, 2nd Paragraph and Table 6-6.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.125
101. <u>Page 6-9, Table 6-7.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.126
102. <u>Page 6-10, Table 6-8.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.127
103. <u>Page 6-12, Table 6-10.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.128
104. <u>Page 6-14 and Table 6-11.</u> The assumptions about the number of bags needs to be revisited. See comment 11. Alternative 4 would mean 9.7 reusable bags per capita in the study area or 29 reusable bags per household (three people) or 39 reusable bags for a family of four. It should be obvious that the existing methodology does not yield reasonable results.	1.129
105. <u>Page 6-15 and Table 6-12.</u> The assumptions about the number of bags needs to be revisited. See comment 11.	1.130

106.	<u>Page 6-16, Table 6-13.</u> The number of bags per truck load for single use plastic carryout bags is incorrect. Also the truck trips per day do not add up for alternative 3 total.	1.131
107.	<u>Page 6-17, 2nd Paragraph.</u> The installation of trash excluders on storm drains in 2012 and 2013 would keep the bulk of plastic carryout bags and other trash out of the rivers, coastal areas, and the ocean. This alternative would eliminate windblown litter in sensitive environmental areas.	1.132
108.	<u>Page 6-17, 3rd Paragraph.</u> Revise bag quantity estimates. See comment 11.	1.133
109.	<u>Page 6-18, Table 6-15.</u> Why does the table have a row titled “Total GHG Emissions from Alternative 2”?	1.134
110.	<u>Page 6-19, 3rd Paragraph.</u> Revise bag quantity estimates. See comment 11.	1.135
111.	<u>Page 6-20, Table 6-16.</u> Revise bag quantity estimates. See comment 11.	1.136
112.	<u>Page 6-20, Last Paragraph, Line 7.</u> Correct the spelling of the word “sale”.	1.137
113.	<u>Page 6-21, Table 6-17.</u> Revise bag quantity estimates. See comment 11.	1.138
114.	<u>Page 6-21, Last Paragraph.</u> Truck trips are overstated since bag quantities are overstated.	1.139
115.	<u>Page 6-23, Second Paragraph.</u> We need to remember that plastic and paper bags are interrupted in their journey to the ocean by trash excluders newly installed in 2012 and 2013 on storm drains that empty into creeks/rivers. Hence reduction in the amount of plastic bags and paper bags that could end up in litter would actually be beneficial as compared to either Alternative 1 or the proposed ordinance.	1.140
116.	<u>Page 6-24, Table 6-20.</u> Revise the bag quantities. See comment 11.	1.141
117.	<u>Page 6-25, 1st Paragraph.</u> Trash excluders will prevent the bulk of plastic carryout bags from entering creek/river and ocean environments.	1.142
118.	<u>Page 6-25, 3rd Paragraph, line 11.</u> The statement that there are sufficient water supplies is as of today. See comment 5 and paragraph 4.3-4 where it is stated that future supplies of water cannot be guaranteed due to drought and uncertain climate conditions in the future as a result of climate change.	1.143
119.	<u>Page 6-25, Last Paragraph.</u> Under this Alternative the volume and weight of plastic bags, paper bags, and reusable bags that are recycled and disposed of in landfills should be provided. See comment 92.	1.144
120.	<u>Page 6-26, 3rd Paragraph.</u> The alternative titled “No Charge for Paper Bags” should have been considered. The public will question decision makers about the fact that if plastic bags are bad for the environment why not just ban them and leave it at that. Evaluating this alternative would have provided decision makers specific information as to how this option differs from the proposed ordinance or other alternatives.	1.145
121.	<u>Page 6-26, 4th Paragraph.</u> The statement that biodegradable bags or compostable bags degrade the plastic recycling stream is noted. Less than 5% of plastic carryout bags are recycled. And increasing recycling of plastic carryout bags is not one of the alternatives considered in the draft EIR. Furthermore, while plastic carryout bags cannot be easily digested by marine mammals, a compostable bag will break down in the mammals stomach and be eliminated preventing the potential death of the animal. Hence, all things considered, biodegradable or compostable bags would be a good universal alternative.	1.146
122.	<u>Page 6-27, Paragraph 6-7.</u> Alternative 4, while eliminating plastic and paper carryout bags would have very limited environmental impact. Trash excluders on storm drains will eliminate the majority of plastic bags, plastic debris, and trash that enter the riverbed and subsequently into the ocean or coastal bays. So the impact of alternative 4 would be limited to windblown litter on the side of the road or perhaps blown into the riverbed or directly into the ocean. These are relatively small amounts in comparison to the amount that used to come from storm drains.	1.147

Recommendations On The Proposed Model Ordinance

BEACON Single Use Carryout Bag Ordinance

By

Anthony van Leeuwen

4 March 2013

The following issues are presented for consideration by BEACON and involve modifications to the project, proposed model ordinances, and/or deal with issues that might be deemed outside the scope of the proposed EIR and need to be addressed:

1. The Elderly, Disabled, and Ergonomic Issues. One advantage often touted is that the reusable bag can hold more than the plastic bag. While that is true, often forgotten is the fact that if they hold more they weigh more! The reusable shopping bag presents ergonomic safety issues related to the fact that the weight of individual bags increased from an average of 10 lbs. for a plastic bag or a small reusable bag to 28 lbs. and 38 lbs. for the respective medium and larger versions of the reusable bag. The increase in weight is responsible for an increase in musculoskeletal disorders in retail store workers and could also be a concern for customers when lifting heavy bags including potential liability issues. In addition, heavier reusable bags also pose a significant problem to the elderly and disabled or people who have back problems or have had back surgery and are frequently restricted from lifting more than 10 lbs. **BEACON should consider that proposed reusable bags in the model ordinance take into account the ergonomic issues encountered by various classes of people including children, the elderly, and the disabled. This may be as simple as recommending several bag sizes vice the one size bag that holds as much as 22 lbs.**
2. Public Health Hazards. The proposed model ordinance attempts to shift consumers from using sanitary plastic and paper bags to using dirty reusable bags. My paper¹ identifies a number of health hazards presented to consumers: (1) the buildup of bacteria, yeast, mold, coliforms and E-Coli that can potentially cause foodborne illness or death; and (2) the transmission of contagious viruses including the common cold virus, croup, Giardia, influenza, meningitis, rotavirus diarrhea, norovirus, strep, and many other diseases. In addition, there are hazards associated with cross contamination of food and non-food items including hazardous substances. People with compromised immune systems are at greater risk from bacteria and viruses in reusable bags than people with normal immune systems. In addition, people who are homeless and cannot wash and sanitize reusable bags are also at risk! These health hazards can be overcome by regular washing or sanitization of

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1.149

¹ Van Leeuwen, Anthony. 12 December 2013. "Negative Health and Environmental Impacts of Reusable Shopping Bags". Located in Appendix A on page 197 of the BEACON Single Use Carryout Bag Ordinance Draft Environmental Impact Report SCH#2012111093

reusable bags. In addition the paper identifies why incidents of illness attributed to Reusable bags are under reported. **Public health officials should review this information and the literature to develop guidelines for properly and safely using reusable bags. Public health officials should make recommendations as to how often reusable bags should be washed taking into account people with both normal immune systems and those whose immune systems are compromised.**

1.149

3. Public Awareness and Recycling of Plastic Bags and Wraps. A successful recycling program depends upon public awareness and education. The California legislature through AB 2449 and extended by SB 1219 created the In Store Recycling Program for recycling of plastic carryout bags. While grocery stores and retail stores have attempted to educate their customers about the in-store recycling bins, no one store has had the wherewithal to educated the public as a whole. Retail stores are in the business of selling products and competing with one another for consumer dollars. As a result, many people are not aware that the in-store recycling bins accept not only plastic carryout bags but also other plastic bags and plastic wraps for recycling. Hence, a lot of plastic is going to the landfill that could be easily be diverted if the public was better informed about the In Store Recycling Program. **An effort to reach out and educate the public about this program needs to be undertaken along with education efforts about the proposed ordinance or alternative that is adopted.**

1.150

4. Integral Recycling Component. The proposed model ordinance should have an integral recycling component. Not only should paper bags be recycled, but the use of paper bags and reusable bags will have a secondary effect of increasing the use of small lightweight single-use plastic bags in the retail store environment. For example, when a consumer purchases a frozen food item, such as Ice Cream, the package will sweat (condensed water vapor) making the paper bag wet, and when the bag is lifted it will tear and spill the contents. Therefore, items like ice cream will have to be placed in plastic bags and then placed in the paper bag to preserve the integrity of the paper bag. These lightweight single-use plastic bags will end up in the landfill unless recycled. These lightweight single use plastic bags can also become windblown litter even though they do not have the familiar “handles”. Similarly, when the consumer purchases a hazardous material, such as a Black Flag Ant Poison, the item should be placed in plastic bag prior to being put in a reusable bag to avoid the possibility of contaminating the bag. Hence, even though there is a net reduction in the quantity of plastic carryout bags issued there will be an increase in non-regulated plastic bags. **This is why the proposed ordinance should have an integral recycling component**; otherwise, we will be back to where we started from.

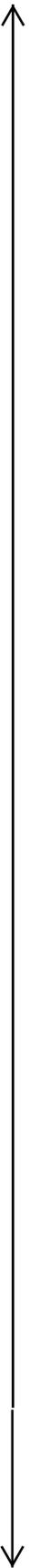
1.151

5. Specific Detailed Comments on the Proposed Model Ordinance. The following comments are concerning the proposed model ordinance, included in Appendix B of the Draft Environmental Impact Report (EIR) dated February 2013, and include recommendations for improvement and consideration by BEACON and by decision makers who intend to implement the proposed model ordinance or one of the alternatives.

a. Section 9.150.010 Paragraph F. The phrase “to prevent such food items from coming into direct contact with other purchased items” is incomplete. The purpose of a produce bag is to prevent contamination of the food product by preventing contact with contaminated surfaces (shopping cart and checkout stand surfaces, reusable bag surfaces, kitchen counters, etc.) and other food and non-food purchased items.

1.152

- b. Section 9.150.010 Paragraph I. The reusable bag label or tag should include washing and drying instructions. In other words is the bag machine washable and dryer safe or hand washable or only air dryable.
- c. Section 9.150.010 Paragraph I. The reusable bag definition specifies a minimum size of 15 liters and a minimum weight or 22 lbs. that must be carried. See comment 1 above about specifying both the small and medium sizes of reusable bags.
- d. Section 9.150.020 Paragraph A. The ordinance should provide an exception for very large plastic carryout bags, such as the one that will hold large pillows or very large items. These plastic bags are distributed in much smaller quantities and do not present the litter problem that are caused by the common HDPE or LDPE plastic carryout bag distributed at grocery and retail stores.
- e. Section 9.150.020 Paragraph B. This paragraph should include "reusable bags" – see Section 9.150.010.D for similar statement.
- f. Section 9.150.040 Paragraph D. Purpose 3 should be deleted. See comment 5.i below.
- g. Section 9.150.040 Paragraph E. This paragraph states that retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction. The intent of this paragraph is to ensure that the ordinance is properly implemented by the grocery or retail store. However, the reporting requirements by each retail establishment represents an increased cost of doing business. Grocery stores in particular are competing with each other and the big box stores and increasing their cost of doing business is certainly not welcome. On the other hand, the city or local jurisdiction must also expend labor hours to review reports from retail establishments and countless staff hours will be expended in preparing annual reports to the city council. **These labor expenditures will continue indefinitely unless the ordinance contains a sunset clause that allows reporting to cease after three years.** Three years should be a long enough of a time period for the city or local jurisdiction to determine that the retail establishment has successfully implemented the ordinance and to assess that the ordinance is accomplishing the intended purpose.
- h. Section 9.150.040 Paragraph E. The reporting requirements as stated in this paragraph are very minimal and may not provide an accurate picture of the effectiveness of the proposed ordinance. Therefore it is highly recommended that consideration be given to include the following in the data to be provided by the retail establishments:
 - 1) The total number of paper bags sold.
 - 2) The total amount of monies collected from the sale of paper bags.
 - 3) The total number of paper bags provided free pursuant to Section 9.150.060
 - 4) The total number of reusable bags sold.
 - 5) The total number of reusable bags provided free pursuant to Section 9.150.060
- i. Section 9.150.060 . The purpose of this section is to exempt a whole class of people who are on specific public assistance programs who are allowed to receive a paper bag or reusable bag at no cost. While some of these public assistance programs limit the type of items that can be purchased with program funds, some of the purchases have to be paid for in cash. Therefore, those on the assistance program would be able to pay cash for the paper bag or pay for reusable bags. If the motivation on the other hand is concern for the financial wellbeing of those on public assistance, then we have to ask the following question. **Why are the elderly who live**



1.152

from month to month on meager social security earnings not exempt! This certainly does not demonstrate equal justice for all. Therefore, it is recommended that Section 9.150.060 be removed for the following reasons:

- 1) The ordinance should apply equally to all people who shop at grocery and retail stores in the jurisdiction that has adopted the ordinance, including those who are on public assistance.
 - 2) People who qualify for the free paper bags have no incentive to use reusable bags since a free paper bag will always be provided. This will create a permanent class of people who use paper bags thereby preventing a further reduction in paper bag use.
 - 3) If the store provides a free reusable bag to shoppers who qualify under this section, there is no guarantee that the exempt shopper would bring the reusable bag with them the next time they shop; after all, the store will always provide a free paper or reusable bag.
 - 4) If the store provides a free reusable bag to shoppers who qualify under this section, the shopper could turn around and sell the free reusable bags to someone else and pocket the money; after all, the store will always provide a free paper or free reusable bag the next time they shop.
 - 5) The exemption for those on specific public assistance programs demonstrate that the goal to reduce paper bag use is not serious.
 - 6) **If the ordinance is good enough for social security recipients who live from month to month on a meager social security earnings, then the ordinance is good enough for those customers who participate in various public assistance programs.**
- j. Section 9.150.060, Paragraph A. This paragraph should be removed along with the entirety of Section 9.150.060 of the model ordinance. It creates a new and perpetual administrative burden for the jurisdiction that adopts the proposed ordinance by requiring the expenditure of public funds to pay for staff time and labor to administer this program.

1.152

Letter 1

COMMENTER: Anthony van Leeuwen

DATE: March 4, 2013

Letter 1

COMMENTER: Anthony van Leeuwen

DATE: March 4, 2013

Response 1.1

The commenter summarizes the information he provides throughout the comment letter. Responses to these comments are provided in greater detail throughout the following responses.

Response 1.2

The commenter suggests that the BEACON's objectives identified in the EIR are too narrow and are poorly worded. Specific concerns about the project objectives are addressed in responses 1.3 through 1.6.

Response 1.3

The commenter suggests removing the reference to utilities in Objective #1 and rewording the objective. This comment relates to BEACON's objectives for the Proposed Ordinance. The intent of the first objective is that the Proposed Ordinance would reduce the amount of single use plastic carryout bags within the Study Area and would thus reduce existing impacts associated with plastic carryout bags including those impacts related to biological resources (plastic bag litter affecting wildlife species and habitat), water quality (plastic bag litter clogging storm drains and entering creeks and waterways within the Study Area), and solid waste equipment and facilities (plastic carryout bags causing increased maintenance costs at solid waste facilities and affecting equipment performance).

Response 1.4

The commenter suggests that Objective #2 should be removed because there are no negative documented environmental impacts associated with the use of paper carryout bags. The second objective of the Proposed Ordinance as discussed in Section 2.0, *Project Description*, is intended to deter the use of paper bags in the Study Area because simply replacing single use plastic bags with paper bags could result in impacts related to air quality, greenhouse gas emissions, hydrology/water quality and utilities (solid waste). As shown in the Draft EIR, the life cycle assessment data has determined that generally paper bags have a higher impact rate than



plastic bags on a per bag basis related to the impacts discussed above. As such, the intent of the Proposed Ordinance is to deter customers in the Study Area from simply switching from the use of single use plastic bags to paper bags, and as discussed in the third objective, the intent is to instead promote a shift towards reusable bags.

Response 1.5

The commenter states that Objective #3 has already been achieved because some people have shifted from plastic to reusable bags. The commenter suggests rewording the objective to encourage the use of reusable bags. As stated above in Response 1.4, the intent of the third objective is to promote a shift towards reusable bags (even more so than existing conditions) and thus to not encourage customers to simply switch from using single use plastic bags to using paper bags. As shown in the life cycle assessment data utilized in the Draft EIR, when reused multiple times (as required by the Proposed Ordinance, a reusable bag must be able to withstand 125 uses) a reusable bag results in fewer impacts than both paper and single use plastic bags.

Response 1.6

The commenter states that Objective #4 is not valid because California State Law establishes a goal of 50% reduction of landfilled waste. The fourth objective is to reduce the amount of single-use bags in trash loads to reduce landfill volumes. This includes trash loads associated with both plastic and paper carryout bags. The intent of this objective is to reduce the amount of single use bags currently used in the Study Area (approximately 658 million single use plastic bags used per year in the Study Area) the majority of which are deposited in a landfill. It also intended to avoid simply replacing those plastic bags (and the associated trash loads) with the use of the same number of paper bags which could actually increase the volume of trash loads that go to landfills in the Study Area compared to existing conditions as paper bags are larger and heavier than plastic bags. Thus the Proposed Ordinance intends to reduce the volume associated with both single use plastic and paper carryout bags.

Response 1.7

The commenter states that Objective 5 is valid. No response is warranted.

Response 1.8

The commenter summarizes previous statements about the objectives and suggests other objectives. Please see responses 1.3 through 1.6.

Response 1.9

The commenter states an opinion that the assumption that Californians use 20 billion plastic carryout bags per year, or 531 per capita is unreasonable and overstated. The assumption that Californians use 20 billion plastic carryout bags has been cited numerous times in documents evaluating carryout bag use including: the City of Palo Alto Final EIR, March 2013; the City of Huntington Beach Final EIR, March 2013; the Sonoma County Waste Management Agency Final



EIR, April 2013; the San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2009. As discussed in greater detail in Response 1.15, 20 billion plastic bags used per year in California (CIWMB, 2009) is a reasonable assumption based on measurements of the weight of plastic bags found in California landfills.

Response 1.10

The commenter states an opinion that the assumption that Californians use 531 bags per capita, or 41 per week is too large. The commenter suggests a more appropriate number might be in the range of 15 to 20 bags per week. See Response 1.9 and Response 1.15.

Response 1.11

The commenter notes that the 20 billion number comes from the California Integrated Waste Management Board's (CIWMB) "California 2008 Statewide Waste Characterization Study" which identified the composition of material dumped in California's landfills by material classes. There is a material class for "plastic grocery and other merchandise bags." This comment is correct and no further response is needed.

Response 1.12

The commenter displays data from CIWMB 2008 Waste Characterization Study and from the U.S. Environmental Protection Agency and calculates the number of plastic carryout bags used in California and in the U.S. by dividing the estimated weight of plastic bags in landfills by the weight per bag. With this calculation, the commenter calculates a quantity of 20.35 billion bags used in California per year or 535 bags per capita. This number is similar to the quantities assumed in the Draft EIR that were taken from the CIWMB study and no further response is needed.

Response 1.13

The commenter notes that the CIWMB's estimate includes plastic grocery and other merchandise bags. Therefore, the commenter concludes that this weight estimate could be inflated and skewed by dry cleaning bags, which are heavier than plastic grocery bags. CIWMB's estimate includes bags from all types of retail stores (grocery stores, pharmacies, liquor stores and other small retail stores that distribute plastic bags). The CIWMB study attempts to break down the origins of plastic bags found in landfills, but does not go into great enough detail to determine what percentage of plastic bags in landfills could be from dry cleaners or if there are bags present that could be heavier than plastic grocery bags and skew the results. Therefore, this comment is speculative.

Response 1.14

The commenter reiterates the opinion that the CIWMB estimate of 20 billion plastic bags is not accurate because the CIWMB estimates the total weight of plastic carryout bag waste in landfills and divides by the average weight of plastic bags to determine the total number of plastic bags in landfills. The commenter states that the average weight of plastic carryout bags in landfills is



unknown and assumes the numbers are inflated. The CIWMB does not go into detail about how the average weight of plastic bags was calculated; therefore, it is speculative to assume the CIWMB's numbers are inaccurate. For more information, please see responses 1.9 and 1.13.

Response 1.15

The commenter suggests using data collected from the requirements of AB 2449 to estimate bag use in California. This data would suggest that total bag use in California is between 4 and 8.9 billion bags per year. The commenter's suggestion is not accurate as the suggested bag use estimates would only account for those retailers subject to AB 2449 (only grocery stores). The Proposed Ordinance as described in the Draft EIR would apply to grocery stores and smaller retailers such as pharmacies, drug stores, convenience food stores, food marts, or other similar retail stores or entities engaged in the retail sale of a limited line of grocery items as discussed in Appendix B of the Draft EIR (Draft Ordinance). Thus, the commenter's suggested quantity of plastic bags does not consider all plastic bags currently used in the Study Area that may be subject to the Proposed Ordinance. As discussed in Response 1.9, 20 billion plastic bags used per year in California (CIWMB, 2009) is a reasonable assumption as and the commenter does not provide any evidence suggesting otherwise. Therefore, this comment is speculative.

Response 1.16

The commenter notes that the average weight of plastic bags purchased by retailers is unknown, so that dividing by the average weight of an HDPE bag will inflate the numbers of plastic bags. As discussed in responses 1.13, 1.14 and 1.15, this comment is speculative. Further, if indeed the average weight of plastic bags assumed by CIWMB is inaccurate, the assumption about plastic bag use in California could be either overstated or understated. If the average weight is too high, the number will be understated and if the average weight is too low, the number will be overstated.

Response 1.17

The commenter recommends that the EIR be revised to change the assumption of plastic bag use by Californians. The commenter recommends a number of 9 or 10 billion. See Response 1.15. This comment is speculative as 9 or 10 billion bags only considers bag use at only grocery stores subject to AB 2449. Nevertheless, assuming 10 billion bags used instead of 20 billion per capita bag use of 266 bags rather than 531 bags, total bag use in the study area would be cut in half (329,740,516 instead of 658,241,406). Using this new estimate, proposed impacts would also be reduced. For example, proposed greenhouse gas emissions resulting from the Proposed Ordinance would increase only by 7,106 MT CO₂e instead of a net increase of 10,919 MT CO₂e as under the original Draft EIR analysis. Although the 20 billion bags per year in California is a reasonable and conservative estimate, even using a different or lower per capita bag use assumption, none of the overall conclusions in the Draft EIR would be altered (all impacts would remain either less than significant or beneficial) as the impacts would be incrementally fewer than analyzed within the Draft EIR. As such, the Draft EIR utilizes a conservative or a "worst case" scenario to analyze environmental impacts.

Response 1.18



The commenter notes that by reducing the assumption about per capita bag use as discussed previously, but with the same assumption of a 30% switch to paper bags, the EIR's estimates for paper bag use would be reduced. The commenter notes that this would be beneficial to environmental calculations in the EIR. Please see Response 1.15 and 1.17 regarding why the existing plastic bag use of 20 billion bags per year in California is a reasonable and conservative estimate. Nevertheless, even assuming 266 bags used per capita (as suggested by the commenter), 98,922,155 paper bags would replace 30% of plastic bags as a result of the Proposed Ordinance which is a reduction compared to the estimate in the Draft EIR for recyclable paper bags (at 197,472,422 bags per year). Following the commenter's suggested reduction, this would result in an incremental reduction of impacts related to paper bag use compared to what was analyzed in the Draft EIR. However, this would not change any of the overall conclusions in the EIR (impacts related to air quality, biological resources, greenhouse gas emissions, hydrology/water quality and utilities/service systems) would remain either less than significant or beneficial. As described in Response 1.17, the Draft EIR utilizes a conservative or a "worst case" scenario to analyze environmental impacts.

Response 1.19/1.20

The commenter summarizes the EIR's assumptions about reusable bag use as a result of the Proposed Ordinance. The summary of the assumptions is accurate. No response is warranted.

Response 1.21

The commenter states that the 8,228,018 reusable bags number is unreasonable because it is unreasonable to assume that a family of four would have 41 reusable bags. Based on a Study Area population of 1,239,626, per capita bag use would be approximately 7, so a family of four would have approximately 28 reusable bags, not 41. The assumption that reusable bags would replace 65% of plastic bags resulting from the Ordinance, and that bags are used 52 times per year is a conservative estimate. Please see responses 1.17 and 1.18 regarding these estimates. Please note that the assumption that 65% of plastic bags would be replaced by reusable bags is provided in the City of San Jose Final EIR, SCH # 2009102095, October 2010 and a report prepared for that EIR by Herrera Environmental Consultants (June 2010) and is considered reasonable for use in this EIR. It is acknowledged that this is a conservative estimate and its use in the Draft EIR is intended to evaluate the "worst-case" scenario related to impacts of the Proposed Ordinance. Using the higher, more conservative estimate of reusable bags would result in greater impacts as a result of the Proposed Ordinance and is therefore considered the worst-case scenario. In addition, even if the overall number of carryout bags (either paper or reusable) used in the Study Area as a result of the Proposed Ordinance is reduced compared to the number of bags considered in the EIR analysis, as the commenter suggests, the overall environmental impacts would be reduced incrementally. Thus, the estimate of 8,228,018 reusable bags considered in the Draft EIR is considered reasonable to provide a conservative estimate of potential environmental impacts that may result from the Proposed Ordinance.

Response 1.22

The commenter reiterates an opinion that the assumption in the initial study and the EIR that 8,228,018 reusable bags are used in the study area is unreasonable and it is unreasonable to assume that each person in the Study area would purchase 7 reusable bags a year. See Response 1.21.

Response 1.23

The commenter suggests that instead of calculating reusable bag use with the assumption that 65% of plastic bags would be replaced by reusable bags, the number of reusable bags in the Study Area should be calculated by multiplying the average number of reusable bags per household by the total number of households. The commenter states that the average number of reusable bags per household is between 8 and 15 bags so that total reusable bag use in the Study Area would be 3,223,028, which the commenter believes is a more reasonable number. The commenter does not provide a source for the number of 8 to 15 reusable bags per household; therefore, this information cannot be verified and is speculative. Please see Response 1.21. In addition, using the lower estimate of reusable bags that the commenter suggests would actually result in a reduction of the impacts from the Proposed Ordinance than those discussed in the Draft EIR. Thus using the commenter's suggested bag use estimates, impacts would be reduced compared to the impacts in the Draft EIR.

Response 1.24

The commenter summarizes previous statements that the number of 20 billion plastic carryout bags in California is too high and is unreasonable. See responses 1.15 and 1.17.

Response 1.25

The commenter notes that the word "displaces" in the first paragraph on page ES-2 should be "displays." This correction has been made in the Final EIR.

Response 1.26

The commenter recommends removing the requirement in Proposed Ordinance that requires retail establishments to keep records. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. Nevertheless, the suggestion will be forwarded to the BEACON Board and to each jurisdiction considering adoption of the Proposed Ordinance.

Response 1.27

The commenter again recommends revising the objectives. See Responses 1.3 through 1.8.



Response 1.28

The commenter recommends changing impact statement BIO-1 to reflect the use of trash excluders in area storm drains. The commenter further states that the installation of trash excluders in storm drains would have a greater impact on reducing litter in sensitive biological areas than the Proposed Ordinance.

As noted in the Section 4.4, *Hydrology and Water Quality*, there are several programs in place to reduce trash and pollution in Ventura County waterways. These programs include installation of trash excluders and implementation of existing regulations, including Trash TMDLs. However, these programs are not expected to reduce litter as much as the Proposed Ordinance, which prohibits the use of plastic carryout bags. In addition, these programs only apply to Ventura County and municipalities within Ventura County, and thus do not apply to the entire Study Area, which also includes unincorporated Santa Barbara County and most of the incorporated municipalities in that county in addition to Ventura County.

While it may be true that trash excluders help reduce the amount of litter entering storm drains, the Draft EIR is not evaluating the impacts of trash excluders. The purpose of the Draft EIR is to evaluate the potential environmental impacts of the Proposed Ordinance. Furthermore, as noted in Section 4.4, *Hydrology and Water Quality* of the Draft EIR, single use plastic bags that become litter may enter storm drains from surface water runoff or may be blown directly into local waterways by the wind. As trash excluders are installed in storm drain systems, they would not help reduce the amount of plastic bag litter that is blown into local waterways by the wind.

Response 1.29

The commenter states that Impact U-1 does not take into account the uncertainty of future water supplies. This comment is speculative as the commenter does not provide any evidence to suggest that the existing water supplies in the Study Area (approximately 30,315 acre-feet per year (AFY) of excess supply in Ventura and Santa Barbara counties) as provided in Section 4.5, *Utilities and Service Systems*) would not be adequate to serve the additional demand associated with the Proposed Ordinance (an increase of approximately 470.5 AFY of water). As stated by CEQA Guidelines Section 15144, EIRs are to use the “rule of reason” with respect to content and are limited to disclosing impacts that could be reasonably expected under the circumstances. The Draft EIR complies with this standard as there is no evidence suggesting that the increase of water associated with the Proposed Ordinance would not exceed existing water supplies in the Study Area. Further, the water use impact assumptions in the Draft EIR utilize conservative estimates and would be anticipated to be a worst-case scenario.

Response 1.30

The commenter suggests that the Proposed Ordinance’s exemption for customers participating either in the California Special Supplemental Food Program for Women, Infants, and Children or in the Supplemental Food Program would not be consistent with the Proposed Ordinance’s objective to deter the use of paper bags and promote a shift towards reusable bags. This comment relates to the merits of the Proposed Ordinance and does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR. Because the

comment does not pertain to the Draft EIR, no response is warranted. Nevertheless, the comment will be forwarded to the BEACON Board and to each jurisdiction considering adoption of the Proposed Ordinance.

Response 1.31

The commenter notes a spelling error. The error has been corrected in the Final EIR.

Response 1.32

The commenter requests that the Draft EIR evaluate the impacts of the Proposed Ordinance after the implementation of trash excluders on storm drains. The commenter further states that trash excluders are already resulting in reductions in litter and that the Proposed Ordinance is overestimating the amount of litter that enters local waterways by not evaluating the impacts of trash excluders on storm drains. See response 1.28.

Response 1.33

The commenter states that the Proposed Ordinance's requirement that reusable bags carry a minimum of 22 pounds is too heavy for the elderly and young children. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. Nevertheless, the fact that reusable bags must be capable of carrying 22 pounds does not mean that every individual would be required to fill every bag to capacity.

Response 1.34

The commenter requests that the No Project Alternative include the beneficial impacts of trash excluders on river, coastal habitat areas, and the ocean. See Response 1.28.

Response 1.35

The commenter states that the assumption that Californians use 20 billion plastic carryout bags is too high. See Response 1.17.

Response 1.36

The commenter suggests that in the paragraph describing single-use carryout bags in Section 2.0, *Project Description*, low density polyethylene (LDPE) bags be added to the discussion along with the high density polyethylene (HDPE) bags as a matter of completeness. As described in Appendix B (Draft Ordinance) a plastic carryout bag is defined as "any bag made predominantly of plastic derived from either petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale". Both HDPE and LDPE plastic carryout bags could fit under the category of a plastic carryout bag if they do not meet the definition of a reusable bag. As described in the Draft EIR Section 2.0, single-use plastic carryout bags used at the type of retailers that would be subject to the Proposed Ordinance "are typically made of thin, lightweight high density polyethylene (HDPE) (Hyder



Consulting, 2007)” (see page 2-5). HDPE plastic carryout bags are more commonly used by retailers at grocery stores, pharmacies, liquor stores and other small retail stores that would be subject to the Proposed Ordinance. Thus, it is reasonable to assume that the majority of the single-use plastic bags currently used in the Study Area are HDPE carryout bags. LDPE carryout bags are generally thicker and heavier than HDPE and generally cost more to produce; therefore, they are less common than HDPE at typical retailers that would be subject to the Proposed Ordinance. Further, if the LDPE bag is at least 2.25 mils thick and meets the definition, this type of bag could also be classified as a reusable bag under the Draft Ordinance (see Appendix B). Nevertheless, because some LDPE plastic bags that are less than 2.25 mils and/or do not meet the definition of a reusable bag, the following has been added to the Final EIR to note that some LDPE bags are considered single-use plastic bags in the EIR analysis (changes are shown in underline):

Page 2-5: *Plastic Bags. Single-use disposable plastic grocery bags are typically made of thin, lightweight high density polyethylene (HDPE) (Hyder Consulting, 2007). Although not as popular as HDPE bags due to cost, some retailers may also utilize low density polyethylene (LDPE) plastic bags that are intended for a single use.*

This change would not affect the overall impact analysis contained in the Draft EIR.

Response 1.37

The commenter speculates that a shift to paper bag use would increase plastic bag use because frozen food items placed in paper would cause the paper bags to get wet and tear. Therefore, frozen food items would need to be placed in plastic produce bags. This comment is speculative and does not provide any data to support this claim. In addition, produce or product (as defined by the Draft Ordinance as “Any bag without handles used exclusively to carry produce, meats, or other food items from a display case within a store to the point of sale inside a store or to prevent such food items from coming into direct contact with other purchased items”) – would be exempt from the proposed ordinance, and would continue to be the chief means of isolating wet groceries from other groceries. This practice would continue to be practical and effective whether in a single-use bag or a reusable bag.

Response 1.38

The commenter notes that different sized paper bags may be used as a result of the proposed ordinance and asks if there is intent to account for the different sized bags with different fees. The Proposed Ordinance would place a \$0.10 fee on all paper carryout bags, regardless of size.

Response 1.39

The commenter notes that the description of paper bags on page 2-5 should show how paper bags are manufactured from a combination of virgin raw material and recycled content. The amount of recycled content used in paper bags varies by manufacture. For example, according to International Paper, the paper bags produced their Buena Park plant contain a minimum of 40% recycled content. However, there is no industry wide standard for the amount of recycled



content in paper bags. Therefore it would be speculative to put this information in the Draft EIR.

Response 1.40

The commenter states that commercial composting is not an absolute requirement for biodegradable bags. According to Whole Centric, a company that sells compostable items, composting is required for biodegradation. A citation has been added to the Final EIR to support this conclusion.

Response 1.41

The commenter reiterates the opinion that the 531 bags per capita estimate used in part b on page 2-6 is too high. See responses 1.15 and 1.17.

Response 1.42

The commenter states that Table 2-1 should be revised based on his previous comments that the assumption about plastic bag use in the Study Area is too high. See responses 1.15 and 1.17.

Response 1.43

The commenter states the 2nd to last paragraph on page 2-9 should be revised to match the requested update to Table 2-1. See responses 1.15 and 1.17.

Response 1.44

The commenter reiterates the opinion that a shift to paper bag use may lead to an increase in produce bags. This ordinance relates to carryout bags, those that are used to transport items outside of the store, not those that are used in the store. See Response 1.37.

Response 1.45

The commenter states that the quantity of carryout bags described on page 2-10 should be modified based on his previous comments. See responses 1.15, 1.17, 1.21 and 1.23.

Response 1.46

The commenter suggests that the analysis should take into account different sizes of paper bags that might be used as a result of the Proposed Ordinance. The Proposed Ordinance would apply to grocery stores and smaller retailers such as pharmacies, drug stores, convenience food stores, food marts, or other similar retail stores or entities engaged in the retail sale of a limited line of grocery items. It can be reasonably assumed that the anticipated replacement of plastic bags at these types of retailers would likely utilize a recyclable paper bag similar to the type and size currently used at these retailers such that the same volume of groceries currently held by a plastic bag could be replaced by a comparably sized recyclable paper bag. Thus, it is reasonable



to assume that plastic bags used at these retailers would be replaced by a commonly used/sized paper bag.

Response 1.47

The commenter suggests that the analysis should take into account the increase of plastic trash liners and the associated impacts that may occur since area residents won't be able to reuse plastic bags as trash liners. Regarding the commenter's opinion that plastic bags are reused, the Draft Program EIR acknowledges that single-use plastic bags can be used more than once. As discussed in Section 2.0, *Project Description*, single-use plastic bags can be re-used by customers and are recyclable. There may likely be an increase in plastic trash liners used in the Study Area. However, these types of trash bags are intended for such use and are not the type of bags that generally end up as litter (which impact biological resources, clog storm drains, and enter the marine environment). The objective of the Proposed Ordinance is intended to reduce existing impacts associated with plastic carryout bags including those impacts related to biological resources (plastic bag litter affecting wildlife species and habitat) and water quality (plastic bag litter clogging storm drains and entering creeks and waterways within the Study Area).

Response 1.48

The commenter suggests that Table 2-2 should contain language that is consistent with other places in this EIR that state that the lifetime of a reusable bag is conservatively assumed to be one year. As stated in Table 2-2 of the Draft EIR, "it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times." No changes are warranted.

Response 1.49

The commenter refers to previous comments about the project objectives. See responses 1.2 through 1.8.

Response 1.50

The commenter notes that the description of transportation systems in Ventura County does not include marine transport. The following revisions to the text of page 3-2 of the Final EIR were made to address this comment:

Ventura County's transportation system consists of a series of highways, streets, bikeways, transit systems, ~~pedestrian~~ passenger rail service, three harbors, and four airports.

Response 1.51

The commenter notes the word "passenger" is more accurate than "pedestrian" when describing rail service and notes a spelling error. The errors have been corrected and the change has been made in the Final EIR (see Response 1.50).



Response 1.52

The commenter states that the cumulative impact analysis should include a discussion of Trash TMDLs. The commenter further states that decision-makers need to know how effective trash excluders have been at reducing the amount of plastic bag litter entering County waterways. See Response 1.28 regarding trash excluders. In regard to Trash TMDL programs, including the use of trash excluder, these programs are not expected to reduce litter associated with single use plastic bags as much as the Proposed Ordinance, which prohibits the use of plastic carryout bags.

Response 1.53

The commenter notes that the ten cent charge in the City of San Francisco ordinance applies to checkout bags, not to reusable bags. This correction has been made in the Final EIR.

Response 1.54

The commenter states that the number of truck trips described on page 4.1-4 should be adjusted in response to his previous comments that the assumption of 531 plastic bags used per capita is too high. Please see responses 1.15 and 1.17 regarding why the assumption of 531 plastic bags used per capita is reasonable for the Draft EIR. Nevertheless, if the plastic bag use assumption was reduced to 266 plastic bags per capita (see Response 1.17) there would be 342 new truck trips in the Study Area per year, or approximately 1 truck trip per day, compared to 682 new annual truck trips, or approximately 2 per day using the original 531 bags per capita assumption. Thus the overall net new truck trips would be lower than estimated in the Draft EIR (and thus impacts associated with truck trips would be reduced compared to the Draft EIR analysis). Nevertheless, using the assumption proposed by the commenter, the number of truck trips would still increase compared to existing conditions as a result of the Proposed Ordinance and the conclusions of the EIR would not change (the impact would remain less than significant).

Response 1.55

The commenter questions whether a “single use plastic bag” is a reference to an HDPE plastic carryout bag and asks how a LDPE single use plastic carryout bag compares to the LDPE plastic reusable bag. As described in Response 1.36, under the Proposed Ordinance a plastic carryout bag is defined as “any bag made predominantly of plastic derived from either petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale”. Both HDPE and LDPE plastic carryout bags could fit under the category of a plastic carryout bag if they do not meet the definition of a reusable bag. HDPE plastic bags are more commonly used at the retail stores that would be regulated by the Proposed Ordinance. Thus, it is reasonably assumed that the majority of single use carryout plastic bags are HDPE bags and the impact analysis for the life cycle assessments are based on a HDPE bag. Further, because LDPE is generally thicker than HDPE, LDPE plastic carryout bags could fit under the definition of a reusable bag (if they meet the criteria listed in the Draft Ordinance including being at least 2.25 mils thick) and thus would not be regulated under the Proposed Ordinance.



Response 1.56

The commenter suggests that the EIR must address both types of single use carryout bags, those made from HDPE and LDPE plastic. See responses 1.36 and 1.55.

Response 1.57

The commenter requests that baseline conditions include the current paper and reusable bag use in the Study Area. According to the CEQA statute, “the purpose of an environmental impact report is to identify the significant effects on the environment of a project” (PRC Section 21002.1). In this case, the project is the Proposed Ordinance and the EIR examines the effects on the environment as a result of the Proposed Ordinance. The Proposed Ordinance would prohibit plastic carryout bags at regulated retail establishments, causing customers who currently use plastic bags to shift to paper or reusable carryout bags. This EIR examines the environmental effects of the switching behavior as a result of the Ordinance and does not take into account existing paper and reusable carryout bag use prior to the Ordinance since these factors would not be relevant to the EIR analysis.

Response 1.58

The commenter asks whether the “single use plastic bag” is an HDPE or LDPE bag and whether the air quality emissions relate to an HDPE or LDPE bag. Please see responses 1.36 and 1.55. In regard to air pollutant emissions, because the majority of retailers that would be subject to the Proposed Ordinance utilize HDPE, the impact analysis for air pollutant emissions is based on the life cycle analysis of the HDPE bags as it is undetermined how many retailers utilize single-use LDPE bags (those less than 2.25 mils or that would not meet the definition of a reusable bag in the Draft Ordinance) while the use of HDPE plastic bags is more likely at the type of retailers that would subject to the Proposed Ordinance. Thus, it is reasonable to assume that the emissions for single use plastic bags (either HDPE or LDPE) as well as other environmental impacts (biological resources, greenhouse gas emissions, hydrology/water quality and utilities/services systems) are generally similar to those of HDPE plastic bags.

Response 1.59

The commenter requests that the numbers on Table 4.1-4 be adjusted to reflect prior comments that the assumption of per capita plastic bag use in the Study Area is too high. Please see responses 1.15 and 1.17. The 20 billion plastic bags used per year in California (CIWMB, 2009) is a reasonable assumption and the commenter does not provide any evidence suggesting otherwise. Nevertheless, assuming per capita plastic bag use of 266 (see Response 1.17), the Proposed Ordinance would reduce ozone emissions by 4,105 kg per year and reduce AA emissions by 122,383 kg per year (compared to a reduction of 8,195 kg and 244,306 kg, respectively, with the original assumption in the EIR). Thus, although the reduction in emissions would be less than described in the Draft EIR, there would still be a reduction in emissions and the overall conclusions of the EIR would not change.



Response 1.60

The commenter again suggests a different method to calculate reusable bag use. See Response 1.21.

Response 1.61

The commenter states that trash excluders, installed on storm drains, will prevent plastic bags and debris from entering the riverbed or the ocean. The commenter requests that paragraph 4.2.1c, in Section 4.2, *Biological Resources* of the Draft EIR be updated to include damage to the environments post trash excluder installation. See Response 1.28.

Response 1.62

The commenter requests that the last paragraph on page 4.2-2 of the Draft EIR be revised to state that wildlife is entangled by discarded fishing lines and fishing nets, not by plastic bags. The commenter further states that the subject of entanglement needs to remain focused on discarded fishing gear, not plastic bags and that entanglement by plastic carryout bags occurs infrequently. While it may be true that the entanglement of marine wildlife in fishing line/gear results in harm to those species, the purpose of the Draft EIR is to evaluate the potential impacts of the Proposed Ordinance on the environment. It is not the purpose of the Draft EIR to address potential impacts to wildlife resulting from entanglement of fishing line/gear. Furthermore, as stated in Section 4.2, *Biological Resources*, of the Draft EIR single use plastic carryout bags enter the biological environment primarily as litter. This can adversely affect terrestrial animal species, and marine species that ingest the plastic bags (or the residue of plastic bags) or become tangled in the bag (Green Cities California MEA, 2010). Therefore, entanglement of wildlife can occur with terrestrial species as well as marine species. As such, the Draft EIR addresses the impacts of plastic bag entanglement on terrestrial as well as marine species. Although entanglement of wildlife by plastic carryout bags may occur infrequently, the commenter acknowledges that entanglement of wildlife by plastic carryout bags does occur. No change to the Draft EIR text is warranted.

Response 1.63

The commenter requests a revision to line seven of the last paragraph on page 4.2-2 of the Draft EIR to reflect the opinion that plastic bags do not cause entanglement, but that fishing gear does. See Response 1.62.

Response 1.64

The commenter requests a revision to the first paragraph on page 4.2-7 of the Draft EIR to reflect evidence that discarded fishing lines and nets causes entanglement of marine wildlife. See Response 1.62.



Response 1.65

The commenter requests a revision to the following statement, contained in the last paragraph of page 4.2-10, to reflect harm done to the environment post trash excluder installation: “These bags can become litter that enters the storm drain system and ultimately enters into creeks/rivers and eventually coastal and marine environments.” See Response 1.28.

Response 1.66

The commenter requests expansion of the second paragraph on in Section 4.2, *Biological Resources*, page 4.2-11 to provide a better definition of recycling and to clarify the following: that some curbside recycling bins allow plastic bags and some reject them, that a plastic carryout bag ban would result in the absence of in-store recycling bins for plastic bags and that more plastic would go to the landfill as a result, that plastic carryout bags filled with trash serve a useful purpose, and that plastic carryout bags caught in trash excluders are removed and properly disposed of by agency personnel on a regular maintenance schedule. The purpose of the Draft EIR is to evaluate the potential environmental impacts of the Proposed Ordinance. In particular, the purpose of Section 4.2, *Biological Resources*, is to evaluate the potential impacts of the Proposed Ordinance on biological resources. It is not the purpose of the Draft EIR to provide refined definitions of recycling. While it may be true that some curbside recycling bins allow plastic bags, there are many that do not in the Study Area. Moreover, as described in Section 4.2, *Biological Resources*, although some recycling facilities handle plastic bags, most reject them because they can get caught in the machinery and cause malfunctioning, or are contaminated after use.

The solid waste impacts of the Proposed Ordinance are evaluated in Section 4.5, *Utilities and Service Systems*, of the Draft EIR. As discussed in Section 4.5, the Proposed Ordinance would result in an increase of solid waste to area landfills as a result of the increase in paper and reusable bag use, not as a result of the increased use of single use plastic carryout bags. As stated in Section 2.0, *Project Description*, AB 2449, which requires stores over 10,000 square feet that provide plastic carryout bags to customers, must provide at least one plastic bag collection bin in an accessible location to collect used bags for recycling. AB 2449 was extended to January 1, 2020 by the adoption of SB 1219 on September 9, 2012. The Proposed Ordinance would ban plastic bags and would therefore eliminate the need for customers to return plastic bags to the stores for recycling. In regard to the concern about more plastic being sent to the landfill, the AB 2449 plastic bag recycle bins are intended for plastic carryout bag recycling and is not the only recycling infrastructure in the Study Area. The cities and counties within the Study Area provide curbside recycling in private recycling bins for both residents and businesses. In addition, each jurisdiction provides dropoff centers where the public can recycle products such as plastic wraps and other plastic bags. The Proposed Ordinance would not eliminate recycling of other materials. The commenter has provided no evidence to support the contention that bins for recyclable materials other than plastic bags would be removed or that higher amounts of such materials would be sent to landfills as a result of the Proposed Ordinance.

The comment that plastic bags filled with trash serves a useful purpose is noted and will be forwarded to the BEACON Board and to each jurisdiction considering adoption of the Proposed Ordinance.



See Response 1.28 regarding trash excluders.

Response 1.67

The commenter requests modification of the third paragraph on page 4.2-11 to reflect harm to the environment prior to the installation of trash excluders on storm drains. See Response 1.28.

Response 1.68

The commenter requests modification of the second paragraph on page 4.2-12 to reflect the opinion that the Proposed Ordinance would not reduce the amount of litter that enters the marine environment since installation of trash excluders will prevent all trash from entering the marine environment. See Response 1.28.

Response 1.69

The commenter states that the Proposed Ordinance would not have any beneficial impacts on the marine environment as the installation of trash excluders has already resulted in beneficial impacts to the marine environment and the Proposed Ordinance would be duplicating those efforts. See Response 1.28.

Response 1.70

The commenter objects to the statement “the past 100,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated around the globe.” The source for this statement is the Intergovernmental Panel on Climate Change Fourth Assessment Report (2007). CEQA documents are required by statute to evaluate impacts from greenhouse gas emissions.

Response 1.71

The commenter states that as ocean water and terrestrial temperatures rise, the amount of water that evaporates will increase, resulting in additional cloud formation, which leads to cooling, and that this information should be included in the EIR. According to NASA, clouds can both cool the planet by reflecting visible light from the sun, and warm the planet by absorbing heat radiation emitted from the surface. Overall, clouds slightly cool the planet. However, as the commenter notes, as temperatures rise the amount of water that evaporates will increase. Water vapor in the atmosphere acts as a greenhouse gas and could further increase temperatures.¹

Response 1.72

The commenter notes that the calculation of truck trips in the study area on page 4.3-6 only includes truck trips for plastic bags and does not take into account truck trips for existing paper and reusable bag use. See comment 1.57.

¹ <http://earthobservatory.nasa.gov/Features/GlobalWarming/page5.php>



Response 1.73

The commenter states that the paragraph on page 4.3-6 about disposal/degradation does not cover recycling. The paragraph states that “Once disposed of by customers, carryout bags that are not recycled are deposited to a landfill.”

Response 1.74

The commenter questions whether carryout bags refer to all three types, plastic, paper, and reusable and asserts that because a study has shown that some plastic and paper carryout bags in the landfill do not necessarily decompose in modern landfills due to a lack of air, water, and sunlight, the notion that carryout bags generate methane at the landfill is questionable. In regards types of carryout bags, carryout bags refers to any type of bag that is intended to carry purchased items from the point of sale including plastic, paper or reusable type bags. In regard to methane emissions, while some carryout bags may not necessarily completely decompose in a landfill (and thus have a reduced methane emission rate) it would be speculative to assume that all plastic and carryout bags do not decompose and thus do not emit methane. Therefore, the Draft EIR analysis related to decomposition of carryout bags is reasonable as it provides a worst case estimate of the GHG emissions impacts that may result from the Proposed Ordinance. If some carryout bags do not decompose, as suggested by the commenter, this would actually result in fewer GHG emissions associated with the Proposed Ordinance and thus impacts would be slightly reduced. In any event, impacts related to GHG emissions, including those from decomposition in a landfill would not be significant.

Response 1.75

The commenter asks whether the “single use plastic bag” is an HDPE or LDPE bag and whether the GHG emissions relate to an HDPE or LDPE bag. Please see Response 1.58.

Response 1.76

The commenter states that the last paragraph on page 4.3-6 is confusing. The following revisions have been made to the Final EIR to address this comment:

If used 20 times, a reusable LDPE carryout bag results in 10% the GHG emissions of a single use HDPE plastic bag on a per bag basis (AEA Technology, 2005).

Response 1.77

The commenter suggests that while the analysis in the Draft EIR considers an LDPE reusable bag, the cotton reusable bag should also be evaluated as more than likely that this is the type of bag that is machine washable and dryable. The commenter also suggests that a number of studies provide Life Cycle Assessment data for various reusable bags.

The Draft EIR considers the impacts associated with the Proposed Ordinance, which promotes the use of reusable bags. As stated in Draft EIR Section 2.0, *Project Description*, reusable bags can



be made from plastic or a variety of cloths such as canvas or cotton. In order to provide metrics to determine environmental impacts associated with the Proposed Ordinance, reasonable assumptions based upon the best available sources of information were established and utilized in the Draft EIR. Many studies that evaluate the environmental impacts of different types of reusable bags were considered during preparation of the EIR. These studies evaluated reusable bags made from a variety of materials including low density polyethylene, woven high density polyethylene, cotton, and non-woven polypropylene. Specific metrics that compared impacts on a per bag basis were available for single-use plastic, single-use paper and LDPE reusable bags from the best available sources of information (including Stephen L. Joseph, 2009; Boustead, 2007; the Scottish Report, 2005; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010). For example, in Section 4.3, *Greenhouse Gas Emissions*, emissions rates per bag were provided from various sources and utilized to determine GHG impacts as a result of the Proposed Ordinance. This is consistent with previous CEQA documents that analyze carryout bag ordinances including the County of Los Angeles Ordinances to Ban Plastic Carryout Bags in Los Angeles County Final EIR (SCH#2009111104), City of Santa Monica Single-use Carryout Bag Ordinance Final EIR (SCH# 2010041004), City of Sunnyvale Single-Use Carryout Bag Ordinance Final EIR (SCH#2011062032), City of Huntington Beach Single-Use Carryout Bag Ordinance Final EIR (SCH #2011111053), Sonoma County Waste Management Agency Final EIR (SCH#2012102039), and the Palo Alto Disposable Checkout Bag Ordinance Final EIR (SCH#2012062037). The Draft EIR reasonably concludes that overall life cycle impacts attributable to reusable bags (if used multiple times as intended), whether made of plastics such as LDPE, or other materials such as cotton, are less than overall impacts due to plastic carryout bags (which are intended for a single use), so a switch from the use of plastic carryout bags to the use of reusable bags would generally result in a reduction in environmental impacts compared to existing conditions. The Draft EIR utilizes the best available information to disclose environmental impacts associated with the Proposed Ordinance. As stated by *CEQA Guidelines* Section 15144, EIRs are to use the “rule of reason” with respect to content. The analysis contained in the Draft EIR satisfies the rule of reason.

Response 1.78

The commenter questions whether the reference to a LDPE bag on page 4.3-7 of the Draft EIR refers to a reusable LDPE bag. The following has been modified in the Final EIR to clarify that this sentence is referring to a reusable LDPE bag.

Page 4.3-7: However, given the high rate of reuse for all types of reusable bags (100 times or more), the GHG emissions associated with these bags, are expected to be comparable to an LPDE reusable bag or lower.

Response 1.79

The commenter suggests that the Draft EIR overestimates the existing use of plastic bags in the Study Area and suggests this would lead to incorrect GHG emissions. Please see responses 1.15 and 1.17 regarding why the assumption of 531 plastic bags used per capita is reasonable for the Draft EIR. Also, see Response 1.21 related to the estimated reusable bag use as a result of the Proposed Ordinance. These estimates are considered reasonable for use in the EIR. Further,



even if the analysis utilized the commenter's suggested bag use estimates, the overall net change of bag use (with an increase in paper and reusable bags) would be reduced compared to the Proposed Ordinance (as there would be fewer paper bags and reusable bags compared to the Proposed Ordinance which have a higher emissions rate than plastic bags) and thus would result in fewer impacts related to GHG emissions. In any event, the impact would not be significant.

Response 1.80

The commenter states that the GHG impacts calculations are incorrect because the number of plastic carryout bags is overstated. Please see responses 1.15, 1.17, 1.21 and 1.79. While the assumptions in the Draft EIR are reasonable and adequate, even if the EIR analysis utilized the commenter's suggested per capita plastic bag use of 266 (see Response 1.17), the Proposed Ordinance would increase greenhouse gas emissions only by 7,106 MT CO₂e instead of a net increase of 10,919 MT CO₂e as under the original Draft EIR analysis. The commenter's assumption would result in a decrease in GHG emissions compared to the assumption in the EIR, but would not change the conclusions of the Draft EIR.

Response 1.81

The commenter states an opinion that the numbers of plastic, paper, and reusable bags on page 4.3-12 are overstated. See responses 1.15, 1.17, 1.21 and 1.80.

Response 1.82

The commenter states an opinion that the numbers of reusable bags are overstated on page 4.3-12. See Response 1.21 and 1.80.

Response 1.83

The commenter states an opinion the numbers of plastic, paper, and reusable bags on Table 4.3-3 are overstated. See responses 1.15, 1.17, 1.21 and 1.80.

Response 1.84

The commenter suggests removing the item discussing "Ethanol:85" in Table 4.3-5 as large trucks that transport carryout bags would not likely utilize such fuel. This line has been deleted in the Final EIR. This edit does not alter any of the impact analysis related to greenhouse gas emissions in the Draft EIR (impacts would be the same, less than significant).

Response 1.85

The commenter states a concern that the Proposed Ordinance would result in the loss of plastic bag recycling bins at stores, which also collect other recyclable products such as other plastic bags and plastic wraps. He further states concern that if these bins are removed, recyclable material would be sent to landfills.



This comment is speculative. The Proposed Ordinance would ban plastic bags and would therefore eliminate the need for customers to return plastic bags to the stores for recycling. In regard to the concern about other recyclable materials being sent to the landfill, the AB 2449 plastic bag recycle bins are intended for plastic carryout bag recycling and is not the only recycling infrastructure in the Study Area. The cities and counties within the Study Area provide curbside recycling in private recycling bins for both residents and businesses. In addition, each jurisdiction provides dropoff centers where the public can recycle products such as plastic wraps and other plastic bags. The Proposed Ordinance would not eliminate recycling of other materials. The commenter has provided no evidence to support the contention that bins for recyclable materials other than plastic bags would be removed or that higher amounts of such materials would be sent to landfills as a result of the Proposed Ordinance. In addition, see Response 1.66.

Response 1.86

The commenter opines that truck drivers would likely choose the lowest cost tire when tires need to be replaced. This comment is speculative. The item in Table 4.3-5 in the Draft EIR is related to the State of California's statewide program to encourage the production and use of more efficient tires and that drivers delivering carryout bags within the Study Area "could purchase tires for their vehicles that comply with state programs for increased fuel efficiency." The Draft EIR does not state that truck drivers "will" purchase, but rather that the option is available and would be a more likely option for truck drivers as a result of the state program.

Response 1.87

The commenter opines that it is doubtful that "non-petroleum" fuels would be suitable for or have the availability required for long haul trucks which according to the commenter would be more likely for delivery of carryout bags to the Study Area as these fuels are used more likely to be used in "semi-trucks used for short-haul deliveries" which according to the commenter would not be likely for carryout bag delivery in the Study Area. The comment is noted; however, the commenter does not provide any evidence to suggest that the trucks delivering carryout bags to the Study Area would not be able to utilize non-petroleum fuels. Therefore, the comment is speculative.

Response 1.89

The commenter requests modification of the last paragraph on page 4.4-1 to include a discussion of trash excluders and how they prevent plastic bags from entering water bodies. See Response 1.28.

Response 1.90

The commenter requests modification of the first paragraph on page 4.2-2 to clarify the difference between curbside recycling and in-store recycling bins. The first paragraph on page 4.2-2 of the Draft EIR describes the species contained within the Goleta Slough habitat in Santa Barbara County. As such, clarification of the difference between curbside recycling and in-store



recycling would not be appropriately discussed in that paragraph. In addition, see Response 1.66.

Response 1.91

The commenter states that 40% of plastic carryout bags are used as trash bags and that banning plastic carryout bags would result in increased manufacturing of plastic trash bags, which result in environmental impacts. The commenter requests a revision of the Draft EIR to assume that 40% of plastic bags would be replaced by plastic trash bags and states that the manufacturing and disposal of these bags should be evaluated. The commenter does not provide a source for the estimate of 40% of plastic carryout bags being used as trash bags. As discussed in Section 2.0, *Project Description*, single-use plastic bags can be re-used by customers. However, single-use plastic bags are generally intended for one use before disposal. Therefore, the estimate that 40% of plastic carryout bags are used as trash bags is speculative.

Response 1.92

The commenter states that while plastic carryout bags can clog catch basins or trash excluders and cause local flooding, this seldom happens because municipal employees regularly clean out catch basins and trash excluders. The commenter further states that in the event of a major rainstorm municipal employees will be on duty to ensure that flood control channels and storm drains are clear and not impeding water flow resulting in flooding. This comment pertains to the impacts of clogged basins or trash excluders and does not pertain to the analysis contained in the Draft EIR. Additionally, see Response 1.28.

Response 1.93

The commenter states a personal observation that reusable bags can, under high wind conditions, become windblown litter and if it enters a storm drain could cause clogging due to the fact that these bags are heavy duty and resistant to biodegradation. As stated in Section 4.2, *Biological Resources*, reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to single use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 52 times, they would be disposed of less often than single use carryout bags. As such, reusable bags are less likely to enter the marine environment as litter, when compared to single use plastic or paper bags. Therefore, the Draft EIR acknowledges that reusable bags can be released into the environment as litter.

Response 1.94

The commenter states an opinion that the installation of trash excluders on storm drains in response to the Trash TMDLs listed on page 4.4-5 or the Draft EIR will eliminate plastic carryout bags and other plastic debris and trash from entering streams/rivers and the ocean. See Response 1.28.



Response 1.95

The commenter states an opinion that the numbers of plastic, paper, and reusable bags, discussed in Section 4.4, *Hydrology and Water Quality*, are overstated. Please see responses 1.15, 1.17, 1.18 and 1.21.

Response 1.96

The commenter states an opinion that the following statement is not correct as it does not account for the routine maintenance and cleaning of trash excluders by agency personnel: “Single use plastic bag litter that enters the storm drain system can block or clog drains resulting in contamination.” As stated in Response 1.28, single use plastic bags that become litter may enter storm drains from surface water runoff or may be blown directly into local waterways by the wind. As trash excluders are installed in storm drain systems they would not help reduce the amount of plastic bag litter that is blown directly into local waterways by the wind or the resulting water quality impacts of those bags.

Response 1.97

The commenter restates an opinion that the assumption that Californians use 20 billion plastic carryout bags on page 4.4-8 is overstated. See responses 1.15 and 1.17.

Response 1.98

The commenter states an opinion that paper bags have increased water quality impacts as compared to plastic carryout bags. The commenter further states that the degradation of paper bags in waterways releases trace amounts of chemicals that were used during the manufacturing process. The Draft EIR acknowledges that paper bags can have adverse impacts on water quality. However, those impacts are reduced when compared to single-use plastic bags. As stated in Section 4.4, *Hydrology and Water Quality*, single use paper bags have fewer litter-related effects on water quality than single use plastic bags; however, the manufacturing process for paper bags may utilize various chemicals and materials and may also require the use of fertilizers, pesticides and other chemicals for production of resources (such as pulp). Discharges of these chemicals and materials into water bodies, either directly or indirectly through storm water runoff, may increase the potential for higher than natural concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus. Therefore, the analysis contained in the Draft EIR reasonably accounts for the potential impacts of paper bags on water quality.

Response 1.99

The commenter states an opinion that because of the size weight and flexibility of single-use plastic bags they have an easier time running down storm drains with the water flow and therefore, are less likely to block or clog storm drains compared to paper bags. The commenter provides no evidence to support the opinion that plastic carryout bags are less likely to block or clog drains compared to paper bags or the plastic bags “have an easier time running down storm drains with water flow.”



Response 1.100

The commenter opines that as reusable bags more popular, they have the potential to end up as litter just as plastic carryout bags, but perhaps less often. See Response 1.93.

Response 1.101

The commenter states that “promoting a shift” towards reusable bags is not a proper objective for the Proposed Ordinance. See responses 1.3 through 1.8.

Response 1.102

The commenter suggests modification of the description of the manufacture of paper bags on page 4.4-10 to include recycled content in paper bags. The discussion on page 4.4-10 relates to the manufacture of paper bags and is intended to provide general setting information related to the potential impacts that the manufacture for various carryout bags (plastic, paper or reusable) may have on the existing environment. Impacts from manufacturing would be similar whether for recyclable paper bags or paper bags that do not contain recycled content.

Response 1.103

The commenter states that paper bags have trace amounts of chemicals that are released when a littered paper bag breaks down and contaminates the environment. Please see Response 1.98.

Response 1.104

The commenter suggests a grammatical edit to “in the Study Area” to replace “in Study Area” on page 4.4-10. This change has been made in the Final EIR.

Response 1.105

The commenter asks what the impact of chemicals used to wash and sanitize reusable bags on a recurring basis is. Washing and sanitizing reusable bags by individuals (most likely in their private residences) would be expected to be similar to existing hygiene efforts for other washable materials using soaps or over the counter cleaners. The comment does not provide any evidence to suggest otherwise.

Response 1.106

The commenter states that reusable bags may be made from raw materials or purchased materials, or made at home by a seamstress or hobbyist so the term manufacturing facilities should include manufacturers of the raw materials used to construct the reusable bag. The discussion on page 4.4-11 relates to the manufacture of reusable bags and is intended to provide general setting information related to the potential impacts that the manufacturing for reusable bags may have on the existing environment. Impacts from manufacturing would be similar

whether for raw materials or purchased from manufacturers of other materials (such as a textile mill).

Response 1.107

The commenter repeats a comment related to the assumptions used in the Draft EIR to estimate the existing and proposed number of plastic, paper and reusable bags in the Study Area. Please see responses 1.15, 1.17, 1.18 and 1.21.

Response 1.108

The comment repeats a comment related to the assumptions used in the Draft EIR to estimate the existing and proposed number of plastic, paper and reusable bags in the Study Area. Please see responses 1.15, 1.17, 1.18 and 1.21.

Response 1.109

The commenter reiterates a previous comment related to the impact of trash excluders on trash discharges into area rivers. Please see Response 1.28.

Response 1.110

The commenter reiterates a comment that the plastic bag quantities on page 4.4-12 are overstated. See responses 1.15 and 1.17.

Response 1.111

The commenter reiterates a comment that the plastic bag quantities in Tables 4.5-2 and 4.5-3 are overstated. See responses 1.15 and 1.17.

Response 1.112

The commenter again states that the carryout bag quantities on page 4.5-5 are overstated. See responses 1.15, 1.17 and 1.21.

Response 1.113

The commenter states that the quantity of plastic bags used in Table 4.5-6 is overstated. See responses 1.15 and 1.17.

Response 1.114

The commenter states that the quantity of plastic bags used in Table 4.5-8 is overstated. See responses 1.15 and 1.17.



Response 1.115

The commenter suggests that the reusable bag estimate assumptions should be modified per his prior comments and that 2 gallons of water should be used for handwashing reusable bags instead of 1 gallon as used in Table 4.5-10. Further, the commenter opines that even though 65% of the plastic bags would be replaced by reusable bags, because water is scarce resource the Draft EIR should assume that 100% of plastic bags are replaced by reusable bags.

In regard to reusable bag estimates, please see responses 1.15, 1.17 and 1.21. In regard to using 2 gallons, one gallon for handwashing a reusable bag is a reasonable assumption and changes to the Draft EIR are not warranted. Nevertheless, using the commenter's suggested rate of two gallons to hand wash reusable bags, the water use would increase by approximately 151.5 acre-feet per year (AFY) to approximately 622 AFY compared to the 470.5 AFY per year estimated in the Draft EIR. However, even using this estimate, the additional water use associated with the Proposed Ordinance would not exceed the Study Area's existing surplus water supply of 30,315 AFY. Thus, the impact would remain less than significant.

Response 1.116

The commenter reiterates previous comments that the estimates of plastic bags, paper bags, and reusable bags should be adjusted. Further, the commenter states that the estimated solid waste for reusable bags in Table 4.5-11 and 4.5-12 should be verified for accuracy and that the Draft EIR should assume that all 8.2 million reusable bags ("overstated number") are disposed of in a landfill.

In regard to bag estimates and assumptions, please see responses 1.15, 1.17, 1.18 and 1.21. It is acknowledged that 8.2 million reusable bags is a conservative estimate and its use in the Draft EIR is intended to evaluate the "worst-case" scenario related to impacts of the Proposed Ordinance. Using the "overstated" (as the commenter suggests), more conservative estimate of approximately 8.2 million reusable bags would result in greater impacts as a result of the Proposed Ordinance compared to lower bag use estimates and is therefore considered the worst-case scenario. In regard to the amount of solid waste associated with the increased use of reusable bags from the Proposed Ordinance, the estimated solid waste contained in Table 4.5-11 and 4.5-12 were verified and confirmed according to the Ecobilan and Boustead life cycle assessment data and using the bag use assumptions discussed in responses 1.15, 1.17 and 1.21. Please also see Response 2.32 regarding the quantity of solid waste from reusable bags as a result of the Proposed Ordinance.

Response 1.117

The commenter opines that more information needs to be supplied related to recycling and that decision makers need to know the volume and weight of material projected to go to the landfill and how much material is expected to be diverted as a result of recycling. As described in Section 4.5, *Utilities and Service Systems*, on 4.5-7, the estimated solid waste generation rate for each type of bag utilizes EPA recycling rates to estimate the amount of solid waste that could eventually be sent to a landfill. In regard to the amount of material diverted, the volume of recyclable material is not pertinent to the impact of the Proposed Ordinance. The salient



question is whether the Proposed Ordinance would generate solid waste exceeding the capacity of local solid waste disposal facilities. As discussed in Section 4.5, future solid waste generation changes associated with the Proposed Ordinance would remain within the capacity of regional landfills.

Response 1.118

The commenter states that Alternative 1 would see a difference in the environment because trash excluders would interrupt the flow of trash from the storm drain to the river and to the ocean. Please see Response 1.28.

Response 1.119

The commenter suggests that the no project alternative (Alternative 1) should discuss the use of reusable bags in the Study Area. Please see Response 1.57.

Response 1.120

The commenter states that the assumptions about bag use on Table 6-1 need to be revised. See responses 1.15 and 1.17.

Response 1.121

The commenter states that the assumptions about bag use on page 6-4 need to be revised. See responses 1.15 and 1.17.

Response 1.122

The commenter opines that discarded fishing line and nets are the primary cause of entanglement of marine mammals. Please see Response 1.62.

Response 1.123

The commenter states that the assumptions about bag use in Table 6-5 need to be revised. See responses 1.15 and 1.17.

Response 1.124

The commenter states that decision makers need to know the impact to landfill volumes and diversion from Alternative 2. See Response 1.117.

Response 1.125

The commenter states that the assumptions about bag use on Table 6-6 need to be revised. See responses 1.15 and 1.17.



Response 1.126

The commenter states that the assumptions about bag use on Table 6-7 need to be revised. See responses 1.15 and 1.17.

Response 1.127

The commenter states that the assumptions about bag use in Table 6-8 need to be revised. See responses 1.15 and 1.17.

Response 1.128

The commenter states that the assumptions about bag use on Table 6-10 need to be revised. See responses 1.15 and 1.17.

Response 1.129

The commenter states that the assumptions about bag use on Table 6-11 need to be revised. See responses 1.15 and 1.17.

Response 1.130

The commenter states that the assumptions about bag use on Table 6-12 need to be revised. See responses 1.15 and 1.17.

Response 1.131

The commenter states that the assumptions about bag use on Table 6-13 need to be revised. See responses 1.15 and 1.17.

Response 1.132

The commenter opines that the installation of trash excluders on storm drains in 2012 and 2013 would keep the bulk of plastic carryout bags and other trash out of the rivers, coastal areas, and the ocean. Please see Response 1.28.

Response 1.133

The commenter states that the assumptions about bag use on page 6-19 need to be revised. See responses 1.15 and 1.17.

Response 1.134

The commenter notes a title/heading error in Table 6-15. Table 6-15 in the Final EIR has been corrected with the appropriate heading related to Alternative 4 (replacing the wrong heading which listed Alternative 2).



Response 1.135

The commenter states that the assumptions about bag use on page 6-19 need to be revised. See responses 1.15 and 1.17.

Response 1.136

The commenter states that the assumptions about bag use on Table 6-16 need to be revised. See responses 1.15 and 1.17.

Response 1.137

The commenter notes a spelling error on page 6-20. The error has been corrected in the Final EIR.

Response 1.138

The commenter states that the assumptions about bag use on page 6-21 need to be revised. See responses 1.15 and 1.17.

Response 1.139

The commenter states that the assumptions about truck trips on page 6-21 are overstated because the bag use assumption used in the Draft EIR are overstated. Please see responses 1.15, 1.17, 1.18 and 1.21.

Response 1.140

The commenter opines that plastic and paper bags are interrupted in their journey to the ocean by trash excluders newly installed in 2012 and 2013 on storm drains that empty into creeks/ rivers. Please see Response 1.28.

Response 1.141

The commenter states that the assumptions about bag use in Table 6-20 need to be revised. See responses 1.15 and 1.17.

Response 1.142

The commenter reiterates his prior comments that trash excluders will prevent the bulk of plastic carryout bags from entering creek/ river and ocean environments. Please see Response 1.28.



Response 1.143

The commenter repeats a previous comment that future supplies of water cannot be guaranteed due to drought and uncertain climate conditions in the future as a result of climate change. Please see Response 1.29.

Response 1.144

The commenter repeats a previous comment that more information needs to be supplied related to recycling and that decision makers need to know the volume and weight of material projected to go to the landfill and how much material is expected to be diverted as a result of recycling. Please see Response 1.117.

Response 1.145

The commenter suggests that an alternative for a “No Charge for Paper Bags” should have been considered in the Draft EIR as evaluating this alternative would have provided decision makers specific information as to how this option differs from the proposed ordinance or other alternatives.

As described in Section 6.0, *Alternatives*, on page 6-26, a “No Charge for Paper Bags” alternative was considered but ultimately rejected. CEQA Guidelines § 15126.6 requires that an EIR consider a range of reasonable alternatives to a proposed project, which would feasibly obtain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. This alternative was rejected because it would not deter customers from using paper bags, which have greater impacts related to air quality, GHG emissions, and water quality than plastic bags on a per bag basis. Therefore, this alternative would not avoid or substantially lessen any of the impacts from the Proposed Ordinance and may increase certain environmental impacts. In addition, this alternative would not achieve the Proposed Ordinance’s objective of promoting a shift toward the use of reusable carryout bags by retail customers to as great a degree as would occur with the Proposed Ordinance as customers would simply switch from “no fee” plastic bags to “no fee” paper bags as there would be no financial disincentive to utilize reusable bags.

Response 1.146

The commenter states that biodegradable or compostable bags would be a good universal alternative. As stated in Section 6.6, this alternative was considered, but ultimately rejected because it is unclear what environmental impacts may be associated with switching to plastic bags made with biodegradable additives or water soluble bags. In addition, this alternative would not achieve the objectives of reducing the amount of single-use plastic and paper bags in trash loads (e.g., landfills), in conformance with the trash load reduction requirements of the NPDES Municipal Regional Permit, promoting a shift toward the use of reusable carryout bags by retail customers, and avoiding litter and the associated adverse impacts to stormwater systems, aesthetics and the marine environment.



Response 1.147

The commenter reiterates that under Alternative 4, trash excluders on storm drains will eliminate the majority of plastic bags, plastic debris, and trash that enter the riverbed and subsequently into the ocean or coastal bays. Please see Response 1.28.

Response 1.148

The commenter recommends that the Proposed Ordinance does not require reusable bags to carry up to 22 pounds because of potential weight and ergonomic issues from carrying heavy bags. See Response 1.33.

Response 1.149

The commenter recommends that public health officials review and make recommendations on possible public health issues related to reusable bag use. This comment is speculative. Regarding public health impacts of reusable bags, while the Proposed Ordinance would promote a shift toward the use of reusable bags, periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers. It is assumed that individuals would generally continue to practice good hygiene.

Response 1.150

The commenter recommends the Proposed Ordinance include a public awareness campaign. This suggestion is noted and will be forwarded to the BEACON Board and to each jurisdiction considering adoption of the Proposed Ordinance. The proposed Bag Ordinance allows for use of the charges collected by a store for paper carryout bags to fund educational materials or an education campaign encouraging the use of reusable bags. The implementation and content of these campaigns would be at the discretion of the individual stores under the existing text of the Proposed Ordinance.

Response 1.151

The commenter recommends that the Proposed Ordinance integrate a recycling component. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. The cities and counties within the Study Area provide curbside recycling in private recycling bins for both residents and businesses. In addition, each jurisdiction provides dropoff centers where the public can recycle products such as carryout bags.

Response 1.152

The commenter recommends changes to the Proposed Ordinance. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. The recommended changes would not be expected to address any significant environmental impacts of the Proposed Ordinance because as discussed in the Draft



EIR, the Proposed Ordinance would not result in any significant environmental impacts (all impacts would be either beneficial or less than significant).



Letter 2

15 March 2013

Mr. Gerald Comati, P.E.
Program Manager
Beach Erosion Authority for Clean Oceans and Nourishment
206 East Victoria Street
Santa Barbara, CA 93101

Subj: Comments on the Draft Environmental Impact Report (DEIR)

Ref: (a) Notice of Availability of a Draft Environmental Impact Report BEACON Single Use Carryout Bag Ordinance dated 12 February 2013
(b) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 4 march 2013

Encl: (1) "Discussion Of Reusable Shopping Bags", by Anthony van Leeuwen, dated 15 march 2013
(2) "Detailed Comments on Draft EIR", by Anthony van Leeuwen, dated 15 March 2013
(3) "Plastic Carryout Bag Ban – More Plastic Headed To The Landfill", by Anthony van Leeuwen, dated 15 March 2013

1. Enclosure (1) and (2) are submitted in accordance with Reference (a) as public input regarding the content of the Draft EIR and the proposed ordinance.
 - a. Enclosure (1) discusses reusable shopping bags from the perspective of retail store security including the role of reusable bags in shoplifting and theft as well as water consumption and restricted availability of water supplies in much of Ventura County. These issues will need to be addressed by BEACON and decision makers who implement the proposed ordinance or one of the recommended alternatives.
 - b. Enclosure (2) provides a list of detailed comments on the Draft EIR.
 - c. Enclosure (3) is resubmitted to emphasize the need for a recycling component in the proposed model ordinance.
2. It is requested that BEACON update the Draft EIR of 12 February 2013 based upon all comments received and post the Final EIR prior to EIR certification for verification by the public that comments and corrections made have been properly incorporated. It is further requested that a short window of opportunity be provided to provide last minute corrections to the Final EIR prior to EIR Certification. This request is based on the magnitude of comments submitted in Reference (b) and in Enclosure (2) of this letter.
3. This memorandum and enclosures are submitted in accordance with reference (a) and should become part of the official record regarding the preparation of this EIR and development of model ordinances. For more information, please feel free to contact Mr. Anthony van Leeuwen at 805-647-4738 or by email at vanleeuwenaw@roadrunner.com.

2.1

Respectfully,

Anthony van Leeuwen

Discussion of Reusable Shopping Bags

By Anthony van Leeuwen, 15 March 2013

Introduction

The reusable shopping bag is seen by many people as a solution to environmental, litter, and aesthetic problems associated with the use of plastic carryout bags. California State Legislators passed AB 2449 and SB 1219 that require grocery stores to offer reusable shopping bags for sale and to have a recycling bin for plastic carryout bags. The use of reusable bags by consumers was strictly on a *voluntary* basis with each person having the *freedom of choice*. Consumers who were *environmentally conscientious* and who chose to use reusable bags comprise a sizeable segment of today's shoppers. A study¹ titled "*Unearthing the truth about reusable grocery bags*" reports that **39%** of grocery shoppers use reusable bags, **53%** still use plastic carryout bags, and **8%** use paper carryout bags or no bags. The study further states that **63%** of people who use plastic carryout bags admit that they forgot to bring their reusable bags into the store.

2.2

The effort continues to further reduce the use of plastic carryout bags, with proponents proposing local ordinances that would ban plastic carryout bags and impose a fee on paper bags in order to *coerce resistant* consumers into using reusable bags. The proposed ordinance assumes that 65% of shoppers will choose to use reusable bags to avoid paying the per paper bag fee. This means the proposed ordinance would only increase reusable bag use from 39% to 65%, although proponents hope for a much larger increase. Proponents justify banning the plastic carryout bag based upon exaggerated claims of environmental damage as described in the video titled "*Are You Being Told the Truth About Plastic Bags?*":

<http://www.youtube.com/watch?v=UdQUzxp9Mfw&feature=youtu.be>

In addition, proponents of bag bans, often fail to inform the public and elected officials about an **inconvenient truth**, that other local projects such as the Total Maximum Daily Loads (TMDL) program mitigates the most egregious environmental problem attributed to plastic carryout bags. Trash TMDL projects for county rivers install hundreds of trash screens on storm drain outfalls to prevent plastic bags, other plastic debris, and trash from entering the riverbed and flowing to the ocean and thereby preventing harm to marine wildlife. It is well documented that 80% of plastic bags and plastic debris in the ocean comes from land based sources and are conveyed to the ocean by storm drains and rivers. Although it is still possible for plastic bags to become windblown litter and end up in the riverbed or ocean directly, this amount of plastic bags are deemed insignificant compared to the amount that previously came from storm drains. With the TMDL program preventing harm to biological and marine

2.3

¹ MaCorr Research Solutions. 2010. "Unearthing the truth about reusable grocery bags". Located at: <http://www.macorr.com/blog/?p=142>

resources, the remaining problem is largely a roadside litter and aesthetics problem where plastic bags comprise less than 1% of roadside litter.

Most important is that the use of reusable bags have not been critically examined from a number of important aspects. First, the impact on retail store security, increased security costs, and merchandise losses due shoplifting and theft. Second, the impact of washing reusable bags for hygienic reasons and the resulting increase in water consumption with respect to water resources and water availability. It should be noted that local officials encourage water and energy conservation, and in times of drought could even prohibit the use of water for certain uses such as watering yards or washing cars. These areas concerning reusable bags are discussed in this paper.

2.3

Reusable Bags

Reusable Bags and Shoplifting

In an article² entitled “Store owners say plastic bag ban causes more shoplifting” Seattle store owners say that thieves with reusable bags are harder to track and in one store, owners reported thousands of dollars in merchandise losses. The highest losses occurred in stores in low income areas with many homeless and transients. According to survey data³ released by the Seattle Public Utilities (SPU) Solid Waste Division in January 2013, 21.1 percent of business owners surveyed said that an increase in shoplifting occurred since the adoption of the plastic bag ban and customer use of reusable bags. Quoting from the article:

“They enter the store with reusable bags and can more easily conceal items they steal. The reusable bags require staff to watch much more closely, and even though the store has a loss-prevention officer and more than a dozen security cameras, it’s tough to tell what a customer has paid for and what they may already have brought with them.”

2.4

By requiring customers to use reusable bags, the security posture of a retail store is *altered* increasing the problem with shoplifting and theft. In an article⁴ entitled “How to Identify Shoplifters” the author describes shoplifting methods as follows:

Many of these thieves work in groups of two or more to distract the sales staff while they pilfer. Shoplifters learn to take advantage of busy stores during peak hours or they may hit at times when employees are less alert, such as opening, closing and shift changes.

Hiding merchandise is the most common method of shoplifting. Items are concealed in the clothing of the shoplifter, in handbags, [reusable bags,] strollers, umbrellas or inside purchased

² McNerthey, Casey. 28 February 2013. “Store owners say plastic bag ban causes more shoplifting”. Seattle PI, available at: <http://www.seattlepi.com/local/article/Store-owners-say-plastic-bag-ban-causes-more-4314744.php>

³ Seattle Public Utilities Plastic Carryout Bag Ban Survey, Seattle Public Utilities, January 2013. Available at: http://www.seattle.gov/util/groups/public/@spu/@conservation/documents/webcontent/01_025117.pdf

⁴ Waters, Shari. 2013. “How to Identify Shoplifters”. About.com Retailing. Available at: http://retail.about.com/od/lossprevention/qt/spot_shoplifter.htm

merchandise. *Bold shoplifters may grab an item and run out of the store. Other methods include price label switching, short changing the cashier, phony returns, and so on.* **[bold text inserted for completeness and emphasis]**

The number of people who bring handbags into a retail store is relatively small compared to the number of people who bring in reusable shopping bags. In other words, the problem of store security is exacerbated. Reusable shopping bags can be used to hide a weapon which is a particular concern for convenience stores (e.g. Circle K, 7-11, etc.) who are more apt to be robbed. In addition, the reusable shopping bag can be used to pilfer merchandise as described in the following scenario:

A shoplifter could simply walk into a store and purchase an item. The shoplifter would pay for the item and walk out of the store and hand the item to an accomplice who holds the item while the shoplifter either re-enters the same store or a different store and picks up the same item and puts it in the reusable bag. If challenged, the shoplifter would pull out the receipt to show that the item was previously paid for.

While many variations to the above scenario or scam exist, the scam becomes particularly egregious if the **plastic carryout bags are banned at all retail stores**, such as stores in your local shopping mall where shoppers would carry reusable bags from one store into another as they shop!

The higher security costs and losses due to theft will be offset by higher prices. Since shoplifting losses are predominantly in low income areas, **residents** of these areas will be *disproportionately harmed*.

Reusable Bags and Bag Hygiene

In an article⁵ titled “*Negative Health and Environmental Impacts of Reusable Shopping Bags*” the author identifies a number of health hazards to consumers including the following:

1. The buildup of bacteria, yeast, mold, coliforms and E-Coli that can potentially cause foodborne illness or death.
2. The transmission of contagious viruses including the common cold virus, croup, Giardia, influenza, meningitis, rotavirus diarrhea, norovirus, strep, and many other diseases.
3. Bacterial cross-contamination of food items e.g. food items eaten raw by poultry and meats.
4. Cross-contamination of food items with residue from cleaning products or pesticides previously carried in the bag.

The problems mentioned above can be solved by consumers washing their reusable bags on a regular basis and/or when they become contaminated. Hand washing or machine washing reusable bags reduces bacterial and viral contamination by more than 99.9%. The importance of washing bags on a regular basis cannot be overemphasized. Most people have the facilities at home to wash reusable bags but it is important to understand that those who are homeless, live in their cars, or live in a homeless encampment, do not have the facilities to wash reusable bags, putting these people at risk. While the

⁵ Van Leeuwen, Anthony. 12 December 2012, “Negative Health and Environmental Impacts of Reusable Shopping Bags”. Located in Appendix A on Page 197 of the BEACON Single Use Carryout Bag Ordinance Draft Environmental Impact Report SCH#2012111093. Available at: <http://www.beacon.ca.gov/index.htm>

homeless might get a free paper bag or a free reusable bag, the reusable bags will prove to be particularly attractive because of its durability and because it holds more.

2.5

Washing reusable bags increases household consumption of energy and water.

Water Consumption

Reusable Bags and Water Consumption

The requirement to wash reusable shopping bags increases the consumption of electricity, natural gas, and water. Both energy and water are subject to conservation by consumers as required by both state and local jurisdictions. In an article⁶ entitled “Ventura’s water supply could shape growth and development” the author identifies that water may not be as abundant as thought. In a memorandum⁷ to the Ventura City Council, the general manager of Ventura Water states:

“In the western United States, most water resources have been challenged by drought conditions, increased demand, ecosystem habitat protection and water quality concerns. Ventura is no exception. Changing pressures on our local water sources is driving the need to create a more holistic and integrated approach to water supply, demand and infrastructure management.”

2.6

In addition, the memorandum makes the following statement:

“prudent planning and collaboration will be needed in the coming years to develop practical strategies to manage demand, balance economic growth, and pursue new water supplies.”

Also, the Draft EIR (page 4.3-4) in the paragraph titled “Water Supply” states that future water supplies in California are **uncertain** and may be limited:

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los

⁶Martinez, Arlene. 5 March 2013. “Ventura’s water supply could shape growth and development”. Ventura County Star. Available at: <http://www.vcstar.com/news/2013/mar/05/venturas-water-supply-could-shape-growth-and/>

⁷ City of Ventura Administrative Report, John F. Johnson and Shana Epstein to the Mayor and City Council dated 28 January 2013 and available at: http://www.cityofventura.net/files/file/meetings/city_council/2013/03-04-13/item%2003%282%29.pdf

Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

It should be noted that Ventura County experienced a number of droughts, and on several occasions water use was prohibited for watering yards and washing cars.

The Draft EIR (page 4.5-10) estimates that washing reusable bags would increase water consumption by **470.5 AFY** for both Ventura and Santa Barbara counties based upon washing an estimated quantity of 8,228,018 reusable bags. The quantity of reusable bags is overstated, and when corrected will reduce the estimated water consumption to about **316 AFY** assuming 65% of households use a reusable bag with a worst case of **396 AFY** if 100% of households use a reusable bag. The draft EIR indicates that these water consumption amounts are within the reserve capacity of study area water supplies.

Reusable Bags, Bag Costs, and Utility Costs

The cheaper reusable bags are made from various plastics and may not really be machine washable or dryable. Cotton or Hemp bags that are durable and machine washable and dryer safe will cost the consumer somewhere between \$4 and \$23 each. While hand washing and air drying reusable bags uses less water and energy, it is expected that consumers will gravitate toward machine washable and dryable bags for both durability and convenience. Which means more water and energy use.

Utility costs for washing reusable bags depend upon both the frequency at which bags are washed and also depend upon the type of appliances: front loader and top loader washing machine; gas or electric

	Low/High	Yearly Cost (1 X per Month)	Yearly Cost (1 X per Week)
Household	Low	\$8.54	\$37.00
	Mid	\$14.31	\$62.00
	High	\$17.54	\$76.00
Total / Ventura 42,827 Households in City of Ventura	Low	\$365,742.58	\$1,584,599.00
	Mid	\$612,854.37	\$2,655,274.00
	High	\$751,185.58	\$3,254,852.00
Total / Ventura County 243,234 Households in Ventura County	Low	\$2,077,218.36	\$8,999,658.00
	Mid	\$3,480,678.54	\$15,080,508.00
	High	\$4,266,324.36	\$18,485,784.00
Notes: (1) Low assumes front loading washer, gas dryer and water heater. (2) Mid assumes top loading washer, electric dryer, and gas water heater. (3) High assumes top loading washer, electric dryer and water heater. (4) Dollar figures represent the increased utility costs.			

Table 1 Yearly Cost Of Washing Reusable Bags Depending Upon Type Of Appliances

NOTE: Table 1 can be adapted for your community/county by multiplying the number of households by Low, Mid, and High values from the per month and per week columns.



2.6

2.7

dryer; and, gas or electric water heater. The annual utility cost for washing reusable bags on a monthly and weekly basis using three options for appliance type are denoted in Table 1 as: Low, Mid, and High.

For a typical family that has 12 machine washable reusable cotton bags (12 x \$4 = \$48 plus 7.25% sales tax is \$51.48) and wash them once per month for an annual cost (“Mid” option) of about \$14.31 the total **first year cost is \$65.79**. In households where a family member has a compromised immune system or other medical condition, reusable bags may have to be washed as often as weekly or between uses. That household’s first year costs would increase to about **\$113.48**. Most of the bags have to be replaced every other year, so consumers will get hit with the recurring cost of buying new bags. It should be noted that these bags are cotton or canvas bags and not the polypropylene woven bags used weekly for 52 weeks with a lifespan of 1 year as identified in the Draft EIR.

2.7

Summary

The adoption of the proposed ordinance to ban plastic carryout bags in favor of consumers using reusable bags will have unintended consequences. First, it will exacerbate retail store security resulting in higher merchandise losses from shoplifting and theft. Increased retail store costs will be offset by higher prices which will disproportionately be felt by low income residents. Second, consumers will be faced with the health consequences and cross contamination issues of reusable shopping bags and the need to wash those bags on a regular basis resulting in higher utility bills plus the additional cost of purchasing reusable bags.

Elected officials and decision makers will have to determine if the proposed ordinance or one of the alternatives selected will improve the plastic bag litter situation in light of the fact that the most egregious environmental impact of plastic carryout bags has been solved by the Total Maximum Daily Loads (TMDL) program. The Trash TMDL project interrupts the flow of plastic bags and debris to the ocean by installing trash screens on storm drain outfalls thereby preventing harm to marine wildlife.

2.8

In addition, decision makers will have to determine if reserve water capacity should be saved for future commercial and residential development projects or whether to **squander** a portion of that reserve capacity to wash reusable bags.

The recurring consumption of water and energy to wash reusable bags is a waste of scarce resources especially when you consider that sanitary plastic and paper bags are readily available off-the-shelf! Water and energy can be more efficiently used during the manufacturing process of plastic and paper carryout bags than by consumers washing reusable bags!

Detailed Comments on Draft EIR

BEACON Single Use Carryout Bag Ordinance

By Anthony van Leeuwen, 15 March 2013

The following comments are submitted on the Draft Environmental Impact Report (EIR) dated 12 February 2013.

1. Page ES-1, 1st Paragraph, Line 11. “for recycled paper bags and at the point of sale” should state “for recycled paper bags at the point of sale”. | 2.9
2. Page ES-1, Last Paragraph, Line 3. “Regulated plastic carryout bags” are not defined. Is the single use carryout bags mentioned in line 1 of this paragraph a “regulated” bag? | 2.10
3. Page ES-2, 1st Paragraph, Line 2. Are “Recyclable paper carryout bags” also considered regulated bags? If so, then you need to clearly define regulated bags. If not, then how can you justify the that the retail establishment charge the customer a fee for each paper bag issued? | 2.11
4. Page ES-2, 2nd Paragraph, Line 1. The statement “the Proposed Ordinance would prohibit the sale or distribution of single use carryout plastic bags” contradicts the statement on page ES-1: “The ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags ... at the point of sale”. NOTE: There is nothing in the proposed ordinance that would prohibit a store from selling plastic carryout bags, packaged in bulk, and sold for a profit just as they sell single use plastic trash bags. | 2.12
5. Page ES-4, Table ES-1, Impact GHG-1. The Impact Statement is incomplete in that it does not identify the increase in GHG emissions as result of washing reusable bags. Compare with Page ES-5, Impact U-1 and Impact U-2 statements that identify the increase water consumption with washing reusable bags. | 2.13
6. Page ES-5, Table ES-1, Impact U-3. The Impact Statement is incomplete in that it does not identify disposal of reusable bags. In addition, diversion to recycling activities is not mentioned at all. It should be noted that diversion of bags to recycling activities is an important method to decrease material dumped in a landfill. | 2.14
7. Page 1-1, 1st Paragraph, Line 3. This paragraph is an introductory paragraph to the Draft EIR which covers the proposed ordinance and a five alternatives. In this paragraph it describes the proposed ordinance as limited to stores that sell “groceries”? What about Alternative 2 that would ban plastic carryout bags in all retail stores? Suggest you rewrite the paragraph to cover the scope of the recommended alternatives, and then narrow it down to the proposed ordinance. | 2.15
8. Page 1-1, Last Paragraph; Page 1-2, 1st Paragraph. The statement “the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) has prepared a Single-Use Carryout Bag Ordinance ... that participating agencies ... may consider for adoption” is not correct. BEACON prepared a “model ordinance” or a template (i.e. draft) that local agencies can adapt and customize in preparing their own ordinance. | 2.16

9. Page 1-2, 3rd Paragraph, Line 3. Since when is the City of Seattle in California? I would certainly like to know where in California it is located! | 2.17
10. Page 1-2, 3rd Paragraph. What is the purpose of listing these counties and cities that have implemented similar ordinances to ban plastic carryout bags? Are there any lessons learned from these cities that would be applicable to decision makers in Ventura and Santa Barbara counties when adoption of the proposed ordinance or one of the alternatives is considered? | 2.18
11. Page 1-4, Table 1-1, Topic No. 11. In the Response column, it should indicate that up to 40% of plastic carryout bags are re-used by consumers as trash bags in lieu of purchasing small trash bags. This complements the statement that 5% of plastic carryout bags are recycled. | 2.19
12. Page 2-9, 5th Paragraph, Lines 1 and 3. Are “Regulated plastic carry out bags” the same as “Single-use carryout bags”? Is a paper bag not also considered a “Single Use carryout bag”? You need a good definition of what a regulated bag is. | 2.20
13. Page 2-10, Last Paragraph; Page 2-11, 1st Paragraph. In this paragraph it states that 65% of the plastic bags would be replaced by 8,228,018 reusable bags. It further states that this amounts to seven (7) reusable bags per person in the study area. In my book, 100% of plastic carryout bags are used by 100% of the population; therefore, 65% of the plastic carryout bags are used by 65% of the population. If you say each person in the study area is using reusable bags, who is using the 197, 72,422 Single use paper bags? Suggest you relook at this paragraph, correct your conceptual errors and rewrite the paragraph. | 2.21
14. Page 4.1-6, Table 4.1-3. A research study by MacOrr Research Solutions reports that 39% of market research respondents indicated they have already switched to reusable bags and that 53% still use plastic carryout bags. This study is titled “Unearthing the truth about reusable grocery bags” and available at: <http://www.macorr.com/blog/?p=142>. The Draft EIR assumes 100% of the population uses plastic carryout bags as the baseline condition. The research study would suggest 53% use plastic carryout bags, 8% paper bags, and 39% reusable bags as a baseline condition. It is recommend that the baseline condition be more representative of reality. If the percentages cited are accurate, then the proposed ordinance would only increase reusable bag use from 39% to 65% for an increase of just 26%! Recommend that you take a hard look at this and update the baseline condition. | 2.22
15. Page 4.2-2, Last Paragraph, Line 13. The following video challenges the statement that plastic bags cause *physical entanglement* and other myths. The video is available at: http://www.youtube.com/watch?feature=player_embedded&v=UdQUzxp9Mfw | 2.23
16. Page 4.2-9, 2nd Paragraph. The statement “Plants or animals have "special-status" due to declining populations, vulnerability to habitat change, or restricted distributions” is poorly written. Some plants or animals have been designated as an endangered species and given “special status” because of declining populations, vulnerability to habitat change, etc. However, there is a process required to obtain such a designation and not all plants and animals have this “special status” as implied. Please clarify and rewrite the sentence. | 2.24
17. Page 4.3-1, 3rd Paragraph, Last Line. Water vapor is produced by evaporation of water from both land and ocean surfaces. | 2.25
18. Page 4.3-7, Table 4.3-1. The table should be updated to reflect the true baseline condition. See comment 14 above. | 2.26

19. Page 4.3-9, 5th Paragraph, Line 10. Correct the spelling of “Santa Barbra[sic] County”. 2.27
20. Page 4.3-15, Table 4.3-5, Heavy-Duty Vehicle Emission Reduction Measures. The statement in the “Consistent” column: “The heavy-duty trucks that deliver carryout bags to and from Study Area retailers on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture” is **wrong**. The Heavy-Duty Vehicle Emission Reduction Measures program requires both new tractors and trailers to be SmartWaySM certified (Aerodynamic changes and Low Rolling Resistance Tires). In addition, older trucks and trailers are phased in over a period of 11 years beginning in 2010. More information is available at: <http://www.arb.ca.gov/cc/hdghg/hdghg.htm> 2.28
21. Page 4.3-15, Table 4.3-5, Achieve 50% Statewide Diversion Goal. The diversion of plastic carryout bags, paper carryout bags, and reusable shopping bags are not covered in the Draft EIR. The Draft EIR assumes all discarded bags go the landfill, vice recycled. Established percentages of bags recycled are available and are mentioned in various places in the Draft EIR. Recommend that a recycling component be added to the proposed ordinance and estimated amounts of material diverted to recycling activities be identified. 2.29
22. Page 4.4-1, Paragraph 4.4.1, 1st Paragraph. What is meant by the statement “Therefore, impacts to hydrology and water quality are not limited to the local watershed”? This is somewhat confusing and needs more clarification. It is understood that plastic, paper, and reusable bags are not known to be manufactured in the study area. However the comparative hydrology and water quality impacts for the manufacture of different types of bags is to be considered in the Draft EIR in order to identify the solution with a lower environmental impact. 2.30
23. Page 4.5-7, 1st Paragraph, Line 6. The statement “a reusable bag (used 52 times) would generate 0.001 kg of waste per bag” does not make sense. Is this solid waste per bag per use or solid waste per bag? A plastic carry out bag generates 0.0065 kilograms or 6.5 grams per bag of solid waste. So how can a reusable bag that weighs at least ten times more than a plastic carryout bag only generate 1 gram of solid waste? 2.31
24. Page 4.5-7, 1st Paragraph. Since solid waste is calculated on an annual basis, the estimated solid waste generated from reusable bags should be calculated based upon the lifespan of reusable bags (the Draft EIR assumes a reusable bag is used weekly for 52 weeks with a lifespan of 1 year) and calculated by multiplying the estimated weight of a reusable bag times the quantity of bags. So based upon the Draft EIR, the number of 8,228,018 reusable bags each weighing 6.8 ounces would generate 1,749.45 tons of solid waste per year. In comparison the 658,241,406 plastic carryout bags generates 4,733 tons (Draft EIR Table 4.5-8) of solid waste per year. Because the quantity of plastic carryout bags and reusable bags are overstated actual amounts will be far less. Nevertheless, diversion of plastic carryout bags, paper bags, and reusable bags to recycling activities should be a priority in the proposed ordinance and alternatives because diversion to recycling activities is a stated goal and in order to reduce tipping fees at the landfill. 2.32
25. Page 4.5-11, 5th Paragraph. The statement “Solid waste generated within the Study Area is taken to various landfills operating within Santa Barbara and Ventura Counties” ignores the fact that plastic bag, paper bag, and reusable bag waste can be diverted to recycling activities! 2.33
26. Page 4.5-11, Last Paragraph. The information in this paragraph is bogus. See comment 24 above. Table 4.5-11 has erroneous data for reusable bags and table 4.5-12 does not account for 2.34

- reusable bags hence conclusions cannot be drawn for the solid waste generated. Both numeric values in this paragraph are wrong. Please correct. ↑ 2.34
27. Page 4.5-13, Last Paragraph, Lines 7-9. The statements concerning reduction and increase in solid waste generated need to be corrected. See also comments 24, 25, and 26 above. | 2.35
28. Page 6-2, Alternative 2. One of the unintended consequences of expanding the plastic carryout bag ban to all retail establishments is the increase in shoplifting and merchandise losses that would result. The increased security costs and merchandise losses will result in increased costs to the consumer through higher prices. See Enclosure (1) to this letter for more information. | 2.36
29. Page 6-15, Table 6-12. The number of single-use plastic bags cited in the table is incorrect and does not agree with Table 6-11. This will affect other values calculated in this table. | 2.37
30. Page 6-16, Table 6-13. The number of reusable bags per truckload does not appear to be correct. See Table 6-8 for correct values. | 2.38
31. Page 6-24, Table 6-20. The line item “Total GHG Emissions from Alternative 2” should refer to the current Alternative 5 and not 2. Perhaps it would be more clear if it stated “Total GHG Emissions for this Alternative”. | 2.39

Plastic Carryout Bag Ban – More Plastic Headed To The Landfill

By Anthony van Leeuwen, 15 March 2013

One of the unintended consequences of banning plastic carryout bags is that more plastic will be headed to the landfill the exact opposite of what proponents of the plastic carryout bag ban want.

California state law (AB 2449) requires retail stores that issue plastic carryout bags at the checkout counter must have a recycling container in or outside each store. This recycling container not only accepts plastic carryout bags, but also other plastic bags and shrink wrap. These include produce bags, dry-cleaning bags, bread bags, newspaper bags and shrink wraps from paper towels, bathroom tissue, napkins, and diapers.

In extending the expiring AB 2449 by SB 1219, California legislators noted that the program enjoyed “modest success” in recovery of plastic carryout bags but they pointed out that the recovery of plastic shrink wrap and film increased “more dramatically” and avoided sending this material to the landfill.

For example, in 2009 retail stores purchased 53,000 tons of plastic carryout bags and 1,520 tons were recycled for a recovery rate of 2.9%. In addition, 17,589 tons of other plastic bags and film was recycled through this program. That means there were 11 tons of other plastic bags and film recycled for every ton of plastic carryout bags.

It should be noted that plastic bags and plastic film that are recycled through the In-store recycling programs are not accepted for recycling in the curbside recycling bins or by the Gold Coast Recycling and Transfer Station. The reason cited is that the cost of separating the plastic bags and wraps from other recycled material makes it uneconomical. In addition, plastic bags and film get stuck in the sorting equipment. [Note: The City of Santa Barbara allows residents to put clean plastic bags and film in the blue curbside recycle barrel; whereas, in Ventura County cities, residents cannot.]

One inherent weakness of AB 2449/SB 1219 is that only stores that issue plastic carryout are required to establish and maintain an in-store recycling program; other stores may do so on a voluntary basis.

That means Big Box Stores that do not issue plastic carryout bags do not have to establish an in-store recycling program. These stores can make a profit from the sale of products containing

2.40

plastic shrink wrap and film, and the cost of recycling that material is then borne by retailers who do issue plastic carryout bags (i.e. grocery stores).

Retail stores are compensated for every ton of plastic bags and plastic wrap turned in for recycling; However, labor costs to maintain the in-store recycling program are much greater with the difference made up by shoppers through higher prices. Hence, there is little incentive for retail stores to continue the In-store recycling program once plastic carryout bags are banned and the stores are no longer subject to AB 2449/SB 1219. In San Francisco the plastic carryout bag ban has led grocery stores to **shut down** their plastic bag recycling programs.

In the event a ban on plastic carryout bags is adopted in Ventura County or one of the incorporated cities, retail stores will more than likely terminate their in-store recycling programs. As a result, consumers will lose access to facilities for recycling plastic bags and plastic shrink wrap. Since this material is NOT accepted in the curbside recycling bin, consumers will have no other option than to dispose of this material in the trash bin resulting in more plastic going to the landfill instead of being recycled.

Ventura County and incorporated cities would do well to build upon the existing infrastructure of in-store recycling programs by NOT banning plastic carryout bags. Many consumers are unaware that other plastic bags and plastic shrink wrap can also be recycled through the in-store recycling programs. A better job of educating the public will help to improve not only the recovery rate of plastic carryout bags but other plastics bags and wraps as well - keeping more plastic out of the landfill.

Diversion of plastic from landfills to recycling activities should be a component of the proposed ordinance.

2.40

Letter 2

COMMENTER: Anthony van Leeuwen

DATE: March 15, 2013

Response 2.1

The commenter summarizes the information he provides throughout the comment letter. Specific comments are addressed in responses 2.2 through 2.40.

Response 2.2

The commenter states an opinion that local plastic bag ban ordinances coerce resistant consumers into using reusable bags, and bag ban proponents justify banning plastic bags based on exaggerated claims of environmental damage. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. Absent more specificity with respect to what the commenter believes is exaggerated claims, a meaningful response is not possible.

Response 2.3

The commenter states that the TMDL program mitigates the most egregious problems attributed to plastic carryout bags. Please see responses 1.28 and 1.52.

Response 2.4

The commenter speculates that an increase in reusable bag use would lead to an increase in shoplifting. This comment is speculative and pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR, which is focused on the environmental impacts of the Proposed Ordinance.

Response 2.5

The commenter states that bacteria and viruses may build up in unwashed reusable bags and may pose a health hazard. Please see Response 1.149. While the Proposed Ordinance would promote a shift toward the use of reusable bags, periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers. As required by the Proposed Ordinance (see Appendix B), reusable bags are required to be machine washable or made from a material that can be cleaned or disinfected.

Response 2.6

The commenter notes that Southern California continually experiences water shortages and that washing reusable bags would increase water consumption. Please see responses 1.29 and 1.115.



Response 2.7

The commenter notes that consumers may experience an increase in water and energy costs from washing reusable bags. The comment expresses concern about a potential economic impact of the proposed project, which is not CEQA's purview. The purpose of the Program EIR is to address the project's environmental effects, not its economic effects. CEQA Guidelines Section 15064(e) specifically states that "economic and social changes resulting from a project shall not be treated as significant effects on the environment." As shown in Section 4.5, *Utilities and Service Systems*, of the Draft EIR, the increase in water use associated with the Proposed Ordinance would be less than significant (also see responses 1.29 and 1.115).

Response 2.8

The commenter summarizes previous comments related to shoplifting, health hazards, and utility costs. See responses 2.2 through 2.7.

Response 2.9

The commenter notes a grammatical error in the Executive Summary. The error has been corrected in the Final EIR.

Response 2.10

The commenter notes that the term "regulated plastic carryout bag" is not defined. The following revision to page ES-1 and to page 2-9 has been made in the Final EIR to address this comment:

Regulated plastic carryout bags (those plastic bags covered by the Proposed Ordinance) would include...

Response 2.11

The commenter requests further clarification on what is covered by "regulated bags." Please see Response 2.10.

Response 2.12

The commenter suggests that the statement on page ES-2 is unclear because it implies that the Proposed Ordinance prevents stores from selling trash bags. The following revision to page ES-2 of the Final EIR has been made to address this comment:

As noted previously, the Proposed Ordinance would prohibit the sale or free distribution of single use carryout plastic bags at the point of sale and would require regulated retailers to impose a mandatory charge of \$0.10 for each paper carryout bag provided.



Response 2.13

The commenter states that the analysis for Impact GHG-1 is incomplete because it does not identify the increase in emissions as a result of washing reusable bags. GHG emissions from washing reusable bags are quantified in Impact GHG-1. See Table 4.3-3 on page 4.3-13 in the Draft EIR.

Response 2.14

The commenter states that the impact statement for Impact U-3 does not identify disposal of reusable bags and does not discuss diversion/recycling of carryout bags. In regard to diversion and recycling of carryout bags, please see Response 1.117.

In regard to Impact U-3, the statement in Section 4.5, *Utilities and Service Systems*, and in the Executive Summary has been revised as follows:

Impact U-3 The Proposed Ordinance would alter the solid waste generation rates in the Study Area due to an increase in paper bag and reusable bag use and reduction in plastic carryout bag use. However, projected future solid waste generation would remain within the capacity of regional landfills. Impacts would therefore be Class III, *less than significant*.

The Draft EIR analysis does consider disposal of reusable bags (as discussed in greater detail in responses 1.116 and 2.32). The estimate of solid waste discussed in Impact U-3 utilizes two different life cycle assessment studies to quantify the estimated amount of solid waste that would be deposited into local landfills. The life cycle assessment models used for Impact U-3 have some variability associated within them. For this analysis, the Ecobilan Data would represent a more likely scenario for the Study Area as it takes into account reusable bag solid waste in addition to plastic and paper bags. Therefore, impact U-3 does in fact consider the disposal of reusable bags. As described above, under the Ecobilan Data, the Proposed Ordinance would actually reduce solid waste compared to the existing conditions. However, the Boustead Data, which although unlikely for the Study Area as this study does not take into consideration reusable bags (only plastic and paper bags), represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Nevertheless, even using the worst case scenario, the impact to solid waste facilities as a result of the Proposed Ordinance (due to the estimated increase in solid waste in the Boustead study) would be less than significant.

Response 2.15

The commenter states that the first paragraph on page 1-1 does not mention the alternatives and suggests including the scope of recommended alternatives in this paragraph. The purpose of the Introduction section is to introduce the Proposed Ordinance and the EIR. The alternatives are introduced in the Executive Summary and analyzed in Section 6.0, *Alternatives*. This comment does not question the conclusions or analysis of the EIR.



Response 2.16

The commenter opines that the statement “the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) has prepared a Single-Use Carryout Bag Ordinance ... that participating agencies ... may consider for adoption” is not correct. The commenter further states that BEACON prepared a “model ordinance” or a template (i.e. draft) that local agencies can adapt and customize in preparing their own ordinance.

Functioning as a joint powers agency and as a “co-lead agency” for the preparation of the Program EIR, BEACON has prepared a Draft Ordinance (contained in Appendix B of the Draft EIR). As described in Section 1.2 of the Draft EIR, the proposed Single-Use Bag Reduction Ordinance requires the discretionary approval of the counties of Santa Barbara and Ventura and each of the participating municipalities. Therefore, it is subject to the requirements of CEQA. The EIR is to serve as an informational document for the public and the decision-makers of BEACON, the counties of Santa Barbara and Ventura, and participating municipalities. BEACON, the counties, and the participating municipalities will review and consider the information in the Program EIR, along with any other relevant information, in making final decisions regarding the Proposed Ordinance (Section 15121 of the *CEQA Guidelines*). The environmental review process will culminate with a BEACON Board of Directors hearing to determine whether the Final Program EIR was completed in compliance with CEQA and to authorize and direct the BEACON Executive Director to distribute copies of the Final Program EIR to BEACON member agencies and other jurisdictions for those jurisdictions’ consideration and use, at their discretion, in adoption of a Single-Use Bag Reduction Ordinance.. As described in Section 1.3 and 2.7 of the Final EIR, both Santa Barbara and Ventura counties and each participating municipality would function as lead agencies for the certification of the Final EIR for each individual jurisdiction’s project (adoption of a Single-Use Bag Reduction Ordinance that would apply within that jurisdiction). In addition, each jurisdiction will consider whether to adopt the Proposed Ordinance individually. As the commenter suggests, the individual jurisdictions could “adapt or customize” the Proposed Ordinance if they so desire. However, this Program EIR does not preclude any requirement for individual participating municipalities to undergo further environmental review under CEQA if necessary as a result of any potential changes to the Proposed Ordinance. As such, subsequent to adoption of the Proposed Ordinance, each municipality would need to file a Notice of Determination (NOD).

Response 2.17

The commenter points out that the City of Seattle bag ban was listed as an example of a bag ban in California. This error has been corrected in the Final EIR.

Response 2.18

The commenter questions the purpose of listing cities and counties that have also banned carryout bags. This information is used for the required cumulative impacts analysis throughout the Final EIR.

Response 2.19



In response to topic #11 on Table 1-1, the commenter states that 40% of plastic carryout bags are reused. The source for this data is not given. The comment has been noted.

Response 2.20

The commenter notes that the term “regulated plastic bags is not defined.” See Response 2.10.

Response 2.21

The commenter questions the statement that 8,228,018 reusable bags equates to 7 reusable bags per person in the Study Area because if each person in the study area is using reusable bags the noone would be using paper bags. On page 2-11, the EIR states that the 8,228,018 reusable bags “amounts to an average of seven reusable bags per person per year based on a Study Area population of 1,239,626.” This number is provided for informational purposes to give an estimate of per capita reusable bag use. This does not assume that every Study Area resident uses or has reusable bags.

Response 2.22

The commenter states that 39% of the population already uses reusable bags; therefore, the Proposed Ordinance would only increase reusable bag use by 26% (39% to 65%). The EIR analysis looks at the environmental effects of the Proposed Ordinance. Therefore, the EIR looks only at the number of reusable and paper bags that would replace plastic carryout bags if they were banned. The EIR analysis does not take into account reusable bags that are already in use, but instead estimates the net increase in reusable bags that would occur as a result of the Proposed Ordinance.

Response 2.23

The commenter links to a video on YouTube that provides information about the impacts of plastic bags on marine environments. This comment does not challenge or question the analysis or conclusions in the Draft EIR.

Response 2.24

The commenter states that not all plants and animals are given special status as the 2nd paragraph on page 4.2-9 implies. The following revision to page 4.2-9 has been made in the Final EIR to address this comment:

Some Pplants or animals ~~have~~ are given “special status” due to declining populations, vulnerability to habitat change, or restricted distributions.

Response 2.25

The commenter notes that water vapor is produced from both land and ocean surfaces. The following revision to page 4.3-1 has been made in the Final EIR to address this comment:



Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as surface water and oceanic evaporation.

Response 2.26

The commenter recommends that Table 4.3-1 be revised to take into account the information provided in Comment 2.22. Please see Response 2.22.

Response 2.27

The commenter notes a spelling error on page 4.3-9. The error has been corrected in the Final EIR.

Response 2.28

The commenter states that the statement in Table 4.3-5 about heavy-duty truck requirements is inaccurate. The following revision to page 4.3-15 in the Final EIR has been made to address this comment:

The trucks that deliver carryout bags to and from the Study Area retailers on public roadways would be in compliance with ~~ARB's vehicle standards that are in effect at the time of vehicle purchase~~ Tractor-Trailer GHG regulation which requires the use of aerodynamic trailers that are equipped with low rolling resistance tires in order to reduce GHG emissions.

Response 2.29

The commenter states that the potential diversion of carryout bags is not covered in the Draft EIR. Section 4.5 analyzes solid waste impacts as a result of the Proposed Ordinance. The Commenter recommends that a recycling component be added to the Proposed Ordinance. In regard to diversion and recycling of carryout bags, please see Response 1.117. In regard to a recycling component of the Proposed Ordinance, this comment refers to the merits of the Proposed Ordinance and is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 2.30

The commenter asks what is meant by the statement on page 4.4-1 that impacts to hydrology and water quality are not limited to the local watershed.

As stated in Section 4.4, *Hydrology and Water Quality*, no known single use bag manufacturers are located in Ventura or Santa Barbara counties and single use bags are assuredly manufactured and/or used elsewhere in California. Therefore, impacts to hydrology and water quality are not limited to the local watershed. However, for this analysis the local watershed and hydrologic conditions are discussed and used as an example of the types of effects that may

occur as a result of the manufacturing and disposal of bags. As it is unknown exactly where the bag manufacturers are located in California or other that service the Study Area, the analysis provides the local environmental setting as an example of the impacts that may result from carryout bag manufacturing.

Response 2.31

The commenter questions the solid waste generation rate for reusable bags used in Section 4.5 as the rate appears to be low since reusable bags weigh more than plastic bags. See Response 2.32 below.

Response 2.32

The commenter reiterates that the amount of solid waste associated with reusable bags in Section 4.5 appears to be low and should be reevaluated. The commenter also suggests that the Draft EIR should assume that the weight of all reusable bags (approximately 8.2 million bags at 6.8 ounces per bag) is deposited into a landfill each year. The Draft EIR assumes that a reusable bag is used 52 times per year. Nevertheless, using the commenter's suggested rate of solid waste from reusable bags (6.8 ounces per bag x 8.2 million reusable bags per year) that would be deposited into a landfill, the Proposed Ordinance would result in an increase of approximately 1,748.45 tons of solid waste per year from reusable bags. Adding this total to the solid waste generated from paper bags (1,900 tons) and the waste from the remaining single use plastic carryout bags in the Study Area (237 tons) as shown in Table 4.5-11, the Proposed Ordinance would result in approximately 3,885 tons per year of solid waste. The current amount of solid waste associated with the approximately 658 million single use plastic carryout bags is estimated at 4,733 tons per year (as shown in Table 4.5-11). Thus, using the commenter's suggested rate, the Proposed Ordinance would result in a net decrease of approximately 848 tons per year of solid waste compared to existing conditions. This is less than the 2,596 tons per year reduction identified in the Draft EIR, but there would still be a reduction as compared to existing conditions. In addition, the significance determination is based on the Boustead data, which shows an incremental increase in solid waste generation as compared to existing conditions. Even based on this "worst case" scenario, the impact would not be significant.

Response 2.33

The commenter opines that the solid waste impact analysis ignores the fact that plastic bag, paper bag, and reusable bag waste can be diverted to recycling activities. Please see Response 1.117.

Response 2.34

The commenter suggests that tables 4.5-11 and 4.5-12 may have errors and that Table 4.15-12 does not consider reusable bags. In regard to potential calculation errors for reusable bags in Table 4.5-11, see Response 2.32. In regard to Table 4.5-12 not considering reusable bags, see Response 2.14.

Response 2.35



The commenter suggests that the statements regarding reductions and increase of solid waste in Impact U-3 need to be corrected per the commenter's previous comments. Please see responses 2.14 and 2.32.

Response 2.36

The commenter restates that the increase in reusable bag use under Alternative 2 could lead to an increase in shoplifting. See Response 2.4.

Response 2.37

The commenter notes that the number of plastic bags in the Table 6-12 is incorrect and does not correspond with Table 6-11. This error has been corrected in the Final EIR so that Table 6-12 correctly lists 32,912,070 plastic bags. The remainder of the numbers in the table are correct. None of the impact analysis has been changed as a result of this correction.

Response 2.38

The commenter notes that the numbers of bags per truckload listed in Table 6-13 are incorrect. The number of bags per truckload have been corrected in the Final EIR. No changes to the alternatives analysis or impact statement are required as the analysis was based on the correct bag numbers.

Response 2.39

The commenter notes that a cell in Table 6-20 refers to total GHG emissions from Alternative 2 and it should list total emissions from Alternative 5. This error has been corrected in the Final EIR.

Response 2.40

The commenter states that banning plastic carryout bags would result in more plastic heading to landfill because retail stores would likely terminate their in-store recycling programs. Please see Response 1.85.



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Letter 3

March 22, 2013

Mr. Gerald Comati
BEACON
Via email

Dear Mr. Comati,

The Community Environmental Council is in support of the single use bag ordinance as drafted by the Santa Barbara City Council and used as the model for the Draft BEACON Environmental Impact Report. We find the report to be comprehensive and agree with the majority of its contents.

3.1

We have a couple of comments that we would like to share with you:

- Table 2-2: It should be noted that reusable bags can withstand at least 125 uses
- Table 2-4: The definition of single use plastic bags should include 'natural gas' along with petroleum in this instance and in all other mentions of what constitutes a plastic bag (i.e. page 158).

3.2

3.3

Analysis of Alternatives:

- Alt #1 – We are not in support of a 'no project' option
- Alt #2 – We are in support of this option
- Alt #3 – We support exploring a phased-in approach of this option after the ordinance has been in effect for one year and if benchmark reductions in paper bags are not met at that time
- Alt #4 – We are not in support of this option
- Alt #5 – We agree with the DEIR assessment that this option is not as beneficial as 2,3 or 4

3.4

Thank you very much. We look forward to moving ahead.

Sincerely,

Kathi King
CEC

Letter 3

COMMENTER: Kathi King, Community Environmental Council

DATE: March 22, 2013

Response 3.1

The commenter supports the model Bag Ordinance, which is the subject of the Draft EIR. The commenter also agrees with the majority of the contents of the Draft EIR. The supported is noted and will be considered by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 3.2

The commenter states that reusable bags can withstand at least 125 uses. As discussed in Section 2.5 (*Anticipated Changes in Bag Use as a Result of the Proposed Ordinance*), in order to estimate the number of reusable carryout bags that would replace plastics bags, the analysis in the Draft EIR assumes that a reusable carryout bag would be used by a customer once per week for one year (52 times). However, it is acknowledged that reusable bags may be used 100 times or more, as described in the March 2010 *MEA on Single-use and Reusable Bags*. Therefore, the assumption in Table 2-2 that bags are used 52 times is a conservative estimate. Increasing reusable bag use to 125 would not change any of the overall conclusions in the Draft EIR and impacts related to air quality, biological resources, greenhouse gas emissions, hydrology/water quality and utilities/service systems would remain either less than significant or beneficial. As described previously, the Draft EIR utilizes a conservative or a “worst case” scenario to analyze environmental impacts. Please see Response 1.17 for further detail.

Response 3.3

The commenter states an opinion that the definition of plastic bags should explicitly reference natural gas in the definition of single use plastic bags in Table 2-4 and page 158. The Draft EIR does not contain a Table 2-4. It is assumed that the commenter is referencing the definition of plastic bags contained with the Draft Ordinance as described in Section 2.4 (*Proposed Ordinance Characteristics*) and page 158 of the pdf version of the Draft EIR. The recommendation to amend the text of the ordinance to explicitly reference the fact that plastic derived from natural gas can be used in the manufacture of plastic bags is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance. Section 2.3 (Existing Characteristics) of the Draft EIR acknowledges that the HDPE (high density polyethylene) bag cycle begins with either the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers. Inclusion of a reference to natural gas in the text of the Proposed Ordinance would not affect the findings of the Draft EIR.

Response 3.4

The commenter states an opinion regarding support or opposition to each of the alternatives considered in the EIR. This comment relates to the merits of the alternatives considered in the Draft EIR, and does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR. The opinion is noted and will be considered by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.



SAVE THE PLASTIC BAG COALITION

- 1. OBJECTIONS TO BEACON REGIONAL DRAFT EIR ON PROPOSED SINGLE-USE CARRYOUT BAG ORDINANCE FOR SANTA BARBARA AND VENTURA COUNTIES**
- 2. DEMAND FOR REVISION AND NEW FINDINGS OF SIGNIFICANT NEGATIVE ENVIRONMENTAL IMPACT**
- 3. DEMAND FOR RECIRCULATION OF REVISED DRAFT EIR AND PROMINENT NOTIFICATION TO THE PUBLIC OF SIGNIFICANT ERRORS IN INITIAL DRAFT EIR**
- 4. NOTICE OF INTENT TO LITIGATE TO ENFORCE CEQA, INCLUDING PETITION FOR WRIT OF MANDATE OR PRELIMINARY INJUNCTION TO REQUIRE RECIRCULATION OF REVISED DRAFT EIR**

4.1

March 25, 2013

Stephen L. Joseph, Counsel
SAVE THE PLASTIC BAG COALITION
11693 San Vicente Blvd. #150
Los Angeles, CA 90049
Phone: (310) 266-6662
Fax: (310) 694-9067

E-mail: savetheplasticbag@earthlink.net

Website: www.savetheplasticbag.com

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INTRODUCTION

INTRODUCTION

Save The Plastic Bag Coalition (“STPB”) was formed in 2008. Our membership includes companies and individuals engaged in the manufacture, distribution, and marketing of plastic carryout bags and polyethylene reusable bags. Two of our members, Grand Packaging, Inc. (d/b/a Command Packaging) and Crown Poly are located and manufacture plastic carryout bags and polyethylene reusable bags in Los Angeles. They supply supermarkets, grocery stores, and other types of stores that would be subject to the proposed ordinance.

STPB and its counsel, Stephen Joseph, are not, and have never been, connected with or financed by the American Chemistry Council or Progressive Bag Affiliates, or any other plastic industry organization in any way. STPB is and always has been totally independent.

The comments and objections herein are made in the public interest in order to enforce a public duty. The objection is based solely on environmental grounds. STPB’s members are interested as citizens in having the public laws including CEQA executed and the public duties and environmental purposes in CEQA enforced. Therefore, STPB has citizen standing. In *Save the Plastic Bag v. City of Manhattan Beach* (2011) 52 Cal.4th 155, the Supreme Court granted STPB standing to legally challenge plastic bag bans. The court stated (at page 169):

Corporate purposes are not necessarily antithetical to the public interest.... Corporations [may] have particular expertise and thus may have an enhanced understanding of the public interests at stake.

Groups and politicians seeking to have plastic bags banned have used myths, misinformation, exaggerations, and false statistics, and selective photography to promote their goal. The *Times of London* has stated in an editorial (Doc. # 701):

There is a danger that the green herd, in pursuit of a good cause, stumbles into misguided campaigns. Analysis without facts is guesswork. Sloppy analysis of bad science is worse. Poor interpretation of good science wastes time and impedes the fight against obnoxious behavior. There is no place for bad science, or weak analysis, in the search for credible answers to difficult questions.... Many of those who have demonized plastic bags have enlisted scientific study to their cause. By exaggerating a grain of truth into a larger falsehood they spread misinformation, and abuse the trust of their unwitting audiences.

David Laist, a senior policy analyst with the U.S. Marine Mammal Commission, has publicly stated as follows (Doc. # 702):

In their eagerness to make their case [against plastic bags], some of the environmental groups make up claims that are not really supportable.

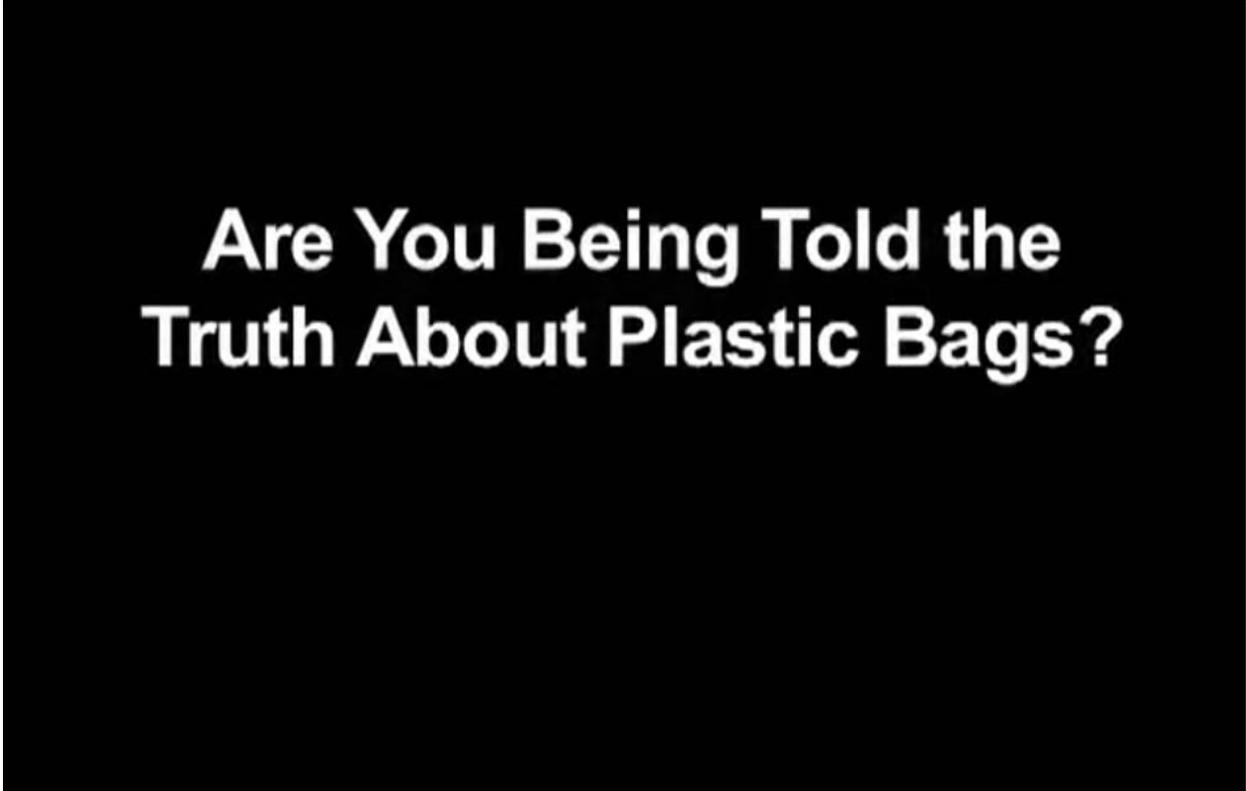
4.2

The following link is to a movie made by STPB entitled: “Are You Being Told the Truth About Plastic Bags?” STPB requests that the full movie be made part of the administrative record. As it is a movie, it can only be submitted as a link. The link is:

WWW.PLASTICBAGMOVIE.COM

A copy of the opening slide of the video is Doc. # 013, which is submitted in lieu of the actual video.

4.2



**Are You Being Told the
Truth About Plastic Bags?**

GENERAL COMMENTS AND OBJECTIONS

**GENERAL OBJECTION; DEMAND FOR
NEW EIR AND NEW PUBLIC REVIEW PERIOD**

Pursuant to Pub. Res. Code §21177(b) and other applicable provisions of the California Environmental Quality Act (“CEQA”), STPB objects to the Draft Environmental Impact Report (“DEIR”) and approval of the proposed ordinance.

In the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) Single-Use Carryout Bag Ordinance, Draft Environmental Impact Report, states in Table ES-1 (Pages ES-3 thru ES-5) that all environmental impacts are either “beneficial without mitigation” or “less than significant without mitigation”. This summary is incorrect and the assertions of fact on which the conclusion is based are incorrect. In fact, as discussed herein, the proposed ordinance **would** result in significant adverse impacts on the environment. STPB objects to the incorrect factual assertions and conclusion. The present DEIR, if finalized, would significantly mislead the members of the Board of Supervisors for Santa Barbara and Ventura County, city council members of the incorporated municipalities, and the public, into believing that the proposed ordinance is environmentally harmless. This is a serious defect in the DEIR. STPB demands a new and revised DEIR, disclosing that the proposed ordinance **would** or **might** result in significant adverse impacts on the environment.

4.3

The present DEIR is so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment have been precluded. Therefore, pursuant to CEQA Guidelines § 15088.5, STPB demands recirculation of the new and revised DEIR, including a new public review period and additional public meetings. The new and revised DEIR would have been “changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project’s proponents have declined to implement.” (Guidelines § 15088.5(a). STPB objects if the City fails to recirculate and new and revised DEIR and provide a new public review period and hold additional public meetings.

SUPPORTING DOCUMENTS

STPB requests that all the supporting documents that have been submitted by STPB on a flash drive be made part of the administrative record. They are numbered BEA 001, BEA 102, etc. They are referred to herein as Doc #1, Doc #2, etc.

STPB further requests that all documents and webpages for which hyperlinks are included herein be made part of the administrative record.

THERE IS NO “GREAT PACIFIC GARBAGE PATCH”

- The so-called “Great Pacific Garbage Patch,” which is alleged to be twice the size of Texas, does not exist. (Docs # 703-711, 717-718, 720, 723-727.) We challenge anyone to provide us with a photograph of the “Great Pacific Garbage Patch.” Check Google Images and no photographs will be found.
- Heal the Bay acknowledges that the term Great Pacific Garbage Patch is “misleading” and that there is no landfill in the ocean.
- Miriam Goldstein, the chief scientist on the Scripps expedition that went to the Pacific to survey marine debris, says the allegations about the patch are hugely exaggerated. She is frustrated with environmentalists who spread misinformation on the subject (and presumably legislators and government officials who believe them without question). She says: “Misinformation on this issue is rampant.”(Docs. ## 703, 704.)
- Dr. Marcus Eriksen of the Algalita Marine Research Foundation sailed a vessel from Long Beach to Hawaii to find the patch. After 24 hours of trawling over 50 miles, the amount of plastic that he found was about the size of the palm of his hand. He now admits: “*There is no island of plastic trash.*” (Doc. # 726.) Click on the following link to view the video of his 24-hour trawl: http://www.youtube.com/watch?v=3d3_fLsjC8U. He has also stated: “The idea of a single, Texas-size garbage patch is the myth of media sensationalism.”
- In 2011, Oregon State University issued a press release based on the work of one of its scientists that was in no way financed or connected with the plastic industry. She said “the highest concentrations ever reported by scientists produces a patch that is a small fraction of the state of Texas, not twice the size.” (<http://tinyurl.com/837xod9> Docs ## 710, 711.)
- Any plastic debris in the Pacific Ocean will soon be overwhelmed by the gigantic amount of debris from the tsunami in Japan. (Doc. # 722.)
- The Sea Education Association (“SEA”) has surveyed plastic debris in the Atlantic Ocean for the past 22 years. They found no overall change in the amount of plastic from 1986 to 2008. Dr. Karen Lavender Law, an oceanographer at SEA said: “I expected to see the line go right up. It took us a good year to decide no, we have not seen an increase, no matter how you slice it.” (Docs. #717, 718.) Each half-hour trawl in the area where the concentration was the highest typically turned up just 20 tiny pieces, equivalent to about 0.3 grams in all. A U.S. nickel weighs 5 grams. She states: “If scientists sifted through 2,000 bathtubs’ worth of plastic-contaminated seawater, Lavender Law says, they’d find just enough microparticles to fill the palm of a person’s hand. “People might feel duped when they discover there are no floating islands of garbage...” (Doc. # 729.)
- ***Almost all of the plastic debris found in the Pacific Ocean is hard plastic. No large accumulations of plastic bags have ever been found.***

4.4

JUNK-n-Gyre



4.4

THE UNIMPRESSIVE RESULTS OF DR. ERIKSEN'S 24-HOUR 50-MILE TRAWL THROUGH THE "GREAT PACIFIC GARBAGE PATCH" BY THE ALGALITA MARINE RESEARCH FOUNDATION.

THAT IS ABOUT THE DISTANCE FROM SAN FRANCISCO TO SAN JOSE.

THE IMAGE INCLUDES DEAD FISH CAUGHT UP IN THE TRAWL.

THE AMOUNT OF PLASTIC FOUND WOULD FILL THE PALM OF A HAND.

THERE WERE NO PLASTIC BAGS!

http://www.youtube.com/watch?v=3d3_fLsjC8U

**THE ALLEGATION THAT 100,000 MARINE MAMMALS AND A
MILLION SEABIRDS ARE KILLED EACH YEAR BY PLASTIC BAGS
IS BASED ON AN ERROR AND IS UNTRUE**

- The allegation that 100,000 marine mammals and a million seabirds are killed every year by plastic bags is a myth. The U.S. and Australian Governments say that the figures are false. (Docs. ## 700, 702, 712, 713, 719, 721, 723.)
- In 2008, the Times of London published an article entitled “*Series of blunders turned the plastic bag into global villain*” (Doc. #700) which states in part as follows:

The central claim of campaigners is that the bags kill more than 100,000 marine mammals and one million seabirds every year. However, this figure is based on a misinterpretation of a 1987 Canadian study in Newfoundland, which found that, between 1981 and 1984, more than 100,000 marine mammals, including birds, were killed by discarded nets. The Canadian study did not mention plastic bags.

Fifteen years later in 2002, when the Australian Government commissioned a report into the effects of plastic bags, its authors misquoted the Newfoundland study, mistakenly attributing the deaths to “plastic bags”.

The figure was latched on to by conservationists as proof that the bags were killers. For four years the “typo” remained uncorrected. It was only in 2006 that the authors altered the report, replacing “plastic bags” with “plastic debris”. But they admitted: “The actual numbers of animals killed annually by plastic bag litter is nearly impossible to determine.”

In a postscript to the correction they admitted that the original Canadian study had referred to fishing tackle, not plastic debris, as the threat to the marine environment.

Regardless, the erroneous claim has become the keystone of a widening campaign to demonise plastic bags.

David Santillo, a marine biologist at Greenpeace, told The Times that bad science was undermining the Government’s case for banning the bags. “It’s very unlikely that many animals are killed by plastic bags,” he said. “The evidence shows just the opposite.”

4.5

- The U.S. National Oceanic and Atmospheric Administration (“NOAA”) states as follows: (Docs ## 705, 707)

Question: Is it true that 100,000 marine mammals and/or sea turtles die each year due to marine debris/plastics/plastic bags?

Answer: We were able to find no information to support this statement. An erroneous statement attributing these figures to plastic bags was published in a 2002 report published by the Australian Government; it was corrected in 2006.

Question: Is it true that marine debris kills a million seabirds each year?

Answer: This statement is currently unknown. We are so far unable to find a scientific reference for this figure. The closest we have found is “214,500 to 763,000 seabirds are killed annually incidental to driftnet fishing by Japanese fishermen in the North Pacific Ocean (US Department of Commerce, 1981)” from Laist, 1987. This refers to active fishing gear bycatch and not marine debris; it also predates the high seas driftnet ban adopted by the United Nations General Assembly in 1992.

- Environmental groups show the same picture of a turtle with a blue bag in its mouth, over and over again and try to provoke an emotional response from audiences. (<http://www.savetheplasticbag.com/ReadContent612.aspx>.) Nobody knows if the photograph is real or PhotoShopped, and if it is real who took the photograph. They produce a handful of other photographs taken over the past 30 years. The evidence of a massive number of deaths on an annual basis just isn’t there.
- While turtles and whales eat lots of things that they shouldn’t, you can’t ban all of those items. The overwhelming majority of deaths are caused by discarded fishing lines and nets and you can’t ban those.

4.5

SURVEY OF 152 BIRD ENTANGLEMENTS
OFF THE U.S. WEST COAST
FROM 2001 TO 2005

Table 1. Entangled birds (n=152) recorded from 2001-2005.

Common name	n	Entanglement material (where identified)
Black-footed Albatross	1	Rope
Brandt's Cormorant	11	Fishing line, fishing hook, rope and metal
Brown Pelican	5	Fishing hook, hook and sinker
California Gull	4	Fishing line
Common Merganser	1	Fishing line
Common Murre	42	Balloon, fishing line, fishing hook, fishing net, hook, line and sinker, plastic, salmon gear
Double-crested Cormorant	3	Fishing line
Glaucous-winged Gull	5	Fishing line, fishing hook, fishing net
Heermann's Gull	1	Fishing line
Northern Fulmar	3	Balloon & string, fishing line and sinker
Pelagic Cormorant	6	Fishing line, fishing hook, line and sinker
Short-tailed Shearwater	1	Fishing line
Sooty Shearwater	11	Fishing line, fishing hook
Surf Scoter	1	Fishing line
Western Grebe	8	Fishing line, string
Western Gull	25	Fishing line, fishing hook, line and sinker
Unidentified spp.	24	Fishing line, fishing hook, plastic, rope and string

4.5

THIS IS WHAT IS KILLING MARINE LIFE, NOT PLASTIC BAGS

<http://www.farallones.org/volunteer/documents/PSGPoster.pdf>

(Doc. #712)

SEE ALSO DOC. # 719

“PLASTIC” IS NOT THE SAME AS PLASTIC BAGS

Doc. # 713 is a YouTube video by the BBC. The URL is:

http://www.youtube.com/watch?v=yom6zlm5VqE&feature=player_embedded

The video shows that albatrosses swallow all kinds of plastic bags, but the albatrosses in the video have not swallowed plastic bags.

STPB requests that the video be made part of the administrative record.



Image from the BBC video showing the “plastic” items swallowed by the albatrosses.
There are no plastic bags.

4.5

PLASTIC RETAIL BAGS ARE A TINY PERCENTAGE OF LITTER

- According to the May 2007 City of San Francisco Litter Survey Report (at page 29), which was completed before the existing ban took effect, plastic non-retail bags were 1.9% of total large litter and plastic retail bags were only 0.6% of total large litter. (Doc. # 601.)
- According to the City of San Francisco Streets Litter Re-Audit 2009 (Doc. #602 at page 42):

Plastic bags including retail sacks and zipper bags represented **2.4%** of total large litter (108 items out of 4,488).

- There is no reason why Santa Barbara and Ventura Counties should have a greater percentage of plastic bags in their litter streams than San Francisco.
- See also Docs ## 600, 603, and 604 showing that plastic retail bags are only about one half of one percent of litter.
- You cannot ban your way out of a litter problem. That is a false solution. You have to pick it up.

4.6

PLASTIC BAGS COST TAXPAYERS VERY LITTLE

- According to Californians Against Waste, Californians pay up to \$200 per household each year to clean up litter and waste associated with single-use bags. This finding is wrong and absurd.
- According to the U.S. Census, there are 12.1 million households in California. (Doc #89.) 12.1 multiplied by 200 is approximately \$2.4 billion. Is that the amount that public agencies in California spend cleaning up plastic bags? Absolutely not. In fact, the Los Angeles County EIR states: “Public agencies in California spend more than \$375 million each year for litter prevention, cleanup, and disposal.” (Los Angeles County EIR (Doc #. 001) at page I-4.)
- Let us assume that plastic bags are 3% of all litter in San Francisco. We can apply the following calculation to determine the cost per household:

$$\frac{\$375 \text{ million} \times 3\%}{12.1 \text{ million households}}$$

- The Los Angeles County EIR found that no more than \$4 million would be saved by banning plastic bags. (Doc. # 001 at IX-3.) Los Angeles County has 3.1 million households. That is a mere 93 cents per household per year. Not \$200!

4.7

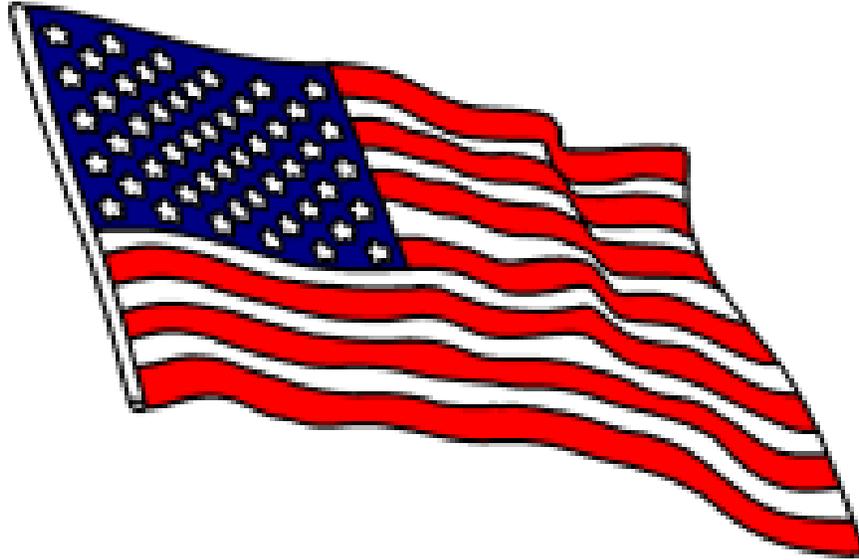
**PLASTIC BAGS HAVE NO
SIGNIFICANT IMPACT ON LANDFILLS**

- Some people say that plastic bags “clog up” landfills. Landfills are the contents of everyone’s trashcans plus other non-recyclables. Plastic bags do not “clog up” landfills any more than they clog up trashcans. Look inside your own trashcan. Plastic bags are low volume and light. A mere 0.4% (that is four-tenths of one percent) of the solid waste stream consists of plastic grocery and merchandise bags. (Doc. # 606.)
- People say that plastic bags last a thousand years in a landfill. That is an environmental benefit, as the Los Angeles County EIR and all other plastic bag ban EIRs acknowledge. Plastic sequesters and locks in the CO₂. Sequestration of CO₂ is a major goal. Organic material including paper decomposes and emits methane, a greenhouse gas with 21 to 25 times the climate changing impact of CO₂. (Doc # 415.)

4.8

PLASTIC BAGS ARE NOT MADE FROM OIL

- There is a claim repeated over and over again on the Internet that plastic bags are made of oil and that 12 million barrels of oil are used annually in the United States to make the plastic bags that Americans use.
- The allegation is not true.
- 85% of plastic bags used in the United States are made in the United States. Plastic bags are made out of polyethylene. In the United States, ethylene is made of ethane, which is extracted from domestic natural gas. As a result, 85% of plastic bags used in the United States are not made out of oil.
- The ethane must be removed from the natural gas anyway to lower the BTU value of the natural gas to an acceptable level. Ethane burns too hot to be allowed to remain in high levels in natural gas that is delivered to homes and businesses for fuel. There is nothing else that the ethane can be used for except to make ethylene. If ethane is not used to make plastic, it will have to be burned off, resulting in greenhouse gas emissions.
- Using the ethane to make plastic does not in any way reduce the amount of fuel available for transportation or power generation or increase our energy imports.
- If plastic bags are banned in the Santa Barbara and Ventura Counties including incorporated municipalities, it would have **zero impact** on our dependence on foreign oil.



**ACCORDING TO U.S. DEPARTMENT OF COMMERCE FIGURES,
APPROXIMATELY 69.3% OF PLASTIC CARRYOUT BAGS
THAT ARE USED IN THE UNITED STATES
ARE MADE IN THE UNITED STATES,
INCLUDING AT FACTORIES HERE IN CALIFORNIA.
(SEE U.S. DEPARTMENT OF COMMERCE FIGURES - DOC. # 109)
MORE THAN 10,000 AMERICANS ARE DEPENDENT ON THESE JOBS
THE VAST MAJORITY OF REUSABLE BAGS ARE IMPORTED,
MOSTLY FROM CHINA.**

4.10

**A PLASTIC BAG BAN REPLACES AMERICAN JOBS
WITH JOBS IN CHINA AND OTHER PARTS OF ASIA.**



4.10

THIS IS A LABEL FROM AN IMPORTED REUSABLE BAG THAT IS SOLD IN SAN FRANCISCO.

THE LABEL STATES:

WARNING

THIS PRODUCT CONTAINS DEHP, A PHTHALATE CHEMICAL, LEAD, AND OTHER CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM.

THERE ARE MAJOR TOXICITY ISSUES WITH IMPORTED REUSABLE BAGS.

THERE ARE NO TOXICITY ISSUES WITH PLASTIC CARRYOUT BAGS.

**THE PROPOSED ORDINANCE MAY
RESULT IN SIGNIFICANT NEGATIVE
ENVIRONMENTAL IMPACTS**

A SWITCH TO PAPER BAGS CAUSED BY BANNING PLASTIC BAGS MAY HAVE A SIGNIFICANT NEGATIVE NET IMPACT ON THE ENVIRONMENT

In June 2008, Heal the Bay stated: (Doc. # 004.)

As the most ubiquitous alternative to plastic, paper bags are themselves fraught with environmental impacts. The production of paper bags contributes to natural resource depletion, greenhouse gas emissions and additional waterborne wastes from the pulping and paper making process.

In December 2009, Heal the Bay stated: (Doc. # 412.)

While paper bags are less likely to become persistent marine debris when disposed in the environment, serious negative environmental impacts occur during the production of these bags. The production of paper bags made from virgin materials contributes to deforestation, greenhouse gas emissions, and additional waterborne wastes.

4.11



The Weyerhaeuser pulp and paper mill, Longview, Washington State

STPB hereby submits five life cycle assessments that constitute substantial evidence that paper bags and reusable bags are *significantly more* damaging to the environment than plastic bags.

THE 1990 FRANKLIN REPORT

[Doc. # 400.]

The Franklin Report is a life cycle assessment of plastic bags and paper carryout bags used in the United States. It shows that plastic bags are substantially better for the environment than paper carryout bags for the following reasons: (see Conclusions section of report):

- The energy requirements for plastic bags are between 20% and 40% less than for paper carryout bags at zero percent recycling of both kinds of bags. Assuming paper carryout bags carry 50% more than plastic bags, the plastic bag continues to require 23% less energy than paper bags even at 100% recycling.
- Plastic bags contribute between 74% and 80% less solid waste than paper carryout bags at zero percent recycling. Plastic bags continue to contribute less solid waste than paper carryout bags at all recycling rates.
- Atmospheric emissions for plastic bags are between 63% and 73% less than for paper carryout bags at zero percent recycling. Plastic bags continue to contribute less atmospheric emissions than paper carryout bags at all recycling rates.
- At a zero percent recycling rate, plastic bags contribute over 90% less waterborne wastes than paper carryout bags. This percentage actually increases as the recycling rate increases. The landfill volume occupied by plastic bags is 70% to 80% less than the volume occupied by paper carryout bags based on 10,000 uses.

4.11

THE 2005 SCOTTISH REPORT

[Doc. #401.]

The Scottish Report was issued by the Scottish Government. It is an environmental impact assessment of the effects of a proposed plastic bag levy in Scotland. The report (at page 22) takes into account the fact that a paper carryout bag holds more than a plastic bag and makes appropriate adjustments. The report includes the following findings:

- Page vi: “If only plastic bags were to be levied..., then studies and experience elsewhere suggest that there would be some shift in bag usage to paper bags (which have worse environmental impacts).”
- Page 31: “[A] paper bag has a more adverse impact than a plastic bag for most of the environmental issues considered. Areas where paper bags score particularly badly include water consumption, atmospheric acidification (which can have effects on human health, sensitive ecosystems, forest decline and acidification of lakes) and eutrophication of water bodies (which can lead to growth of algae and depletion of

oxygen).”

- Page 31: “Paper bags are anywhere between six to ten times heavier than lightweight plastic carrier bags and, as such, require more transport and its associated costs. They would also take up more room in a landfill if they were not recycled.”
- Page 23: After taking into account that paper bags hold more than plastic bags, paper bags still result in:
 - 1.1 times more consumption of nonrenewable primary energy than plastic bags.
 - 4.0 times more consumption of water than plastic bags.
 - 3.3 times more emissions of greenhouse gases than plastic bags.
 - 1.9 times more acid rain (atmospheric acidification) than plastic bags.
 - 1.3 times more negative air quality (ground level ozone formation) than plastic bags.
 - 14.0 times more water body eutrophication than plastic bags.
 - 2.7 times more solid waste production than plastic bags.

4.11

THE 2007 BOUSTEAD REPORT

[Doc. # 402.]

The Boustead Report is an extremely thorough and detailed life cycle assessment of the environmental impacts of plastic bags, compostable bags, and paper carryout bags in the United States. It is packed with data. It studied the types of plastic bags, compostable bags, and paper carryout bags commonly used in the United States. It takes into account that a paper carryout bag holds more than a plastic bag and applies an adjustment factor. It studied paper bags with 30% post consumer recycled content.

The Boustead Report was commissioned by Progressive Bag Affiliates, a plastic bag industry organization. It was peer reviewed by an independent third party, a Professor of Chemical Engineering at North Carolina State University. (Boustead report at pages 4, 63-64.) He is an expert on life cycle analysis with extensive experience in the field. He commented that the Boustead Report “provides both a sound technical descriptions (sic) of the grocery bag products and the processes of life cycle use.... Whatever the goals of the policy makers, these need to be far more explicit that general environmental improvement, since the life cycle story is consistent in favor of recyclable plastic bags.” (Boustead Report at page 63.)

The professor reviewed every single one of the figures in the report and disagreed with some of them. The Boustead report was amended to the extent that the Boustead report author agreed with the professor’s comments. For example, the figure “103” for electricity in Table 9B

was corrected to “154.” (Boustead Report at pages 64 and 19.)

The Boustead Report (at page 4) includes the following findings based on carrying capacity equivalent to 1000 paper bags:

**BOUSTEAD REPORT
IMPACT SUMMARY OF VARIOUS BAG TYPES
(Carrying Capacity Equivalent to 1000 Paper Bags)**

	Paper (30% Recycled Fiber)	Polyethylene
Total Energy Used (MJ)	2622	763
Fossil Fuel Use (kg)	23.2	14.9
Municipal Solid Waste (kg)	33.9	7.0
Greenhouse Gas Emissions (CO ₂ Equiv. Tons)	0.08	0.04
Fresh Water Usage (Gal)	1004	58

4.11

The Boustead Report analyzes paper bags with 30% post consumer recycled content. The proposed ordinance requires that paper bags have 40% post-consumer recycled content. An additional 10% of recycled content would not result in a 10% improvement in environmental impacts. (Obviously, a paper bag with 100% post consumer recycled content would not have zero negative environmental impacts.) But even if an extra 10% of recycled content decreased all environmental impacts of paper bags by 10%, paper bags are still far worse than plastic bags in every environmental category. For example, instead of consuming 2622 megajoules of total energy, 1000 paper bags would consume 2360 megajoules. Plastic bags with the same carrying capacity consume only 763 megajoules.

THE MARCH 2008 ULS REPORT

[Doc. # 403.]

This report addresses the impact of San Francisco's ordinance banning plastic bags at large stores. San Francisco defines acceptable paper carryout bags as containing "no old growth fiber...100% recyclable... contains a minimum of 40% post-consumer recycled content." San Francisco Environment Code, Chapter 17, §1702(j). The report at pages 3-4 contains the following findings:

- Plastic bags generate 39% less greenhouse gas emissions than uncomposted paper carryout bags.
- Plastic bags consume less than 6% of the water needed to make paper carryout bags.
- Plastic bags consume 71% less energy during production than paper carryout bags.
- Plastic bags generate approximately only one-fifth of the amount of solid waste that is generated by paper carryout bags.

The report at page 5 concludes as follows:

Legislation designed to reduce environmental impacts and litter by outlawing grocery bags based on the material from which they are produced will not deliver the intended results. While some litter reduction might take place, it would be outweighed by the disadvantages that would subsequently occur (increased solid waste and greenhouse gas emissions) [from paper bags]. Ironically, reducing the use of traditional plastic bags would not even reduce the reliance on fossil fuels, as paper and biodegradable plastic bags consume at least as much non-renewable energy during their full life cycle.

4.11

THE 2011 BRITISH GOVERNMENT REPORT

[Doc. # 406; Doc. # 407 is summary.]

In February 2011, the United Kingdom Government's Environment Agency published a life cycle assessment of plastic, paper, and reusable bags. Doc #96 is a summary of the British Report.

The British Report found that:

- The environmental impact of all types of carrier bag is dominated by resource use and production stages. Transport, secondary packaging and end-of-life management generally have a minimal influence on their performance. (Exec. Summary)
- "Recycling or composting generally produce only a small reduction in global warming potential and abiotic depletion." (Exec summary)
- 40.3% of plastic bags are reused as bin liners. (Study at p. 30)
- "Reuse as bin liners produces greater benefits than recycling bags." (Exec summary)
- "When each bag was compared with no primary reuse (i.e. no reuse as a carrier bag), the conventional HDPE bag had the lowest environmental impacts of in eight of the nine impact categories, because it was the lightest bag considered." The study did not consider litter impacts. (Study at 56.)
- The table and chart on the following pages summarize the conclusions of the study regarding global warming impacts. (Exec summary)

Note: Conventional plastic bag carryout bags are referred to in the British Report HDPE bags. Plastic carryout bags used in the USA are made from the same materials as HDPE bags used in Britain. (Doc. # 411.)

4.11

BRITISH GOVERNMENT REPORT
(Exec summary)

**NUMBER OF TIMES THAT ALTERNATIVE BAGS HAVE TO BE USED
TO PRODUCE LESS GLOBAL WARMING THAN PLASTIC BAGS**

Plastic bag = 1

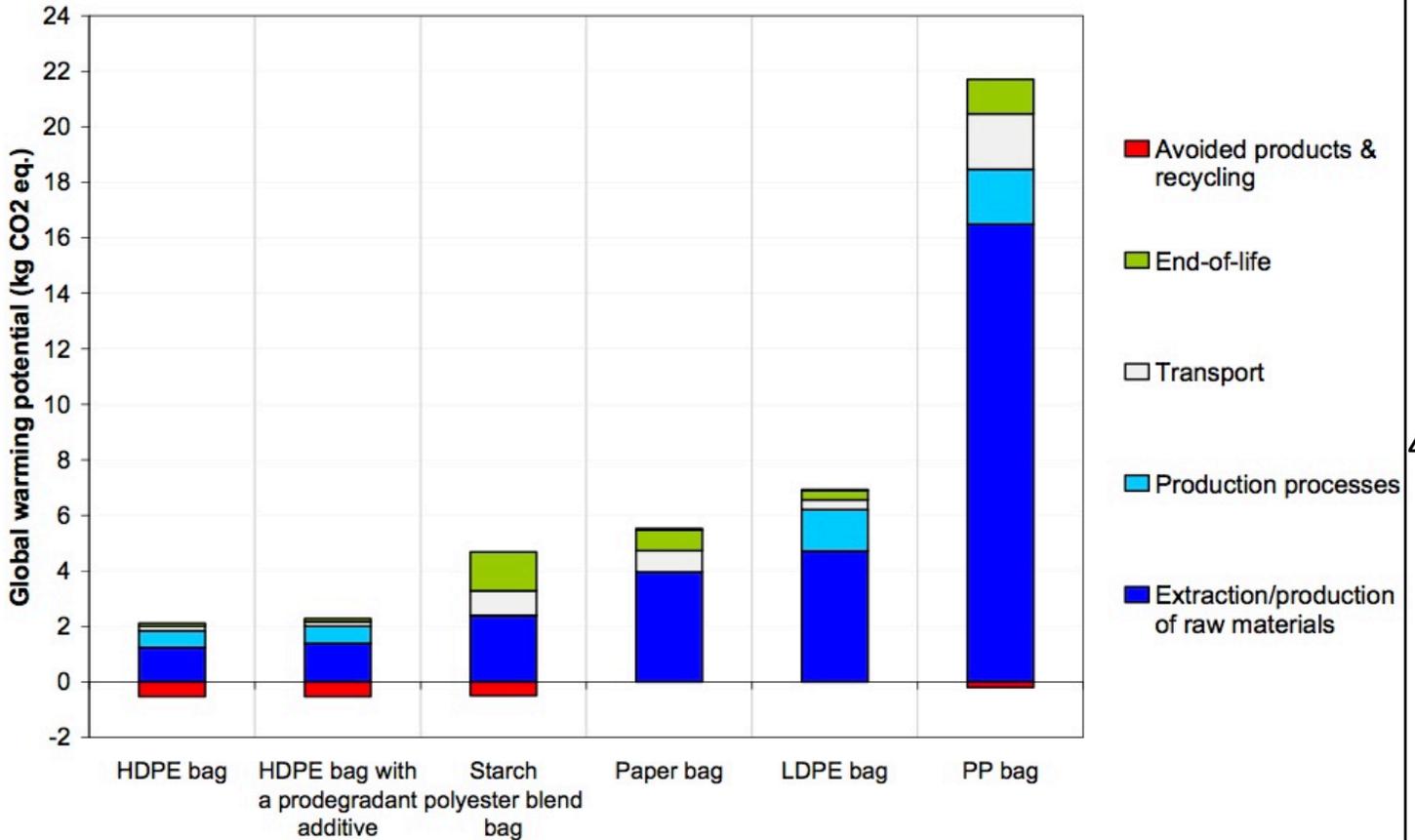
Type of carrier	HDPE bag (No secondary reuse)	HDPE bag (40.3% reused as bin liners)	HDPE bag (100% reused as bin liners)	HDPE bag (Used 3 times)
Paper bag	3	4	7	9
LDPE bag	4	5	9	12
Non-woven PP bag	11	14	26	33
Cotton bag	131	173	327	393

4.11

Based on the above table, if a consumer uses a cotton bag only 130 times and then discard it, more global warming will have been created than if 130 conventional plastic carryout bags had been used. If a consumer has two cotton reusable bags and discards one of them without reusing it, the other would have to be used 262 times.

BRITISH GOVERNMENT REPORT
(Page 33)

“The cotton carrier bag is not shown in [the following table], because its [global warming potential] is more than ten times that of any other carrier bag.” (British LCA at 33)



4.11

The above chart shows that the most important factor in determining the degree to which a bag produces global warming is the material from which the bag is made. Clearly, the best material is HDPE.

VOLUME EQUALIZATION

The Franklin, Scottish, Boustead, ULS, and British Reports take into account the fact that paper bags hold more than plastic bags. The Scottish Report (at page 23) states that the calculations are “normalized against the volume of shopping carried.” The Boustead report (at page 4) shows the impact of bag types based on “carrying capacity equivalent to 1,000 paper bags.” The ratio in the Boustead report (see page 7) is 1,500 plastic bags = 1,000 paper bags. The ULS report is based on the Scottish (Carrefour/Ecobilan) and Boustead reports. (See also British Report at 17.) All of the reports show *based on equivalent carrying capacity*, that paper bags have much worse environmental impacts than plastic bags.



These paper bags were doubled-bagged by a store cashier at the Trader Joe's on Bay Street in San Francisco. The photograph was taken by Stephen Joseph. He has observed Trader Joe's routinely double-bagging paper bags at the store, even for light loads. The manager told him that the reason is that paper bag handles are weak and break. Notice also that the bags are only half-filled. Bags are loaded based on weight, not volume. Many people cannot carry more than 10 to 15 lbs per bag.

Once double-bagging and half-filling of paper bags are taken into account, the environmental impacts of a shift to paper bags are even worse than the findings in the studies.

4.12

THE LOSS OF TREES AND RESULTING IMPACTS

Paper bags are made from trees. Lost trees used to make paper bags are a significant environmental impact. If a small forest located in Santa Barbara or Ventura County is cut down to make paper bags, it would be deemed a significant environmental impact. Trees cut down in other locations for the same purpose are equally a significant environmental impact.

In *Save The Plastic Bag Coalition v. City of Manhattan Beach*, the Supreme Court stated as follows:

We have noted that the area defined by section 21060.5, that is, the area that will be affected by a proposed project, may be greater than the area encompassed by the project itself. “ ‘[T]he project area does not define the relevant environment for purposes of CEQA when a project’s environmental effects will be felt outside the project area.’ [Citation.] Indeed, ‘the purpose of CEQA would be undermined if the appropriate governmental agencies went forward without an awareness of the effects a project will have on areas outside of the boundaries of the project area.’ [Citation.]’ (*Muzzy Ranch Co. v. Solano County Airport Land Use Com.*, *supra*, 41 Cal.4th at p. 387.)

Paper bags used in Santa Barbara or Ventura County may be imported from all parts of the world, including Asia. The logging and forestry practices in those countries may be unsustainable and result in significant environmental consequences.

The Environmental Paper Network (EPN) has published a comprehensive report entitled: “The State of the Paper Industry.” (Doc. # 410.) The EPN states in the report as follows:

[T]he paper industry’s activities – and our individual use and disposal of paper in our daily lives—have enormous impacts. These include loss and degradation of forests that moderate climate change, destruction of habitat for countless plant and animal species, pollution of air and water with toxic chemicals such as mercury and dioxin, and production of methane—a potent greenhouse gas—as paper decomposes in landfills, to name just a few. (Page iv)

One of the most significant, and perhaps least understood, impacts of the paper industry is climate change. Every phase of paper’s lifecycle contributes to global warming, from harvesting trees to production of pulp and paper to eventual disposal. (Page v)

The climate change effects of paper carry all the way through to disposal. If paper is landfilled rather than recycled, it decomposes and produces methane, a greenhouse gas with 23 times the heat-trapping power of carbon dioxide. More than one-third of

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municipal solid waste is paper, and municipal landfills account for 34 percent of human related methane emissions to the atmosphere, making landfills the single largest source of such emissions. The U.S. Environmental Protection Agency has identified the decomposition of paper as among the most significant sources of landfill methane. (Page v)

According to the EPN report at page 3:

- Plastics contribute 4% of toxic emissions
- Paper contributes 12% of toxic emissions

According to the EPN report at page 5, discards in the U.S. municipal solid waste streams by material are as follows:

- Plastics 16%
- Paper and paperboard 25%

The Daily Green has summarized the EPN report. (Doc. # 408.) Some of its observations are as follows:

- Forests store 50% of the world's terrestrial carbon. (In other words, they are awfully important “carbon sinks” that hold onto pollution that would otherwise lead to global warming.)
- Half the world’s forests have already been cleared or burned, and 80% of what's left has been seriously degraded.
- 42% of the industrial wood harvest is used to make paper.
- The paper industry is the 4th largest contributor to greenhouse gas emissions among United States manufacturing industries, and contributes 9% of the manufacturing sector's carbon emissions.
- If the United States cut office paper use by just 10% it would prevent the emission of 1.6 million tons of greenhouse gases -- the equivalent of taking 280,000 cars off the road.
- Paper accounts for 25% of landfill waste (and one third of municipal landfill waste).
- Municipal landfills account for one third of human-related methane emissions (and methane is 23-times more potent a greenhouse gas than is carbon dioxide).

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Friends of the Earth has published a report entitled “Forests And Climate Change.” (Doc. # 409.) This is the most balanced report we could find on the paper industry and deforestation. We believe that it does not overstate or understate the impact of logging. The report contains the following findings:

- Deforestation in the tropics is the second most important source of greenhouse gas emissions.
- Fossil fuel consumption is the greatest source of greenhouse gas emission.
- The forest industry’s claims that they are “combating climate change” are overstated and provide no justification for the intensive forest management practices and timber/paper production of the industry, or the continued wasteful consumption of wood and paper products.

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PEOPLE NEED PLASTIC BAGS AND THEY WILL BUY THEM IN ANOTHER FORM

When assessing the impact of a plastic bag ban, it is essential to take into account the fact that the public needs plastic bags for many purposes. While plastic carryout bags are often referred to as “single-use,” they are in fact one of the most reused items that exist. One survey shows that 92% of households reuse “single-use” plastic bags. (Doc. # 416.) They are reused as bin-liners, for used diapers, to gather dog waste, and many other purposes. If plastic carryout bags are banned, people will buy other types of plastic bags instead.

In 2003, the Government of Ireland imposed a fee on plastic bags. This is an article from the *Irish Examiner* published almost a year after the plastic bag fee was imposed (Doc. # 901):

Shoppers still bagging plastic sales

SHOPPERS are still buying plenty of plastic, despite the introduction of a bag levy last March.

Retailers have noticed substantial increases in the sales of bin bags, nappy [diaper] bags and pedal bin-liners since the levy was introduced.

The number of plastic bags issued has fallen by 95% and has meant that consumers no longer have limitless supplies of plastic bags for household use. This has led to a 77% increase in sales of foot-pedal bin-liners in Tesco.

Sales of nappy [diaper] bags have jumped by 84% in Superquinn and by 25% in Super Valu and Centra stores. Swing binliner sales have increased by 75%.

“There has been an obvious increase in sales of kitchen bin-liners and nappy [diaper] bags, where people would have previously re-used carrier bags. We are looking at options for degradable bin-liners and similar products so that the impact on the environment is minimised,” said Super Valu-Centra trading director James Wilson.

He said the plastic bag levy in general had reduced the amount of plastic going to landfill and has had a “hugely positive impact” in general.

Super Valu and Centra stores have also reported that sales of “bags for life” the reusable plastic shopping bags which were available before the levy have increased by 600-700%.

The plastic bag levy has led to a boom for Killeen, a bin bag company based in Drogheda, Co Loath. It produces 19 different

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types of bin bags and is now employing workers on double shifts to meet the demand.

“We’ve experienced a growth in sales of 300-400%. It's been phenomenal. You can trace it back to last March when the bag levy came in,” Killeen business manager Ken Wall said.

The increase in plastic sales has not alarmed environmental groups.

“It’s the exception to the rule. You only have to look at our streets to see the difference the bag levy has made. There’s no plastic bags stuck in trees or fences anymore,” said Friends of the Environment spokesman Tony Lowes.

A Department of the Environment spokesman said that 7.2m had been raised for the first six months.

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In the bag

77% - increase in pedal bin liner sales (Tesco)

84% - increase in nappy [diaper] bag sales (Superquinn)

13.5% - increase in bin bag sales (Superquin)

25% - Increase in sales of Nappy [diaper] Bags. (Super Value/Centra)

75% -Increase in sales of Swing Bin Liners (Super Value/Centra)

**A SWITCH TO REUSABLE BAGS MAY HAVE A SIGNIFICANT
NEGATIVE NET IMPACT ON THE ENVIRONMENT AS A
RESULT OF LIFE CYCLE IMPACTS OF REUSABLE BAGS**

Every manufactured product creates negative environmental impacts during its life cycle. Reusable bags are no exception. However, as reusable bags are considered a “green” alternative, their environmental impacts are often overlooked. A switch to reusable bags may well be significantly worse for the environment than the status quo.

BEACON must make a determination of how many uses of each of the major kinds of reusable bag it would take to offset the greater negative environmental impacts of reusable bags. STPB objects to the failure to do so. For example, a cotton reusable bag used just once and then discarded and disposed of in a landfill may have much worse impacts on the environment than a plastic bag used just once and disposed of in a landfill.

The fact that a bag can be used hundreds of times does not mean that it will be used hundreds of times.

The Wall Street Journal published an article entitled “An Inconvenient Bag.” (Doc. # 513.) The article states in part as follows:

It's manufactured in China, shipped thousands of miles overseas, made with plastic and could take years to decompose. It's also the hot “green” giveaway of the moment: the reusable shopping bag....

But well-meaning companies and consumers are finding that shopping bags, like biofuels, are another area where it's complicated to go green. “If you don't reuse them, you're actually worse off by taking one of them,” says Bob Lilienfeld, author of the Use Less Stuff Report, an online newsletter about waste prevention. And because many of the bags are made from heavier material, they're also likely to sit longer in landfills than their thinner, disposable cousins, according to Ned Thomas, who heads the department of material science and engineering at Massachusetts Institute of Technology....

Finding a truly green bag is challenging. Plastic totes may be more eco-friendly to manufacture than ones made from cotton or canvas, which can require large amounts of water and energy to produce and may contain harsh chemical dyes. Paper bags, meanwhile, require the destruction of millions of trees and are made in factories that contribute to air and water pollution.

Many of the cheap, reusable bags that retailers favor are produced in Chinese factories and made from nonwoven polypropylene, a form of plastic that requires about 28 times as much energy to produce as the plastic used in standard disposable bags and eight

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times as much as a paper sack, according to Mr. Sterling, of Natural Capitalism Solutions.

Some, such as the ones sold in Gristedes stores in New York that are printed with the slogan “I used to be a plastic bag,” are misleading. Those bags are also made in China from nonwoven polypropylene and have no recycled content.

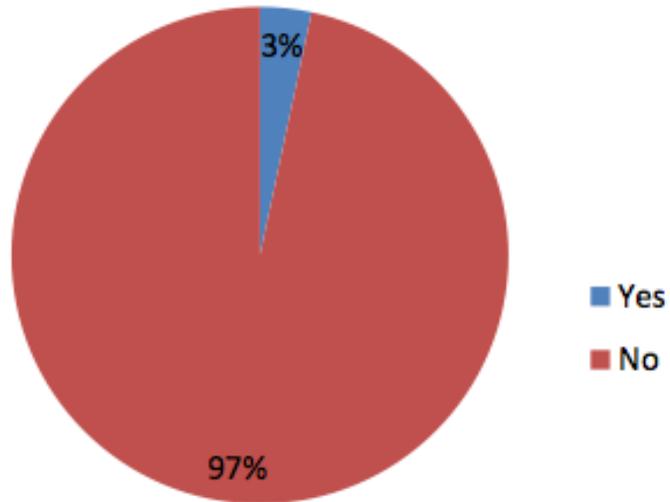
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STPB objects to the assumption that reusable bags will be used a sufficient number of times on average to offset any greater negative life cycle impacts. BEACON must assume a reasonable worst-case scenario. People *may* use reusable bags an average of on two times before discarding them. It depends on the price a consumer has paid for the bag, how dirty the bag has become, how easy it is to clean, how many other reusable bags the consumer owns, and other factors.

The overwhelming majority of consumers do not clean their reusable bags and would prefer to replace them. The University of Arizona asked consumers how often they wash their reusable bags. (Doc. ## 514, 515.) This is important, because as the University of Arizona study shows, reusable bags quickly accumulate dirt and dangerous bacteria if not washed. The result is shown in the following graphic in the University of Arizona study showing that 97% of consumers do not regularly wash reusable bags:

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Figure 7. Cleaned on a Regular Basis?



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An unwashed Trader Joe's reusable bags: a health hazard

It would be *disastrous* from a public health standpoint to encourage consumers to reuse reusable bags if they do not wash them.

Consumers will be more likely to buy a new reusable bag than wash a reusable bag. This will lead to an overproliferation of reusable bags resulting in a very low reuse rate. This is precisely what has happened in Australia. An article on the situation in Australia states as follows (Doc. # 517):

The biggest backer of reusable bags accuses supermarkets of profiteering from their sales.

They were meant to save us from the plague of plastic bags. But reusable “green” bags are being oversold and creating a new proliferation problem, according to Ian Kiernan, who helped devise the environmental anti-plastic campaign.

Coles and Woolworths are profiteering from the popularity of so-called eco-friendly bags, the Clean Up Australia Day founder said. He accused the supermarket chains, which together have sold almost 20 million reusable bags, of “trading off the green potential” of the now ubiquitous products rather than encouraging shoppers to cut consumption.

“They haven't partnered with the community, which they should have done to get it to change behaviour instead of just shovelling [the bags] out the door as quick as they can, selling them like a string of sausages.”

Australia's growing mountain of green bags, many of which end up in landfill, is causing concern. While consumption of disposable plastic bags has plummeted, we now have more reusable bags than are good for us, some environmentalists say.

“It's swallowing up resources, it's overconsumption. It was designed for people to keep reusing them, but people forget to take them to the supermarket and either buy another one or take a plastic bag,” Mr. Kiernan said. “But if we do away with them, the use of plastic bags is going to increase. I still think the green bag is a good thing, but they are not delivering the full benefit they could.”

Green bags, which sell in supermarkets for up to \$2.99, are typically made from non-woven polypropylene, a non-biodegradable byproduct of oil refining.

The bags, introduced in Australia in 2002, have spawned a stand-alone industry, including cooler bags, wine-bottle holders and

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pocket-sized fold-outs.

Leading retailers, such as Target and Bunnings Warehouse, now sell them in place of disposable plastic bags. Stocks have been buoyed further by companies giving away bags as promotional tools.

“There is a proliferation issue that we need to start addressing,” said Planet Ark campaigns manager Brad Gray.

“We've got a lot of people who are using them really regularly and using them the way they should, and we've also got a number of people who buy green bags regularly and don't use them on an ongoing basis.

“It has become a bit of a false environmental economy and a concern. They are made out of plastic, so you don't want a lot of them strewn over the world. But if they are used properly, over and over again, they have a good environmental benefit.”

Mr. Gray said governments should follow South Australia's ban on disposable plastic bags, introduced last May, to encourage reuse of more eco-friendly alternatives.

Coles sold more than 10 million reusable bags in the past 12 months, a 40 per cent increase on the previous year, partly because of the South Australian ban. Woolworths sold 8.82 million reusable bags last financial year, up almost 65 per cent on 2007-08.

Woolworths spokeswoman Clare Buchanan admitted it makes “a very small profit” on reusable bags. But Woolworths had worked hard to encourage customers to reduce consumption, including the provision of recycling bins in stores, she said.

Coles donated more than \$315,000 to Landcare from green bag sales in the past year, spokesman Jim Cooper said.

A report last year by the Sustainable Packaging Alliance, commissioned by Woolworths, found reusable bags have a lower environmental toll than single-use bags, but only when used 104 times - or once a week over two years. The impact on global warming of a reusable polypropylene bag used only 52 times is worse than a standard plastic shopping bag.

Anecdotal reports suggest many reusable bags are not meeting their environmental potential. Online forums include comments from users who have thrown away surplus green bags, used them

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as rubbish bin liners or given them to charity stores.

Smartbag sells about 5 million reusable bags a year, particularly for use as promotional tools, said director Chris Ballenden. “People are ending up with more of these, but is that worse or better than someone buying a shirt in an expensive paper bag and throwing it in the bin? I think, in general, there's an overconsumption in the West of every product, not just our bags.

“If people continue to collect 15 of them, they're going to continue to be made. If you're concerned about them, keep the one or two you use and stop accepting them.”

The switch to green bags helped cut consumption of disposable plastic bags from about 5.9 billion in 2002 to 3.9 billion in 2007. But a report by consumer watchdog Choice, released last May, said many polypropylene bags ended in landfill.

Professor Michael Polonsky, who specialises in environmental marketing at Deakin University, said: “Whether we actually use green bags or not is actually irrelevant; we feel we're making a difference. But if they're not being used and not being recycled, you're creating more harm by using them.

See also television news report on the same subject at: <http://video.au.msn.com/watch/video/green-bags/xglhja0>, which is hereby submitted into the administrative record in its entirety. (Doc. # 518.)

Note that the population of South Australia is about 1,640,700. (Doc. # 522.) Coles and Woolworths sold 18.82 million reusable bags in a year. That is 11.4 bags for every man, woman and child. That would mean about 20 reusable bags purchased per household in just one year and that is reusable bags purchased from just two store chains! There is nothing sustainable about an overproliferation of reusable bags as is happening in Australia.

The Los Angeles County EIR determined that each and every single polypropylene and cotton reusable bag distributed in a city or county must be used at least 104 times before delivering environmental benefits compared to a single plastic carryout bag. (Table at Los Angeles County EIR at 12-21 and repeated in text throughout EIR.) Reusable bags are the worst environmental alternative if they are discarded after one or only a few uses.

Based on the foregoing, a multiplier of two would be the highest reasonable worst-case scenario number for reusable bag usage. STPB objects to any higher multiplier than two being used for the purpose of determining the *possible* significant environmental impacts of the proposed ordinance. If a reusable bag can be used 100 times, that does not mean that it *will* be used 100 times.

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Further, plastic reusable bags are readily recyclable by depositing them in plastic bag recycling bins located at all AB 2449 stores statewide. (Pub. Res. Code §42250-57.) However, there is no recycling infrastructure for any other kind of reusable bag. Non-polyethylene reusable bags must be disposed of in landfills, including cotton, jute, polypropylene, and PET bags.

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THE RECENT OREGON PUBLIC DISEASE OUTBREAK REPORT
IS CONCLUSIVE EVIDENCE THAT REUSABLE BAGS
CARRY VIRUSES AND CAN SPREAD ILLNESS

Doc. # 516 is a public disease outbreak report by officials of the Public Health Division and the Department of Health and Human Services, Washington County, Oregon. Nine members of a soccer team, girls aged 13-14 and adults, became sick from touching a polypropylene reusable grocery bag or consuming its packaged food contents. Seven of them experienced vomiting, four had diarrhea. Symptoms ranged from one to seven days. The officials identified at least five presumptive secondary infections among household members.

All of the people who became ill had consumed cookies that were in sealed packages. The packaged cookies had been stored in a reusable open-top grocery bag made from polypropylene. Not all of the people who became ill touched the reusable bag, but they all touched the packaging of the cookies which had been in contact with the inside of the reusable bag. All three stool specimens collected from ill persons were positive for norovirus genotype GII.2. Viral sequences from the three stool specimens were identical and a 98% match to a GII.2 reference sequence. Two of ten swabs taken from the reusable bag two weeks later were positive for the same norovirus genotype. The report concludes:

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The data indicate that virus aerosolized within the hotel bathroom settled upon the grocery bag and its contents, and it was touching the bag and consumption of its contents that led to the outbreak. Touching the bag could not be analyzed separately from consumption of food items from within the bag. Consumption of food from the grocery bag was strongly associated with illness, as was handling the grocery bag. The nature of the contaminated foods—a bag of chips, grapes, and a package of cookies—facilitated transmission. Fingers contaminated with norovirus have been shown to sequentially transfer virus to up to 7 clean surfaces, and environmental contamination with transmission via fomites has been documented. Incidentally, this also illustrates one of the less obvious hazards of reusable grocery bags.

As reusable bags are used more often, this type of incident will become more frequent, and may happen in the Santa Barbara and Ventura Counties including incorporated municipalities. Municipalities in the DEIR study are encouraging people to bring their own reusable bags. Supermarket and other store baggers put their hands in these bags and may spread viruses and bacteria from one reusable bag to many others. This is a serious public health hazard.

**A SWITCH TO REUSABLE BAGS MAY HAVE A SIGNIFICANT
NEGATIVE NET IMPACT ON THE ENVIRONMENT
AS A RESULT OF HEAVY METALS IN REUSABLE BAGS**

Los Angeles County has been handing out reusable bags to the public. We had two of those bags tested. The results are provided herewith. Both bags tested positive for heavy metals. One of the bags contained more than 100 parts per million of lead. (Docs ## 500, 501.) We are also providing photographs of the tested bags. (Docs. # 502-504.) This is a serious environmental and health concern. However, our testing turned out to be the tip of the iceberg. The Tampa Tribune had reusable bags tested. (Doc. # 506.) The newspaper reports as follows: (Doc. # 507.)

Grocery chain Winn-Dixie sells a reusable grocery bag with two sturdy handles, pictures of cute baby faces and enough toxic lead to alarm health experts.

The bag contains enough lead that Hillsborough County could consider the bag hazardous if thrown out with household trash, according to independent laboratory tests commissioned by The Tampa Tribune.

It's not just Winn-Dixie.

Tribune tests also showed some Publix reusable bags had lead levels that exceed federal limits for paint and exceeded rules coming soon for children's toys. Though the bags comply with other limits, Publix, in a cautionary move, asked its bag suppliers to lower lead content in bags. That decision came after officials were told the results of the Tribune tests.

Winn-Dixie officials said they have an "opportunity to improve" after Tribune tests showed bags exceeded federal limits for paint. This presents a dilemma for shoppers who avoid paper or plastic for environmental reasons. Lead is linked to learning disabilities in children and fertility problems in adults. The answer for shoppers appears to be: Not all bags are created equal, the lab tests showed.

The more elaborate the illustrations on the bags, the more likely they contained toxins. Yellow and green paint on bags is a common carrier of lead.

"For me, personally, I would balk at buying these types of bags," said Hugh Rodrigues, owner of Thornton Laboratories, which tested 13 bags for the Tribune. "I'd choose paper bags."

Those can be recycled easily, he said.

The Tampa Tribune purchased two-dozen reusable bags from the

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largest grocery companies in the Bay area this fall and paid for two rounds of tests at Thornton Laboratories in Tampa, which regularly tests food and chemicals for industrial clients, and has tested children's jewelry for the Tribune.

Some health advocates say there is no safe level for lead, calling it a toxin at any level.

Florida has no clear regulation focused on lead in bags, so lab officials and health advocates point to a conflicting series of government rules regarding consumer products.

Currently, the U.S. Consumer Product Safety Commission allows 300 parts per million of lead in children's products. In August, that level will fall to 100. And any paint on consumer products can contain no more than 90 parts per million.

The packaging industry is pushing for a limit of 100 parts per million, and it helped enact laws in 19 states to limit lead. Florida has not signed on, said Patty Dillon, a spokeswoman for the Toxics in Packaging Clearinghouse.

In the first round of tests, the Baby Faces bag from Winn-Dixie showed the highest levels of lead, 121 parts per million, and showed 117 in the second.

A bag from Publix with a University of South Florida theme approached the 100 parts per million threshold, with a level of 87 parts per million in the first tests, and showed 194 parts per million in a second test -- the highest result of any bag in Tribune tests.

The differences between the two tests likely came from different production runs at the manufacturer, Rodrigues said.

The lead appears to be in a form that is not easily extracted or leached, Rodrigues said. It is not in a form that would rub off on food simply by touching the bag, like wet paint, he said, but over time, bags wear down and paint can flake off and threads can fray, releasing the lead.

Environmental Protection Agency rules require that any product with a lead content higher than 100 parts per million should technically undergo further testing before landfills accept them for disposal, he said.

Publix officials stress that their bags are not toys or paint, and thus comply with current federal rules. But after reviewing the Tribune

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test results last week, Publix officials said they took action.

“We have already contacted the supplier of this bag and asked them to look at reducing the lead content, even though it is within government safety standards,” said spokeswoman Shannon Patten.

“We would never knowingly carry something in our stores that wasn't in compliance with government regulations, and we work hard every day to bring safe, high-quality products to our customers.”

Publix will refund the purchase price of bags to any concerned shopper, she said. Winn-Dixie also said it would refund the cost of a bag. Lead in bags may have emerged as the surprise issue of the year for grocers and consumers.

Shoppers have been switching to reusable totes, avoiding plastic bags to help the environment and lessen the nation's dependence on oil used to make the plastic. Some states want to ban inexpensive plastic bags or impose a tax to discourage their use. Reusable bags seemed the natural solution.

Fitting the Reduce, Reuse, Recycle mantra, reusable bags have become popular, even fashionable, with elaborate designs, holiday themes and sports team logos. Publix has sold 13 million reusable bags, saving an estimated 1 million plastic bags a day.

However, this summer, an independent group tested bags from the upscale Wegmans grocery company and found some contained lead at 799 parts per million, well beyond levels that health officials consider problematic.

Wegmans commissioned its own tests, which also found lead, and immediately stopped selling two styles of bags, one with a green pea design and one with a holiday illustration. (No other designs were affected.) Wegmans posted signs in stores telling customers the bags were safe to use, but should be returned to the store before disposal.

“Lead is a neurotoxin, a carcinogen and affects children's IQ,” said Judy Braiman of Rochesterians Against the Misuse of Pesticides, the first outside group to test Wegmans bags. “It's ironic that everyone is really trying to be good for the environment, and then these bags have lead all over the place.”

Winn-Dixie officials reviewed the Tribune results and said they were confident their bags were “safe to use and reuse as intended.”

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That said, the Tribune test “suggests there is an opportunity to improve this solution as it pertains to disposal of these bags, and ensure the ongoing benefits to our customers and the communities we serve.”

For those hoping to help the environment, perhaps a more important issue is what to do with bags when they wear out. Among rules for disposal, bags fall into a gray area.

The rules are clear with things such as tube televisions and paint. They are considered hazardous waste, and residents must bring them to the government for special handling.

But there are no requirements for bags, said James Ransom, a spokesman for Hillsborough County's solid waste program.

But Ransom said the basic chemical content of these bags tested by the Tribune would require special handling under Hillsborough County rules, and he advises consumers who know about issues with their bags to handle them differently than general household trash.

Florida has come a long way from the days when local governments dug holes, dumped trash and set it on fire, said Richard Tedder, a program administrator for the state Department of Environmental Protection. He said he thinks the bags would be fine in landfills, especially the more modern dumps with liners to prevent groundwater contamination.

However, Rodrigues, Braiman and Dillon said there is a multiplying effect of millions of Americans buying reusable bags and tossing them out over time.

All this presents problems for shoppers.

Reusable bags don't list lead as an ingredient in the material. All the bags tested by the Tribune were made in China. A tag on the USF bag from Publix says to hand wash separately and line dry.

Shoppers could try using the home lead tests sold in stores, but those are primarily designed for testing paint on hard surfaces such as walls or toys.

The bags tested by the Tribune with the highest lead levels tended to have the most elaborate designs or illustrations that covered the entire surface.

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By contrast, a nylon bag sold by Target with almost no illustrations had almost undetectable levels of lead. Also, the simplest bags from Sweetbay, Walmart and Publix contained little lead.

For shoppers, the best advice might be: If you're concerned about your bags, take them back to the store.

As a result of the Tampa Tribune article, U.S. Senator Charles Schumer (D-NY) asked for a federal investigation into the problem. In his press release he stated as follows: (Doc # 508.)

U.S. Senator Charles E. Schumer today called on the Food and Drug Administration (FDA), the Environmental Protection Agency (EPA) and Consumer Product Safety Commission (CPSC) to investigate and ban reusable shopping bags that contain higher than acceptable levels of lead. Many of these popular bags are manufactured in China and sold to grocery stores, who then sell them to customers. Schumer, Vice Chairman of the Joint Economic Committee, noted that while there may be no immediate danger to human health, food products come into direct contact with these bags and long-term exposure can pose serious health and environmental risks. Schumer, who has a long record fighting to make products imported from China safe for consumers and children, is asking federal agencies to investigate and ban any reusable bags sold to grocery stores and retailers that are found to have high levels of lead in them.

The problem came to light this past September when Wegmans, a supermarket chain with stores in New York and four other states, pulled a number of their reusable shopping bags that were manufactured in China after a consumer group found that they contained higher than acceptable levels of lead that could affect public health. Since that time, several other reports have shown higher than acceptable levels of lead in reusable shopping bags sold at chain supermarkets in other states like Publix and Winn-Dixie, as well as drug stores across the country.

....

Several recent reports show that a significant number of reusable shopping bags contained over 100 parts per million (PPM) in heavy metals. In some cases, bags contained as many as 5 times the allowable limits. The paint on lead-filled bags has the ability to peel and flake off, coming into direct contact with exposed groceries, like fruits and vegetables. Exposure to high levels of lead can damage the nervous and immune systems and impair kidney function over time. When disposed of in landfills, these bags can leak toxins into the soil and water and have the potential to create even more environmental problems.

In September, Wegmans Food Markets Inc. announced that it would be replacing 725,000 reusable shopping bags in its stores in New York, Pennsylvania, New Jersey, Virginia and Maryland. The announcement came on the heels of a report by the Empire State Consumer Project that found that the green bags contained lead at 799 parts per million – more than double the amount allowed in children’s products by the CPSC. Currently, the CPSC allows lead in children’s products at up to 300 parts per million; next year, the limit will drop to 100 parts per million.

California Assembly Member Kevin de Leon (D-Los Angeles), submitted a letter on November 15, 2010 requesting the Los Angeles County Board of Supervisors delay its vote on banning plastic bags because of the recent revelations about potentially toxic levels of lead in reusable bags. He questioned whether the bags could contaminate the food that consumers transport and whether the lead could be spread in landfills when the bags are discarded. De Leon even admitted that he is a “co-author and long-time advocate of legislative proposals to ban plastic bags from the stream of commerce.” (Doc. # 509.)

STPB recognizes that the draft ordinance contains a requirement that reusable bags must not contain toxic amounts of heavy metals and thereby meet the standards of the California Toxics in Packaging Prevention Act (Cal. Health & Safety Code §§25214.11-25214.26), as amended, or any successor legislation. However, reusable bags are exempt from the toxic metals restrictions applicable to plastic and paper bags. (Health & Safety Code §25214.12(h)(2): “Package” does not include a reusable bag, as defined in subdivision (d) of Section 42250 of the Public Resources Code.)

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The former restriction on toxic heavy metals in reusable bags was repealed by a bill authored by Assembly Member Julia Brownley (D-Santa Monica) in 2008. (Doc. # 519.) Assembly Member Brownley was the author of bills to ban plastic bags and to switch to reusable bags.

With the restrictions removed, reusable bags provided in Santa Barbara or Ventura County and incorporated municipalities, including reusable bags imported from China, may legally contain lead, mercury, cadmium, and hexavalent chromium.

Health and Safety Code §25214.13 defines a toxic amount for the purpose of regulating packaging including plastic and paper bags as:

the sum of the incidental total concentration levels of all regulated metals present in a single-component package or in an individual packaging component exceeds 100 parts per million by weight.

That definition needs to be incorporated into the proposed ordinance. The Counties of Santa Barbara and Ventura including incorporated municipalities will be permitting reusable bags to be distributed with high levels of toxicity caused by lead, cadmium or other heavy metals.

**THE PROPOSED ORDINANCE MAY RESULT IN
A SIGNIFICANT REDUCTION IN RECYCLING**

Free brown paper carryout bags are the key to a successful recycling program in the City of Los Angeles. You put your recyclables in a brown paper carryout bag and then take the filled bag to the blue bin.

Residents save brown paper carryout bags for recycling of newspapers, junk mail, and other recyclables. Residents dispose of so many recyclables that the paper bags fill up quickly. Residents may find that they have not saved enough paper bags. If the City of Los Angeles bans free paper carryout bags and pushes for a goal of 100% reusable bags, what will be the impact on recycling? When people need a brown paper bag for recycling, they won't have one. They may simply dispose of their recyclables in the trash.

This issue needs to be addressed in an EIR. If Santa Barbara and Ventura County including incorporated municipalities are trying to push people to use reusable bags 100% of the time, there may be a significant negative impact on recycling. This is an enormously important environmental issue for the city and the residents.



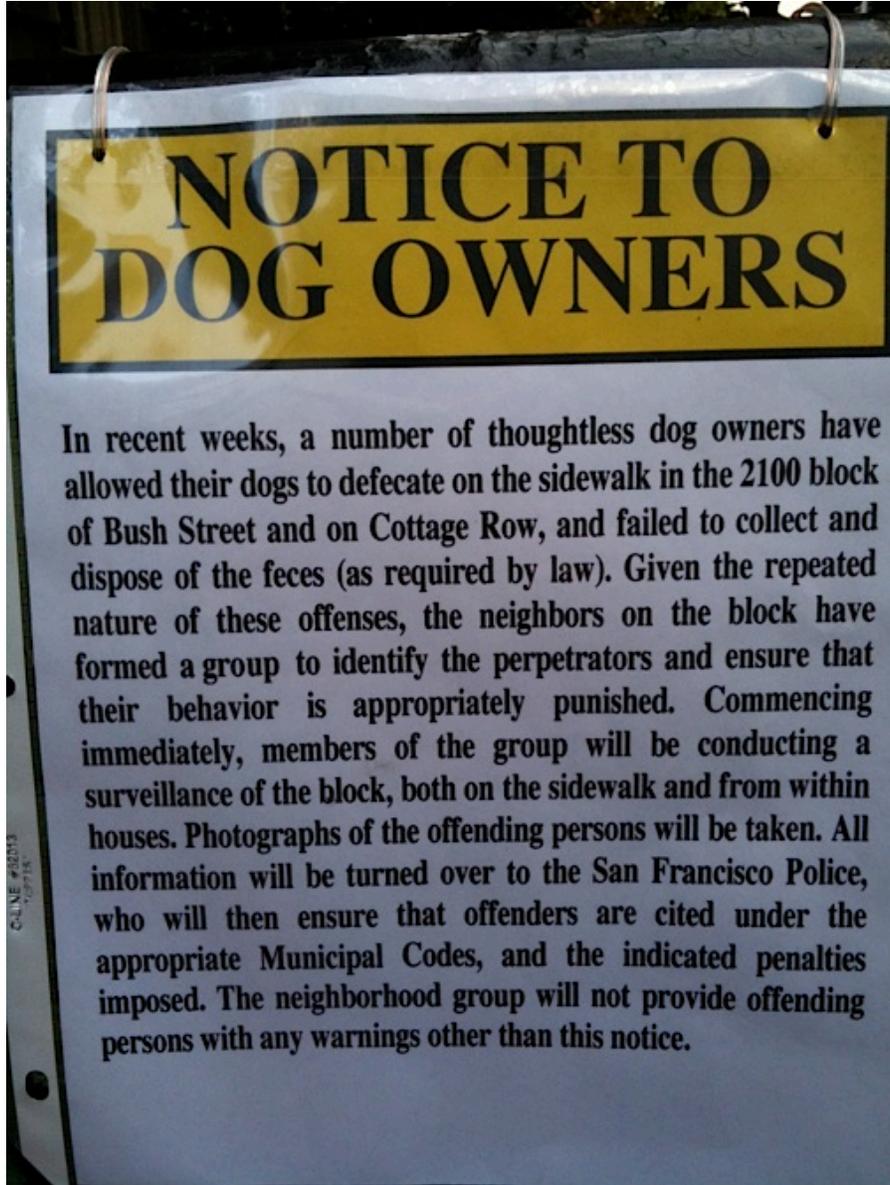
4.22

**Free brown paper carryout bags are critically important
to recycling in Santa Barbara and Ventura Counties**

THE PROPOSED ORDINANCE MAY RESULT IN A SIGNIFICANT INCREASE IN DOG WASTE ON THE STREETS

Dog owners save plastic bags for this purpose to collect and dispose of dog waste.

If plastic bags become a rarity, there may be a significant increase in dog waste on the streets. This is an environmental problem for residents, especially when they are walking at night and step right in it. It doesn't take much additional dog poop on a street to make a big difference.



4.23

THE LOS ANGELES COUNTY EIR

In November 2009, after completing an Initial Study pursuant to CEQA, Los Angeles County determined that banning plastic bags could have significant negative environmental impacts on the environment. After completing an EIR the Los Angeles County Board of Supervisors adopted an ordinance in November 2010 banning plastic carryout bags and imposing a 10-cent fee on paper carryout bags. The Los Angeles County EIR is Doc #001 and can be downloaded at: <http://ladpw.org/epd/PlasticBags/PDF/finalEIR.pdf>. Doc. # 002 is a summary of the EIR. Doc # 003 is the ordinance.

The Los Angeles County EIR adopted the findings of the Ecobilan Report (Docs. # 404, 405) and the Scottish Report (Doc. # 401). The Los Angeles County EIR states that the Ecobilan Report was used as the basis for the findings regarding paper bags and polyethylene reusable bags “because it is relatively recent; contains relatively sophisticated modeling and data processing techniques; considers a wide range of environmental indicators; considers paper, plastic, and reusable bags; was critically reviewed by the French Environment and Energy Management Agency; and contains detailed emission data for individual pollutants.” (Los Angeles County EIR at 3.1-15.) The Scottish Report is based entirely on the Ecobilan Report. (Los Angeles County EIR at 4-8, 4-47.) The Ecobilan table of the relative impacts of plastic and paper bags is at page 23 of the Scottish Report. As mentioned above, those reports determined that even after taking into account that paper bags hold more than plastic bags, the life cycle of paper bags result in:

- 1.1 times more consumption of nonrenewable primary energy than plastic bags.
- 4.0 times more consumption of water than plastic bags.
- 3.3 times more emissions of greenhouse gases than plastic bags.
- 1.9 times more acid rain (atmospheric acidification) than plastic bags.
- 1.3 times more negative air quality (ground level ozone formation) than plastic bags.
- 14.0 times more water body eutrophication than plastic bags.
- 2.7 times more solid waste production than plastic bags.

Based on the Ecobilan and Scottish Reports, Los Angeles County decided to impose a 10-cent fee on paper bags because a straight switch from plastic to paper bags could not be environmentally justified.

The Los Angeles County EIR determined that a 10-cent fee on paper bags and promoting and distributing reusable bags would not be sufficient to prevent significant negative environmental impacts caused by a shift from plastic to paper. The EIR states:

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Based on a conservative analysis, the County has determined that cumulative indirect [greenhouse gas] emissions resulting from implementation of the recommended ordinances will have the potential to result in significant unavoidable impacts even with implementation of [a paper bag fee and promotion and distribution of reusable bags], which will be expected to reduce significant adverse impacts to GHG emissions to the maximum extent feasible.

(Los Angeles County EIR at IV-1. Los Angeles County applied a method for determining applicable significance thresholds. (Los Angeles County EIR at 3.3-14 to 15.)

The Los Angeles County EIR determined that every polypropylene and cotton reusable bag distributed in the County must be used at least 104 times before delivering environmental benefits compared to plastic carryout bags. (Table at Los Angeles County EIR at 12-21 and repeated in text throughout Los Angeles County EIR.)

The Los Angeles County EIR determined that a reusable bag made from polyethylene must be used at least 3 times before delivering an environmental benefit compared to a plastic carryout bag. (Los Angeles County EIR at 4-49 to 50, 12-52 to 53.) This is far better than the 104 times that polypropylene or cotton reusable bags must be used to deliver environmental benefits.

4.24

As banning plastic bags, imposing a fee on paper bags, and promoting and distributing reusable bags would not avoid significant negative environmental impacts, the Los Angeles County Board of Supervisors adopted a “Statement of Overriding Considerations” finding that the alleged benefits of the ordinance outweighed the significant negative environmental impacts of the ordinance. (Los Angeles County EIR at IV-1.)

The principal alleged benefit identified by Los Angeles County in its Statement of Overriding Considerations is assisting in reducing litter cleanup costs by \$4 million throughout the County. (Los Angeles County EIR at IX-3.) Los Angeles County declined to explain how this figure was calculated, despite the fact that STPB pointed out that the same areas would still have to be cleared as plastic bags are only a fraction of total litter.

STPB contended that the “North Pacific Garbage Patch” does not exist and that there is no island of plastic trash. Los Angeles County EIR states that it does not claim that North Pacific Gyre has a visible patch or “island” of plastic debris. (Los Angeles County EIR at 13-37.)

There are many deficiencies in the Los Angeles County EIR, including sweeping and inaccurate statements designed to justify a plastic bag ban. (STPB objected to those deficiencies and continues to assert those objections.) Nevertheless, Los Angeles County was unable to avoid acknowledging that the ordinance will have significant negative environmental impacts.

The Los Angeles County EIR is substantial evidence that the proposed ordinance for Santa Barbara and Ventura Counties and incorporated municipalities may result in significant negative environmental impacts.

**SPECIFIC OBJECTIONS
TO DRAFT EIR**

OBJECTION # 1
UNJUSTIFIED AND MISLEADING USE OF
LDPE REUSABLE BAGS AS BASIS FOR
ENTIRE REUSABLE BAG IMPACT ANALYSIS

OBJECTION: STPB objects to the following statements and tables in the DEIR and all similar statements and tables in the DEIR that make the same point(s):

DEIR page 4.1-9:

However, because LDPE reusable bags are one of the most common types of reusable bags and are of similar durability and weight (approximately 50 to 200 grams) as other types of reusable bags, this Program EIR utilizes the best available information regarding specific metrics on a per bag basis to disclose environmental impacts associated with the Proposed Ordinance. The emissions from all types of reusable bags are lower than single use plastic and paper carryout bags because reusable bags are usually used at least once per week, or 52 uses per year. On a per bag basis, the production and transportation of a single use paper bag has 1.3 times the impact on ground level ozone formation compared to the production and transportation of a single use plastic bag and the production and transportation of a reusable carryout bag that is made of LDPE plastic would result in 1.4 times the ground level ozone formation compared to the production and transportation of a single use plastic bag.

DEIR pages 4.3-6:

If only used once, the manufacture, use and disposal of a reusable LDPE carryout bag results in 2.6 times the GHG emissions of a single use HDPE plastic bag (AEA Technology, 2005). Therefore, reusable LDPE carryout bags would emit 0.104 metric tons CO₂e per 1,000 bags (if used only once).

...

If used 20 times, a reusable LDPE carryout bag results in 10% the GHG emissions of a single use HDPE plastic bag (AEA Technology, 2005). The analysis uses the above LDPE carryout bag as a representation of reusable bags in evaluating GHG impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential GHG emissions. However, given the high rate of reuse for all types of reusable bags (100 times or more), the GHG emissions associated with these bags, are expected to be comparable to an LPDE bag or lower.

DEIR pages 4.3-12:

If only used once, the manufacture, use, and disposal of a reusable LDPE carryout bag results in 2.6 times the GHG emissions of a single use HDPE plastic bag. ...

DEIR page 4.3-13 – Table 4.3-3 - STPB objects to the 2.6 figure and multiplier:

**Table 4.3-3
Estimated Greenhouse Gas Emissions from Carryout Bags in Study Area
with Implementation of the Proposed Ordinance**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	197,472,422	2.97	0.1188 per 1,000 bags ³	23,460	0.0189
Reusable	8,228,018	2.6	0.104 per 1,000 bags ⁴	856	0.0007
<i>Subtotal</i>				25,193	0.0203
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,578	3,279	0.0026
<i>Subtotal</i>				3,279	0.0026
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				10,919	0.0088

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

4.25

**Table 6-5
Estimated Greenhouse Gas Emissions from Alternative 2**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	6,582,414	1	0.04 per 1,500 bags ²	176	0.0001
Single-use Paper	223,802,078	2.97	0.1188 per 1,000 bags ³	26,588	0.0214
Reusable	8,228,018	2.6	0.104 per 1,000 bags ⁴	856	0.0007
<i>Subtotal</i>				27,619	0.0223
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,578	3,279	0.0026
<i>Subtotal</i>				3,279	0.0026
Total GHG Emissions from Alternative 2				30,898	0.0249
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				2,426	0.0020
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				13,345	0.0108

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

4.25

DEIR page 6-12 – Table 6-10 - STPB objects to the 2.6 figure and multiplier:

**Table 6-10
Estimated Greenhouse Gas Emissions from Alternative 3**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	39,494,484	2.97	0.1188 per 1,000 bags ³	4,692	0.0038
Reusable	11,266,055	2.6	0.104 per 1,000 bags ⁴	1172	0.0009
<i>Subtotal</i>				6,741	0.0054
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	3,557,702	3.825	9,938,578	4,489	0.0036
<i>Subtotal</i>				4,489	0.0036
Total GHG Emissions from Alternative 2				11,230	0.0091
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(17,242)	(0.0139)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(6,323)	(0.0051)

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

4.25

DEIR page 6-18 – Table 6-15 - STPB objects to the 2.6 figure and multiplier:

**Table 6-15
Estimated Greenhouse Gas Emissions from Alternative 4**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	0	2.97	0.1188 per 1,000 bags ³	0	0.0000
Reusable	12,025,564	2.6	0.104 per 1,000 bags ⁴	1251	0.0010
<i>Subtotal</i>				2,128	0.0017
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	3,557,702	3.825	9,938,578	4,792	0.0039
<i>Subtotal</i>				4,792	0.0039
Total GHG Emissions from Alternative 2				6,920	0.0056
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(21,552)	(0.0174)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(10,633)	(0.0086)

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

4.25

DEIR page 6-24 – Table 6-20 - STPB objects to the 2.6 figure and multiplier:

**Table 6-20
Estimated Greenhouse Gas Emissions from Alternative 5**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	144,813,109	1	0.04 per 1,500 bags ²	3,862	0.0031
Single-use Paper	92,153,797	2.97	0.1188 per 1,000 bags ³	10,948	0.0088
Reusable	8,101,433	2.6	0.104 per 1,000 bags ⁴	843	0.0007
<i>Subtotal</i>				15,652	0.0126
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	3,557,702	3.825	9,938,578	3,228	0.0026
<i>Subtotal</i>				3,228	0.0026
Total GHG Emissions from Alternative 2				18,880	0.0152
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Difference				(9,592)	(0.0077)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				1,327	0.0011

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

4.25

GROUNDS:

1. LDPE reusable bags are the least common reusable bag

According to the DEIR at page 4.4-10, reusable bags can be manufactured with various materials, including polyethylene (PE) plastic, polypropylene (PP) plastics, multiple types of cloth (cotton canvas, nylon, etc.), and recycled plastic beverage containers (polyethylene terephthalate, or PET), among others. This statement is correct.

One type of polyethylene reusable bag is a low density polyethylene (“LDPE”) reusable bag. An LDPE or an HDPE (i.e. high density) bag is a thick plastic bag. **The DEIR asserts that LDPE reusable bags are “one of the most common types of reusable bags.” STPB objects as the assertion is not true and there is no substantial evidence supporting the assertion.** LDPE bags are quite rare, especially in major supermarkets. They represent no more than 5% of reusable bags distributed by stores and are (unfortunately) the least common type of reusable bag. About 75% of reusable bags are made of nonwoven polypropylene (“PP”).

There are three large manufacturers and suppliers of LDPE reusable bags in California. Two of them are based in Los Angeles, including Command Packaging. The CEO of Command Packaging has executed a declaration that is submitted herewith stating, under penalty of perjury, that based on his marketing work and observations, he states in his declaration as follows (Doc. # 422):

- “Based on my observations when visiting **all retail stores**, including but not limited to supermarkets, in Los Angeles County in areas where plastic carryout bags have been banned, and speaking with buyers for those stores, I believe and estimate that LDPE and HDPE reusable bags together represent no more than **1%** of all bags provided by such stores to their customers at this time.”
- “Based on my observations when visiting **supermarkets** in Los Angeles County in areas where plastic carryout bags have been banned, and speaking with buyers for those supermarkets, I believe and estimate that LDPE and HDPE reusable bags together represent no more than **5%** of all bags provided by such supermarkets to their customers at this time.”
- “I am only aware of a small number of supermarkets in Los Angeles County that display LDPE or HDPE reusable bags near the checkout. **I am not aware of any supermarket that displays LDPE or HDPE reusable bags at the checkout.**”

In contrast, the DEIR offers a bare and incorrect assertion that LDPE bags are “one of the most common types of reusable bags” without any evidence.

*****Ironically, the obvious reason why the authors of the DEIR have selected LDPE reusable bags as the basis for the environmental analysis is that plastic bags have the lowest environmental impact of any kind of bag. This is a testament to the environmental virtues of plastic that even the authors of the DEIR are forced to recognize. However, LDPE reusable*****

4.25

bags are not representative of reusable bags actually provided to consumers.

The photographs on the following pages show the kinds of bags actually being provided to customers by supermarkets in the City of Long Beach, the City and County of San Francisco, and the City of West Hollywood, since the plastic bag bans in those cities took effect. They are not LDPE or HDPE reusable bags. STPB objects to the omission of any kind of environmental impact of such non-LDPE and non-HDPE reusable bags in the DEIR. The kinds of reusable bags used in these locations and the frequency of use of each type of reusable bag is representative of the post-plastic ban situation in Ventura and Santa Barbara Counties.

Stephen Joseph certifies that he took the photographs and that the captions are correct. He further certifies that he did not see any LDPE or HDPE reusable bag at the checkouts of any of the stores that he visited.

4.25

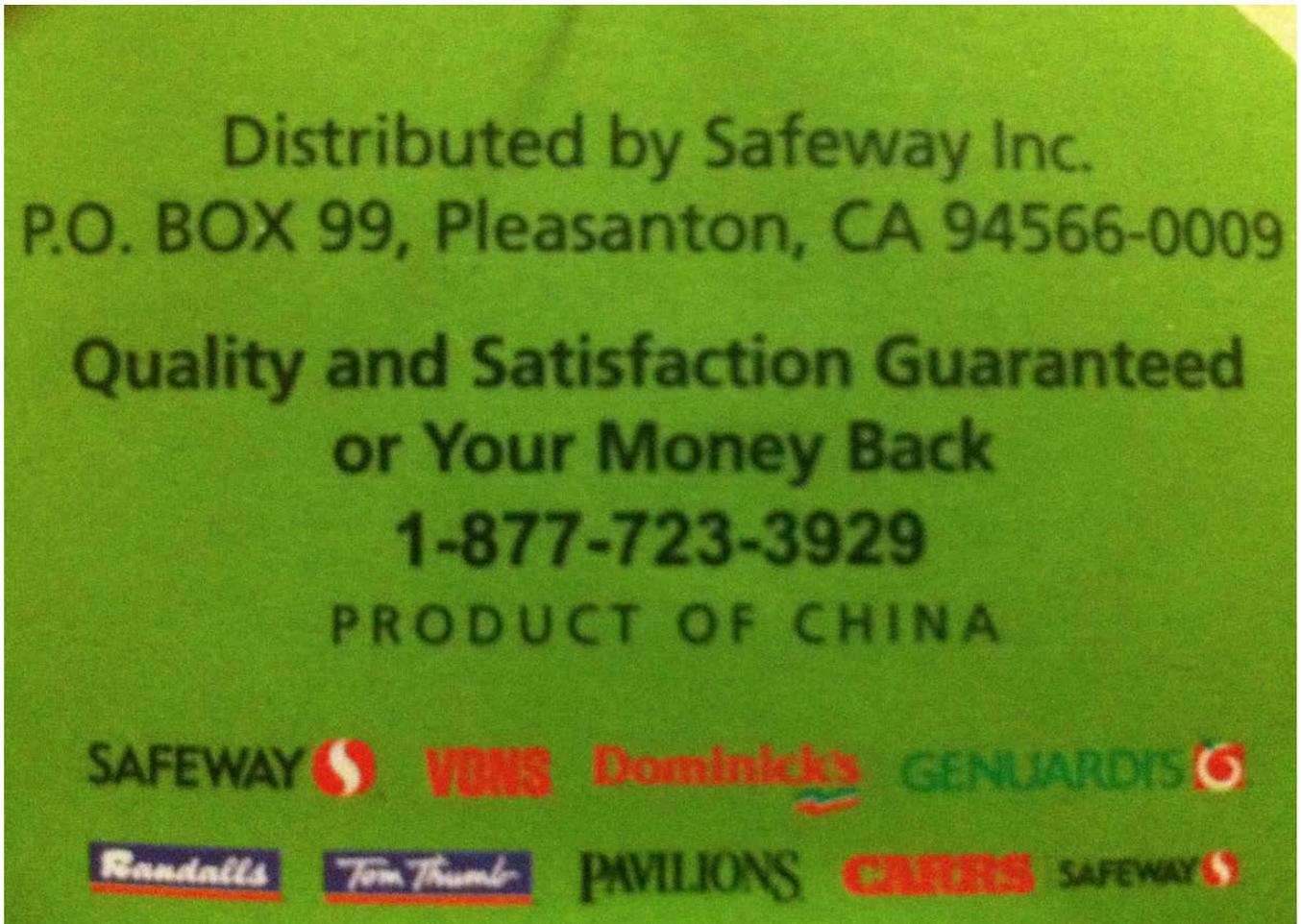


**The checkout at Vons in Long Beach, after plastic bags were banned.
Photo taken by Stephen Joseph on October 24, 2012.
No LDPE or HDPE reusable bags at the checkout.**



4.25

**A Vons reusable bag available at the checkouts.
This is not an LDPE or HDPE reusable bag.
It is made in China.**



4.25

The label on the Vons bag shown on the previous page. This shows that major supermarket chains are providing these kinds of bags to consumers:

- Safeway**
- Vons**
- Dominicks**
- Genuardis**
- Randalls**
- Tom Thumb**
- Pavilions**
- Carr**
- Safeway.**



4.25

**The checkout at Ralphs in Long Beach, after plastic bags were banned.
Photo taken by Stephen Joseph on October 24, 2012.
No LDPE or HDPE reusable bags at the checkout.**



4.25

**Ralphs reusable bag available at the checkout.
This is not an LDPE or HDPE reusable bag.
It is made in China.**



4.25

**The checkout at the Safeway supermarket at 350 Bay Street, San Francisco.
Photo taken by Stephen Joseph on October 24, 2012.
The San Francisco expanded plastic bag ban and 10-cent paper
bag fee requirement took effect on October 1, 2012.
There were no LDPE or HDPE reusable bags at the checkout.**

2.

**REUSABLE BAGS AVAILABLE
AT STORES IN THE
CITY OF WEST HOLLYWOOD
AFTER THE PLASTIC BAG BAN**

**Photographs taken by Stephen Joseph
on March 7, 2013**

4.25

**The City of West Hollywood plastic bag
ban took effect at all of these stores
on February 20, 2013**

**PAVILIONS SUPERMARKET
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**No reusable bags at the checkout.
Most people were taking and paying for paper bags.**

**PAVILIONS SUPERMARKET
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**This is not an LDPE or HDPE reusable bag.
No LDPE or HDPE reusable bags available at the self-service checkout.**

**PAVILIONS SUPERMARKET
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**PAVILIONS SUPERMARKET
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**TRADER JOE'S
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**CVS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

No reusable bags of any kind were available at CVS.

**GELSON'S
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

The checkout at Gelson's where a high degree of paper bag usage was in evidence.

**GELSON'S
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

These are not LDPE or HDPE reusable bags.

**GELSON'S
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are LDPE reusable bags.
These bags are only available in one other
Gelson's store – the one in in Calabasas.**

**WHOLE FOODS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**WHOLE FOODS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

Paper bags at the ready at the Whole Foods store checkout.

**RALPHS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

LDPE reusable bags are available at the checkout at this Ralphs.

**BRISTOL FARMS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**BRISTOL FARMS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

**These are not LDPE or HDPE reusable bags.
No LDPE or HDPE reusable bags were available anywhere in the store.**

**BRISTOL FARMS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

The majority of customers were paying for paper bags.

**BRISTOL FARMS
CITY OF WEST HOLLYWOOD
MARCH 7, 2013**



4.25

A 10-cent fee is not an effective deterrent to ensure a sufficient suppression of paper bag usage. Other cities such as San Jose have opted for a 25-cent fee, which should be more effective.

2. Other types of reusable bags have far worse impacts than LDPE reusable bags

STPB does not dispute that an LDPE bag need only be used 2.6 times to equal the environmental impact of a plastic carryout bag. However, that figure is not applicable to other types of reusable bags.

As noted previously in this document, the British Government report includes the following table (Doc. # 406; Doc # 407 is summary):

NUMBER OF TIMES THAT ALTERNATIVE BAGS HAVE TO BE USED TO PRODUCE LESS GLOBAL WARMING THAN PLASTIC CARRYOUT BAGS

Plastic bag = 1

Type of carrier	HDPE bag (No secondary reuse)	HDPE bag (40.3% reused as bin liners)	HDPE bag (100% reused as bin liners)	HDPE bag (Used 3 times)
Paper bag	3	4	7	9
LDPE bag	4	5	9	12
Non-woven PP bag	11	14	26	33
Cotton bag	131	173	327	393

4.25

The table shows that an LDPE reusable bag must be used 4 times instead of 2.6 times (assuming that the plastic carryout bag is never reused). 2.6 is within a reasonable margin of error. 2.6 times or 4.0 times is still a very good environmental footprint.

According to the British report, a PP bag must be used at least 11 times. That is much worse than 2.6. And a cotton bag must be used at least 131 times, which is the worst of all. Of course, many plastic carryout bags are reused as bin liners. The British report found that 40.3% are reused as bin liners. (Doc. # 406 at page 30.) Therefore, the correct figures are:

Paper bag	4
LPDE reusable bag	5
Non-woven PP reusable bag	14
Cotton reusable bag	173

The Los Angeles County EIR determined that each and every single polypropylene and cotton reusable bag distributed in a city or county must be used at least 104 times before delivering environmental benefits compared to a single plastic carryout bag. (Doc. # 001, table at page 12-21 and repeated in text throughout EIR.)

The Los Angeles County figure of 104 represents an averaging of PP bags and cotton bags, which STPB would not dispute is an appropriate figure for the BEACON EIR.

The statement in the DEIR at 4.1-9 that LDPE reusable bags are representative of all reusable bags because they are of similar durability and weight is baseless and wrong. The material from which the bags are made is of critical importance to their environmental impacts.

3. The use of LDPE reusable bags as the basis for the reusable bag analysis invalidates the findings in the DEIR

The DEIR is projecting a massive switch to reusable bags. As long as it is making that projection, it is critically important that the environmental impact of reusable bags be assessed accurately. Cherry-picking a figure of 2.6 based on a type of reusable bag that is a tiny percentage of the marketplace is misleading and unacceptable. Therefore, STPB objects.

4.25

OBJECTION # 2
UNJUSTIFIED AND MISLEADING ASSUMPTION THAT
EACH REUSABLE BAG WILL BE USED ON AVERAGE 52 TIMES

OBJECTION: STPB objects to the following statements and tables in the DEIR and all similar statements and tables in the DEIR that make the same point(s):

DEIR pages 2-10, 4.1-9, 4.2-7, 4.5-3, 4.5-5, 4.5-7, and 4.5-11:

Although a reusable bag is designed to be used up to hundreds of times, it is conservatively assumed that a reusable bag would be used by a customer once per week for one year (52 times).

Table 2-2
Existing Plastic Bag Replacement Assumptions in the Study Area

Type of Bag	Replacement Assumption	Bags used Post-Ordinance	Explanation
Single-use Plastic	5% (remaining) ¹	32,912,070	Because the Proposed Ordinance does not apply to all retailers (e.g. restaurants), some single-use plastic bags would remain in circulation.
Single-use Paper	30% ²	197,472,422	Although the volume of a single-use paper carryout bag is generally 150% of the volume of a single-use plastic bag, such that fewer paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.
Reusable	65% ²	8,228,018	Although a reusable bag is designed to be used up to hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Carryout Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.
Total		238,612,510	

¹ Rate utilized in the City of Sunnyvale Final EIR, SCH # 2011062032, November 2011.

² Rates utilized in the City of San Jose Final EIR, SCH # 2009102095, October 2010.

See Appendix C for full Bag Reductions for each individual municipality.

4.26

GROUNDINGS:

There is no basis and no substantial evidence supporting the “assumption” that every reusable bag will be used on average 52 times.

In Table 2-2, the DEIR cites the “Green Cities California MEA, 2010” and the “Santa Monica Single-Use Carryout Bag Ordinance Final EIR, 2011”. Those are rates based on assumptions. There is no empirical data whatsoever regarding the number of times that reusable bags are used on average. An assumption is not substantial evidence.

The number of times that reusable bags will be reused is central to the reusable bag analysis. In the Los Angeles County EIR, the reasonable figure of 104 was used as the number of times a reusable bag would have to be used to offset its impact compared to a reusable bag. And if one reusable bag is not used, then the next bag must be used 208 times, and so on.

The DEIR does not even pretend that each reusable bag will be used on average 104 times, and there would be no basis for such an assertion. It is just guesswork. Therefore, the analysis must be based on a reasonable worst case scenario, which is that reusable bags may not be used on average a sufficient number of times to offset their greater negative environmental impacts compared to a plastic or paper carryout bag.

4.26

The City and anti-plastic bag activists paint a rosy picture of reusable bags that is not justified by the facts. It is time for the City to acknowledge that reusable bags are big and heavy and use far more non-renewable resources and create far greater environmental impacts than the bags that they are intended to replace.

Based on the foregoing, an assumption of two uses per reusable bag would be the highest reasonable worst-case scenario number for reusable bag usage. STPB objects to any higher multiplier than two being used for the purpose of determining the *possible* significant environmental impacts of the proposed ordinance. If a reusable bag can be used 125 times, that does not mean that it *will* be used 125 times, or 52 times per year.

In fact, reusable bags are difficult or impossible to wash, except for LDPE and HDPE reusable bags which can be easily wiped clean and cloth bags which can be put in a washing machine. PP bags cannot be washed in a washing machine. The photograph on the next page shows a PP bag after it has been washed in a washing machine.

4.27



4.27

**A polypropylene (PP) reusable bag after it has
been washed in a washing machine.
A PP reusable bag cannot be kept clean
and reused more than a handful of times**

OBJECTION # 3
FALSE ASSERTION THAT
“REUSABLE BAGS...ARE RECYCLABLE PRODUCTS”

OBJECTION: STPB objects to the following statements in the DEIR and all similar statements in the DEIR that make the same point(s):

DEIR at 2-6:

Many types of reusable bags are available today. These include: (1) **non- woven polypropylene (100% recyclable)** ranging from \$1-\$2.50 per bag; (2) cotton canvas bags, which are approximately \$5.00 per bag; (3) bags made from recycled water/soda bottles, which are approximately \$6.00 per bag; (4) polyester and vinyl, which are approximately \$10.00 per bag; and (5) 100% cotton, which are approximately \$5.00 to 10.00 per bag.

DEIR at 4.3-11:

The Proposed Ordinance would increase the number of recyclable paper and reusable bags used in the Study Area and would therefore ...

GROUND:

The statement is untrue. All plastic carryout bags and all plastic LDPE reusable bags and plastic HDPE reusable bags are recyclable. Polyethylene is a recyclable product. By law, all stores that provide plastic carryout bags must install plastic bag recycling bins. (AB 2449 (enacted 2006) as amended by SB 1219 (enacted 2012), Pub. Res Code §§ 42250-57.)

4.28



4.29

The photographs on the preceding page show typical plastic bag recycling bins at supermarkets. The photograph on the right was taken at Safeway in Marin County. The photograph on the left was taken at Ralphs in Marina del Rey. All kinds of plastic bags are deposited in the bins, including plastic carryout bags, LDPE reusable bags, dry cleaning bags, newspaper bags, bread bags, and produce bags.

There are many active buyers for recycled plastic bags deposited in the bins, including Trex, AERT, and Hilex. (Doc. ## 417-421.)

PP, cotton, cotton canvas, nylon reusable bags cannot be recycled anywhere in the County of Santa Barbara or Ventura or one of the incorporated municipalities. Consequently, to the extent that the proposed ordinance results in a switch to reusable bags, there will be a switch from a recyclable product to non-recyclable products. STPB objects to the failure to disclose this impact in the DEIR.

AB 2449 and SB 1219 only require stores to install plastic bag recycling bins if they provide plastic carryout bags. Once the ordinance is passed, stores may remove the bins. That means that there will be no way for members of the public to recycle LDPE reusable bags, dry cleaning bags, newspaper bags, bread bags, and produce bags. STPB objects to the failure to disclose this impact in the DEIR.



The Hilex Poly plastic bag recycling facility (see Doc. # 421)

4.29

OBJECTION # 4
FAILURE TO PROPERLY DISCLOSE THAT STORMWATER CAPTURE DEVICES
ARE PREVENTING AND WILL PREVENT PLASTIC BAGS FROM
REACHING THE LA RIVER, BALLONA CREEK, AND THE OCEAN

DEIR at 4.4-5 identifies programs and regulations in place to reduce trash and pollution in local waterways including the following:

1. The Ventura River Trash Total Maximum Daily Load (TMDL), (Los Angeles-RWQCB Resolution No. R4-2007-007),
2. The Revolon Slough/Beardsley Wash Trash TMDL (LA-RWQCB Resolution No. R4-2007- 008),
3. The Malibu Creek Watershed Trash TMDL (LA-RWQCB Resolution No. R4-2008-007),
4. The Santa Monica Bay Nearshore and Offshore Debris TMDL (LA-RWQCB Resolution No. R10-010), and
5. The Waste Discharge Requirements for Storm Water and Non-stormwater Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein (Ventura MS4 Permit), LA-RWCQB Order R4-2010-0108, NPDES Permit No. CAS004002.

Despite identification of TMDL programs in Ventura and Santa Barbara Counties, STPB objects to the fact that nowhere in the DEIR is it disclosed that plastic bags will be prevented from entering county rivers and creeks and the ocean due to the installation of trash excluders on storm drain outfalls.

4.30

As noted above, according to Heal the Bay (Doc. # 606 at page 4):

Los Angeles County is using full capture devices to comply with TMDL requirements for the Los Angeles River and Ballona Creek, which prevent all trash of 5mm in diameter or greater from entering a catch basin. **These devices will prevent both paper and plastic bags from getting into the stormdrain system.** (Emphasis added.)

Also see also page 3 of the Heal the Bay letter attached to DEIR where Heal the Bay states:

The Initial Study questions whether littered paper and reusable bags will enter storm drains and sewers and hence have a significant impact on water quality. We believe this concern is unwarranted for two reasons. First, requirements to comply with trash total maximum daily loads (“TMDL”) will hinder paper and reusable bags from entering storm drains. Under these TMDL requirements, the City must increasingly regulate trash, and will continue to install full capture devices on the Los Angeles River and Ballona Creek, two major water bodies in Los Angeles. With proper maintenance, these capture devices combined with other

actions to attain TMDL compliance will prevent trash of 5 mm in diameter or greater from entering a catch basin, *and thus will prevent paper and plastic bags (as well as the extremely infrequent wayward reusable bag) from entering Los Angeles' storm drain system.* (Emphasis added.)

4.30

The photographs on the next two pages show full capture devices. Such capture devices are not mentioned in the DEIR. STPB objects. Discussion of such capture devices is critically important to any discussion of litter and the impacts of litter. Members of the Board of Supervisors for Santa Barbara and Ventura Counties and Members of the City Councils of incorporated municipalities and the public will be misled into thinking that plastic bag litter flows directly into county rivers and creeks and the ocean. This is simply not true, as Heal the Bay says.



4.30

Full capture device in the City of Los Angeles.
(Photo taken by Stephen Joseph in Brentwood on 3-2-13)



4.30

The above two photographs are of the same City of Los Angeles capture device.
It has a mechanical clearing mechanism.
(Photos taken by Stephen Joseph in Century City on 2-27-12)

According to the U.S. Environmental Protection Agency, the Ventura River, the Revolon Slough/Beardsley Wash, and Malibu Creek in Ventura County are examples of water ways that have been designated as an impaired water bodies due to the large volume of trash it receives from the watershed. To address this problem a Total Maximum Daily Load (TMDL), which establishes baseline trash loads to the river from the watershed, has been incorporated into the area stormwater permits.

At the March 13, 2012 Santa Barbara City Council meeting, City staff admitted that they find plastic bags only occasionally and that the litter data is “inconclusive.” Plastic bag litter is not a significant problem in the City of Santa Barbara.

STPB strongly objects to the failure to disclose these fact in the DEIR. It is critically important and must be emphasized and highlighted. The use of these full capture devices significantly reduces or eliminates any concern that plastic bag street litter will reach county rivers, creeks, or the ocean.

4.30

OBJECTION # 5
FALSE AND GROSSLY MISLEADING STATEMENTS
REGARDING MARINE IMPACTS

OBJECTION: STPB objects to the following statements in the DEIR and all similar statements in the DEIR that make the same point(s) and the entire discussion of marine impacts at pages 32-35:

DEIR page 4.2-2:

Single use plastic carryout bags enter the biological environment primarily as litter. This can adversely affect terrestrial animal species, and marine species that ingest the plastic bags (or the residue of plastic bags) or become tangled in the bag (Green Cities California MEA, 2010). Based on the data collected for the Ocean Conservancy's Report from September 2009 Ocean Conservancy's International Coastal Cleanup Day, approximately 11% of total debris items collected were plastic bags (Ocean Conservancy, April 2010). Over 260 species of wildlife, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris. Ingestion or entanglement may result in impaired movement and feeding, reduced productivity, lacerations, ulcers, and death (Laist, 1997; Derraik and Gregory, 2009). Ingested plastic bags affect wildlife by clogging animal throats and causing choking, filling animal stomachs so that they cannot consume real food, and infecting animals with toxins from the plastic (Green Cities California MEA, 2010). In addition to affecting wildlife through physical entanglement and ingestion, plastic debris in the marine environment has been known to absorb and transport polychlorinated biphenyls (PCBs), phthalates, and certain classes of persistent organic pollutants (POPs) (Mato, Y., Isobe, T., Takada, H., et al., 2001; and, Moore, C.J.; Lattin, G.L., A.F. Zellers., 2005).

DEIR page 4.2-11:

As described in the Setting, when single use plastic bags enter coastal habitats marine species can ingest them (or the residue of plastic bags) or may become entangled in the bag (Green Cities California MEA, 2010). Ingestion or entanglement in single use plastic bags can result in choking, reduced productivity, lacerations, ulcers, and death to sensitive species in the marine environment including sea turtles, seals, fish, otters, or bird species.

4.31

DEIR page 4.2-11:

In addition, because single use paper bags are not as resistant to biodegradation, there would be less risk of entanglement if paper bags enter the marine environment compared to single use plastic bags. Finally, although not a healthy food source, if ingested, a single use paper bag can be chewed effectively and may be digested by many marine animals (Green Cities California MEA, 2010). Thus, although single use paper bag litter may enter coastal habitats and affect sensitive species in the marine environment, the impacts of paper bags would be less than those of single use plastic bags.

GROUND:

Disclosing the facts about plastic bag litter in the marine environment is of critical importance, because alleged marine environmental impacts is one of the main reasons cited for banning plastic bags. As stated at the beginning of this document, the marine impacts of plastic bags have been massively exaggerated and misrepresented. The DEIR contains similar exaggerations and misrepresentations and deceptive ambiguity.

The Ordinance is intended to ban plastic bags and no other form of “plastic debris.” STPB objects to all the statements in the DEIR about “plastic debris” and “plastic fragments.” Plastic bags are not responsible for the entire universe of plastic debris in the ocean.

4.31

Let us examine each of the above statements in turn.

- 1. DEIR at page 4.2-2: “Ingested plastic bags affect wildlife by clogging animal throats and causing choking, filling animal stomachs so that they cannot consume real food, and infecting animals with toxins from the plastic (Green Cities California MEA, 2010).”**

OBJECTION: No evidence is cited for this statement. Moreover, it is so prejudicial in the context of a debate about a plastic bag ban that it must be quantified as well as substantiated. The word “may” is used. Anything is possible of course, but as we have shown in this document, it is either not happening or happening very rarely.

Here is an extract from an article in the London Times quoting authoritative sources (Doc. # 700):

Campaigners say that plastic bags pollute coastlines and waterways, killing or injuring birds and livestock on land and, in the oceans, destroying vast numbers of seabirds, seals, turtles and whales. However, The Times has established that there is no scientific evidence to show that the bags pose any direct threat to marine mammals.

They “don’t figure” in the majority of cases where animals die from marine debris, said David Laist, the author of a seminal 1997 study on the subject. Most deaths were caused when creatures became caught up in waste produce. “Plastic bags don’t figure in entanglement,” he said. “The main culprits are fishing gear, ropes, lines and strapping bands. Most mammals are too big to get caught up in a plastic bag.”

He added: “The impact of bags on whales, dolphins, porpoises and seals ranges from nil for most species to very minor for perhaps a few species. For birds, plastic bags are not a problem either.”

David Santillo, a marine biologist at Greenpeace, told The Times that bad science was undermining the Government’s case for banning the bags. “It’s very unlikely that many animals are killed by plastic bags,” he said. “The evidence shows just the opposite. We are not going to solve the problem of waste by focusing on plastic bags.

“It doesn’t do the Government’s case any favours if you’ve got statements being made that aren’t supported by the scientific literature that’s out there. With larger mammals it’s fishing gear that’s the big problem. On a global basis plastic bags aren’t an issue. It would be great if statements like these weren’t made.”

- 2. DEIR at page 4.2-2: “Over 260 species of wildlife, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris. Ingestion or entanglement may result in impaired movement and feeding, reduced productivity, lacerations, ulcers, and death (Laist, 1997; Derraik and Gregory, 2009).**

OBJECTION: The statement refers to “plastic debris,” not bags. There is no evidence that any wildlife ingest or become entangled in plastic bags, other than a handful of photographs on the Internet. It is absurd and incorrect to suggest that 260 species of wildlife are ingesting or becoming entangled in plastic bags. The statement is inflammatory, untrue, not applicable to plastic bags, and does not belong in an EIR as it is ambiguous, misleading, and prejudicial.

The DEIR at 4.2-2 cites Laist (1997) and Gregory (2009). As we have seen, Laist says that plastic bags are not a problem for wildlife. He states (Doc. # 700):

They “don’t figure” in the majority of cases where animals die from marine debris, said David Laist, the author of a seminal 1997 study on the subject. Most deaths were caused when creatures became caught up in waste produce. “Plastic bags don’t figure in entanglement,” he said. “The main culprits are fishing gear, ropes, lines and strapping bands. Most mammals are too big to get caught up in a plastic bag.”

4.31

4.31

He added: “The impact of bags on whales, dolphins, porpoises and seals ranges from nil for most species to very minor for perhaps a few species. For birds, plastic bags are not a problem either.”

Gregory cites as evidence *one photograph of one turtle* that he claims is “disgorging an inflated plastic bag.” <http://rstb.royalsocietypublishing.org/content/364/1526/2013/F3.large.jpg>. Here is the photograph:



It is impossible to tell from the photograph what is happening with this turtle. It is not clear whether there is a plastic bag or what the object may be and why it is orange. It doesn't look like a plastic bag. It is also not clear that the object is even in its mouth. The source of the photograph is not provided.

4.31

The MEA cites an ExcelPlas Australia 2004 report for the assertion. The Excel report is provided herewith. (Doc. # 730.) It states: “that it is well-known that sea turtles see plastic bags and that dead sea turtles have been found bloated with plastic bags in their digestive tract and gut.” ExcelPlas cites no evidence, other than saying it is “well-known.”

It is simply not true that any turtles have been found bloated with plastic bags in their digestive tracts or gut. There is not a shred of substantial evidence supporting the allegation. And if any evidence is found, then it must be quantified. Has one turtle been found or perhaps a thousand, or more? The Boards of Supervisors, the City Councils, and the public must be informed, not misled by untrue, inflammatory, and prejudicial statements.

The MEA states: “According to the International Coastal Clean-up Report (2005), 2.2% of all animals found dead during the 2004 survey had been entangled in plastic bags. The proportion of these bags that were grocery bags is unknown.” [International Coastal Clean-up, 2005. The International Coastal Clean Up 2005 Report. Ocean Conservancy. As reported in AEA Technology 2009.”] Here is an extract from page 6 of the 2005 report (Doc. # 731):

the United States 2005 ICC "Top Ten" Debris Items – Land and Underwater Cleanups

Land Cleanups Only

Debris Items	Amount	Percent Of Total
1. Cigarettes	1,002,039	31.4%
2. Food Wrappers	354,340	11.1%
3. Caps And Lids	304,408	9.5%
4. Cups, Plates And Utensils	191,725	6.0%
5. Plastic Beverage Bottles	186,513	5.8%
6. Glass Beverage Bottles	157,995	5.0%
7. Beverage Cans	146,885	4.6%
8. Straws And Stirrers	133,695	4.2%
9. Bags	131,134	4.1%
10. Cigar Tips	54,178	1.7%
Totals:	2,662,912	83.4%

Underwater Cleanups Only

Debris Items	Amount	Percent Of Total
1. Cigarettes	6,249	28.4%
2. Food Wrappers	2,107	9.6%
3. Caps And Lids	2,090	9.5%
4. Glass Beverage Bottles	1,946	8.8%
5. Plastic Beverage Bottles	1,211	5.5%
6. Beverage Cans	1,115	5.1%
7. Cups, Plates And Utensils	911	4.1%
8. Straws And Stirrers	843	3.8%
9. Bags	624	2.8%
10. Fishing Line	620	2.8%
Totals:	17,716	80.4%

the United States 2005 ICC - Entangled Animals

Entangling Debris	Birds	Fishes	Invertebrates	Mammals	Reptiles	Total
balloon ribbon/string	4	0	0	0	0	4
fishing line	21	10	6	3	1	41
fishing nets	8	3	1	0	1	13
miscellaneous	1	2	1	0	2	6
plastic bags	1	6	0	0	1	8
plastic sheeting	1	1	0	0	0	2
rope	5	2	1	6	0	14
Totals	41	24	9	9	5	88

In the entire beach cleanup, the percentage of litter that was “bags” was 4.1%. Underwater, it was 2.8%. ***There is no mention of whether they were plastic or paper bags.***

A grand total of eight animals were found engaged in plastic bags, six of which were fish and one of which was a bird. With all due respect to fish, we eat fish all the time. Six fish is not significant. A family of four can eat six fish at McDonald’s. The other two animals were one bird and one reptile. There is no indication that the bird or reptile died.

The real culprits in marine entanglements are ***fishing gear***, as the above tables show.

- 3. DEIR at page 4.2-11: “In addition, because single use paper bags are not as resistant to biodegradation, there would be less risk of entanglement if paper bags enter the marine environment compared to single use plastic bags. Finally, although not a healthy food source, if ingested, a single use paper bag can be chewed effectively and may be digested by many marine animals. (Green Cities California MEA, 2010)**

OBJECTION:

The MEA makes a similar statement at page 33, but cites no evidence. An assertion in the MEA is not evidence. Paper bags are made using chemicals. There is absolutely no evidence that digesting a paper bag is harmless or that they can be digested. STPB objects to the statement in the DEIR.

CONCLUSION REGARDING MARINE IMPACTS DISCUSSION

The discussion about marine impacts in the DEIR is full of misinformation, innuendo, and falsehoods. It is highly prejudicial and STPB objects to it in its entirety.

STPB will object to any discussion of marine impacts that is inaccurate, vague, ambiguous, misleading, or uses statistics in a misleading way.

4.32

OBJECTION # 6
OBJECTION TO ASSERTION THAT PLASTIC BAGS ARE MADE OF
PETROLEUM, OIL, OR NATURAL GAS

OBJECTION: STPB objects to the following statement in the DEIR and all similar statements in the DEIR:

DEIR at page 2-9:

Single-use carryout bags are defined in the Proposed Ordinance as bags made predominantly of plastic derived from either petroleum, or biologically-based sources, such as corn or other plant sources, and that are provided to a customer at the point of sale.

DEIR at page 4.4-9:

Single use plastic bags begin the manufacturing process with the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers. These polymers are heated to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags (Green Cities California MEA, 2010).

GROUND:

69.3% of plastic bags used in the USA are made in the USA. Only 8.4% come from China. (Doc. # 009.) Bags made in China may be made from naphtha derived from oil, but bags made in the USA are not.

STPB represents plastic bag manufacturers who know what their products are made from. STPB as a producer's representative represents as follows:

1. Plastic bags are made out of polyethylene. In the United States, ethylene is made of ethane which is a waste by-product obtained from domestic natural gas refining. Domestically produced plastic bags are not made out of oil.
2. The ethane must be removed from the natural gas anyway to lower the BTU value of the natural gas to an acceptable level. Ethane burns too hot to be allowed to remain in high levels in natural gas that is delivered to homes and businesses for fuel. There is nothing else that the ethane can be used for except to make ethylene. If ethane is not used to make plastic, it will have to be burned off, resulting in greenhouse gas emissions.
3. Using the ethane to make plastic does not in any way reduce the amount of fuel available for transportation or power generation or increase our energy imports.

4. If we were to abolish plastic bags, it would have zero impact on our dependence on foreign oil.
5. The United States is an exporter of polyethylene. The United States imports virtually no polyethylene.

STPB also objects as the Ordinance would not ban synthetic plastic production. It would ban only plastic bags. Referring to all synthetic plastic, including PVC, polystyrene, and other plastics, is prejudicial.

The oil that Boustead refers to in its report is for energy for manufacturing plastic bags, not as part of the material. As the Boustead report shows, less oil and fossil fuels are used to manufacture plastic bags than any other type of bag.

4.33

OBJECTION # 7
OBJECTION TO ASSERTION THAT 20 BILLION PLASTIC BAGS
ARE USED IN CALIFORNIA ANNUALLY

OBJECTION: STPB objects to the following statement in the DEIR and all similar statements in the DEIR that make the same point(s) and the entire discussion of marine impacts at pages 32-35:

DEIR page 2-5:

Currently, almost 20 billion of these plastic grocery bags are consumed annually in California (San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2007).

DEIR page 2-6:

Statewide, almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2007). Based on this per capita bag, retail customers within the Study Area currently use about 658 million plastic bags per year.

GROUNDS:

There is no substantial evidence that 20 billion plastic bags are used in California each year for 531 plastic bags per person per year or that 658 million are used in the Santa Barbara and Ventura counties. The quantity is overstated and unreasonable.

The MEA at page 14 cites “CIWMB (2007b).” However, there is no indication of which California Integrated Waste Management Board document is being referenced or the nature of the document.

The 20 billion figure is an invention that originated from an unknown source and has become part of the mythology about plastic bags. The 658 million figure for Santa Barbara and Ventura counties is also a myth with no known source. In fact, no one knows approximately how many plastic bags are used in California each year, because the data is not reported or collected, and STPB objects to the failure to disclose this in the EIR.

If we assume one plastic bag per person per day, then the figure would be around 13 billion. And as the DEIR correctly states at page 2-5:

Single-use plastic bags can be reused by customers and are recyclable.

4.34

OBJECTION # 8

**FAILURE TO PROPERLY DISCLOSE THAT TRASH IS NOT A SIGNIFICANT ISSUE
IN THE WATERWAYS OF VENTURA COUNTY AND THAT TRASH EXCLUDERS
AND RECEPTACLES WILL BE INSTALLED IN ALL HIGH PRIORITY CATCH
BASINS**

The Watershed Protection District in a presentation to the Calleguas Creek Watershed Steering Committee regarding the Ventura County Stormwater Quality Management Program and the Ventura County Municipal Stormwater Permit on 15 July, 2009 showed the following slide:



Trash Management Program

- Trash is not a significant issue in the water-ways of Ventura County - less than 12 miles of water ways (vs. X total) listed;
- Nevertheless, we support taking an aggressive approach to trash management that provides flexibility to the municipality.
- Permit includes:
 - Prioritize all Catch Basin – 1 year
 - Install Trash Excluders and Receptacles in all High Priority catch basins, or enhanced trash management program;
 - Public Events – Temporary screens or clean out catch basins, receptacles and grounds within 24 hrs

4.35

The Watershed Protection District stated: (1) Trash is not a significant issue in the waterways of Ventura County; (2) Watershed Protection District is taking an aggressive approach to trash management; and (3) that Trash Excluders and Receptacles will be installed in all High Priority catch basins.

STPB objects that the DEIR did not disclose that trash in Ventura County waterways is not a significant issue.

**DEMAND FOR RECIRCULATION
OF REVISED DRAFT EIR AND
PROMINENT NOTIFICATION TO THE
PUBLIC OF SIGNIFICANT ERRORS IN
INITIAL DRAFT EIR**

4.36

**DEMAND FOR RECIRCULATION OF REVISED DRAFT EIR AND
PROMINENT NOTIFICATION TO THE PUBLIC
OF SIGNIFICANT ERRORS IN INITIAL DRAFT EIR**

CEQA Guidelines § 15088.5 states:

(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term “information” can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not “significant” unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project’s proponents have declined to implement. “Significant new information” requiring recirculation include, for example, a disclosure showing that:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043)

....

(d) Recirculation of an EIR requires notice pursuant to Section 15087, and consultation pursuant to Section 15086.

(e) A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record.

4.36

Pursuant to § 15088.5, STPB demands that the DEIR be revised in accordance with the objections herein and recirculated. The DEIR is so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment have been precluded. Further, a new and revised DEIR that is responsive to the objections must new significant negative environmental impacts that would result from the project, including the reasonable possibility of huge increases in the number of paper bags and non-LDPE and non-HDPE reusable bags that are far worse for the environment than plastic carryout bags.

1. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that a switch to reusable bags instead of paper bags would have a insignificant or a positive environmental impact, because LDPE reusable bags are “one of the most common types of reusable bags.” This is a falsehood. LDPE reusable bags are a tiny percentage of reusable bags. If there is a major switch to reusable bags, it will be primarily PP reusable bags, which have a much greater negative impact on the environment than LDPE. The author of the DEIR has *cynically and deceptively* chosen the best reusable bag for the environment, that is a plastic reusable bag, as being representative of all or a majority of reusable bags. *If members of the public believe a switch to reusable bags will be to LDPE reusable bags which have only a slightly worse environmental impact than banned plastic carryout bags and only have to be used 2.6 times to offset that greater impact, then they may conclude that they do not need to comment as there will be no significant negative environmental impact caused by a switch to reusable bags.* (See Objection # 1.)
2. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that each reusable bag will be used on average a sufficient number of times to offset the greater environmental impacts compared to a banned plastic carryout bag. However, the DEIR buries the fact that this is merely an “assumption” by the author of the DEIR. If the assumption turns out not to be correct, then the entire thesis that the ordinance will not have a significant negative environmental impact will be incorrect. The public should have been told about this assumption and the possibility that it could be wrong *prominently* in the DEIR. *If members of the public believe that there is no reasonable doubt that reusable bags will be used a sufficient number of times to offset their greater negative environmental impacts compared to a banned plastic carryout bag, then they may conclude that they do not need to comment as there will be no significant negative environmental impact caused by a switch to reusable bags.* (See Objection # 2.)
3. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that “reusable bags” are “recyclable products.” With the exception of plastic reusable bags (i.e. LDPE and HDPE), they are *not* recyclable. This is a major deception on an issue of great importance, especially as plastic carryout bags which the proposed ordinance would ban are totally recyclable. The public should have been told in the DEIR that reusable bags, with the exception of LDPE and HDPE reusable bags, are *not* recyclable. This is a significant environmental impact. *If members of the public believe that reusable bags are recyclable, then they may conclude that they do not need to comment as there will be no significant negative environmental impact caused by a switch to reusable bags.*

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(See Objection # 3.)

4. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that “plastic bag litter enters Santa Barbara and Ventura County rivers, creeks, and watersheds via storm drains,” which is not true. Full capture devices and trash excluders prevent plastic bags from entering Santa Barbara and Ventura County rivers, creeks, and watersheds. This is a very significant issue for the public. They are being told by the city that plastic bags are entering the river and marine environments, but it’s a false assertion. **If members of the public believe that plastic bags are entering the County Watershed, then they may conclude that they do not need to comment as the litter problem is apparently very serious.** (See Objection # 4.)
5. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that plastic bags cause a massive number of deaths and entanglements of marine animals and deaths. The total US entanglements in 2005 were six fish and two unidentified marine animals. People would be shocked to hear that it was actually six fish and two unidentified marine animals, none of which apparently died. Also, the DEIR states that 260 species of marine animals are “reported to ingest or become entangled in plastic debris.” The issue for the public is whether **plastic bags** are being ingested or causing entanglement, not “plastic debris.” **If members of the public believe the false information about marine animals in the DEIR, and the intentional confusing reference to “plastic debris”, then they may conclude that they do not need to comment as plastic bags should be banned for that reason.** (See Objection # 5.)
6. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that plastic bags are made of oil or natural gas. In fact, the majority of plastic bags used in the USA are made in the USA. They are made of ethane, which is a waste byproduct of domestically produced natural gas. They are not made of oil or natural gas. **If members of the public believe the false information about plastic bags being made of oil or natural gas, and conclude that vast amounts of imported oil are used for that purpose, then they may conclude that they do not need to comment as plastic bags should be banned for that reason.** (See Objection # 6)
7. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that Californians consume 20 billion plastic bags per year, a number that is overstated and unreasonable and cannot be substantiated. **If members of the public believe that Californians use 20 billion plastic bags per year or 658 million in Santa Barbara and Ventura Counties then they may conclude that they do not need to comment as plastic bags should be banned for that reason.** (See Objection #7)
8. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that trash, including plastic bags, is a significant problem in Ventura County waterways. **If members of the public believe that trash including plastic bags are a significant problem in Ventura County Waterways they may conclude that they do not need to comment as plastic bags should be banned for that reason.** (See Objection #8)

4.36

9. **THE PUBLIC HAS BEEN MISLED BY THE DEIR INTO BELIEVING** that the proposed ordinance will improve the environment. It will not. **If members of the public believe that the proposed ordinance will improve the environment based on the baseless and false assertions and conclusions in the DEIR, then they may conclude that they do not need to comment as plastic bags should be banned for that reason.**

The new and revised DEIR must be reissued with a prominent notice that:

- Tells the public that there were errors in the initial DEIR as stated herein; and
- Clearly identifies those errors; and
- State the correct facts.

STPB is concerned that the public will not be willing or able to read through the massive new and revised DEIR document to find the corrections. They need to be made aware in a **prominent** way that the new and revised DEIR is fundamentally different as a result of the corrections.

4.36

NOTICE OF INTENT TO LITIGATE

4.36

NOTICE OF INTENT TO LITIGATE

If BEACON refuses and fails to

- (i) issue a revised DEIR in accordance with the objections herein; and
- (ii) recirculate it for public comments; and
- (iii) issue a prominent notice telling the public that there were errors in the DEIR, clearly identifying the errors, and stating the correct facts; and

then STPB will file a petition for writ of mandate or complaint in the Ventura and/or Santa Barbara Superior Courts. STPB will also request a preliminary injunction or other injunctive relief to order the City to perform the action items stated above.

All rights are reserved.

4.36

CONCLUSION

CONCLUSION

All rights are reserved. No rights are waived by any statement or omission herein.

Our society faces critical environmental decisions, including important energy and transportation choices that will have long-term environmental consequences. California's city councils and boards of supervisors will make many of those decisions. Understandably, they will want to make "green" choices. EIRs will play a critical role in ensuring that the facts are not lost in a green fog. As the Court of Appeal stated in *People v. County of Kern* (1974) 39 Cal.App.3d 830:

Only by requiring [an agency] to fully comply with the letter of the law can a subversion of the important public purposes of CEQA be avoided, and only by this process will the public be able to determine the environmental and economic values of their elected and appointed officials, thus allowing for appropriate action come election day should a majority of the voters disagree.

(*Id.* at 842.)

The DEIR is an argumentative and deceptive document designed to support a predetermined conclusion that the proposed ordinance will have no significant negative environmental impacts. The Boards of Supervisors, the City Councils, and the public must be told the truth. STPB will take all appropriate legal steps to ensure that they are told the truth.

REQUEST FOR NOTICES

Pursuant to CEQA including but not limited to CEQA Guidelines §15072(b), I request that you send me, by e-mail and regular mail to the address on the letterhead of this document, any and all responses or findings regarding these objections and all notices regarding the proposed ordinance.

SAVE THE PLASTIC BAG COALITION



By: STEPHEN L. JOSEPH, Counsel

Letter 4

COMMENTER: Stephen L. Joseph, Counsel, Save the Plastic Bag Coalition

DATE: March 25, 2013

Response 4.1

The commenter summarizes his comment letter and states that he has objections to the Draft EIR, requests revisions and new findings of significant negative environmental impacts, requests recirculation of a revised Draft EIR, and provides notice of intent to litigate to enforce CEQA. The commenter's specific concerns are addressed in responses 4.2 through 4.36.

Response 4.2

The commenter summarizes what the Save the Plastic Bag Coalition is and states an opinion that misinformation, false statistics and myths have been used by groups and politicians seeking to ban plastic bags in the past. None of the claims are specifically related to the Draft EIR or the assumptions and analysis utilized in the Draft EIR.

Response 4.3

The commenter objects to the Draft EIR's impact analysis that determined that all environmental impacts would result in either less than significant or beneficial impacts and states that the Proposed Ordinance would result in significant adverse impacts on the environment. Further, the commenter opines that the Draft EIR is inadequate and conclusory, that meaningful public review and comment have been precluded, and that a revised Draft EIR, including a new public review period, is required.

The commenter does not provide any evidence to suggest which environmental impacts would be considered significant. Detailed comments that follow in later comments include: LDPE bags, see Response 4.25; reusable bag assumptions, see Response 4.26; recyclability of reusable bags refer to Response 4.28; plastic bags entering storm drains, refer to Response 4.30; impacts to biological resources, see Response 4.31; oil and natural gas refer to 4.33; 20 billion bags used in California, refer to 4.34; trash in Ventura County waterways, refer to 4.35. In regard to improvements in the environment, the Draft EIR determined that the Proposed Ordinance would result in beneficial impacts related to air quality (production), biological resources, and hydrology/water quality (reduction of litter in storm drains). All other impacts were found to be no impact or less than significant. In regard to public review, the NOP included a 30-day public review period in November-December 2012 and the Draft EIR was available for a 45-day public review period in February and March 2013.

Response 4.4

The commenter opines that there is no "Great Pacific Garbage Patch", summarizes various opinions related to this comment, and states that most plastic debris found in the Pacific Ocean



is hard plastic and that large accumulations of plastic bags have never been found. The Draft EIR does not include any mention of the “Great Pacific Garbage Patch” and none of the Draft EIR analysis relates to its existence or lack thereof. In regard to hard plastic debris or plastic bags found in the Pacific Ocean, the Draft EIR considers the impacts related to the Proposed Ordinance, which would ban plastic bags at retailers in the Study Area. This would result in a reduction in the number of plastic bags used in the Study Area and an increase in the use of recyclable paper and reusable bags in the Study Area. The Proposed Ordinance would have no impact on hard plastic use and thus impacts related to hard plastic debris in the Pacific Ocean are not within the scope of the Draft EIR.

Response 4.5

The commenter opines that the allegation that 100,000 marine mammals and a million seabirds are killed each year by plastic bags is untrue and provides some quotes and studies to support this claim. The Draft EIR does not use the statistic mentioned by the commenter. Thus, this comment does not relate to any information provided in the Draft EIR.

Response 4.6

The commenter opines that plastic retail bags are a “tiny percentage of litter” in the Study Area and thus the only solution to the litter is to “pick it up”. The Draft EIR is focused on the environmental impacts of the Proposed Ordinance and is not intended to provide an analysis of the magnitude of the litter problem that the Proposed Ordinance is intended to address. In regard to solutions, litter prevention and cleanup would mitigate impacts related to single-use plastic bags while the Proposed Ordinance would avoid those impacts by banning the use of single-use plastic bags in the Study Area.

Response 4.7

The commenter opines that plastic bags cost taxpayers very little in regard to cleanup costs and disputes a Californians Against Waste claim that Californians pay up to \$200 per household per year to clean up litter and waste associated with single-use carryout bags. The statistic the commenter is disputing and costs per household associated with cleanup of carryout bags is not contained within the Draft EIR. Thus, the comment does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR and therefore further responses are not required. Further, this is an economic issue whereas the Draft EIR is focused on the environmental effects of the Proposed Ordinance, as required by CEQA.

Response 4.8

The commenter opines that plastic bags have no significant impact on landfills because plastic bags are low volume and light and that because they “last a thousand years” in a landfill they would sequester carbon dioxide (CO₂). Impacts related to landfill as a result of the Proposed Ordinance are discussed in Section 4.5, *Utilities and Service Systems*, and impacts related to greenhouse gas emissions from carryout bags as a result of the Proposed Ordinance are discussed in Section 4.3, *Greenhouse Gas Emissions*. Impacts related to landfills and impacts related to greenhouse gas emissions from the Proposed Ordinance would not be significant. The



commenter does not address, question or challenge the assumptions, information, analysis or conclusions related to these impacts analyzed in the Draft EIR.

Response 4.9

The commenter states that there is a claim on the internet that plastic bags are made of oil and that 12 million barrels of oil are used annually to make plastic bags and that this claim is not true and that banning plastic bags in the Study Area would have “zero impact” on dependence on foreign oil. Further, the commenter states that 85% of plastic bags used in the United States are made in the United States.

The claim the commenter is discussing regarding oil for plastic bags is not discussed in the Draft EIR, nor is it the basis for any of the environmental impact analysis in the Draft EIR. Further, the commenter’s statement regarding plastic bags made in the United States is discussed in Section 2.0, *Project Description*, and the Draft EIR is consistent with the commenter’s statement. See the relevant excerpt from the Draft EIR below.

Page 2-5: *“Conventional single-use plastic bags are a product of the petrochemical industry. Studies suggest that conventional single-use plastic bags are manufactured by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources and that 85% of plastic bags used in the United States are made in the United States (Stephen L. Joseph, July 22, 2010). The HDPE bag cycle begins with the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers (Herrera et al, 2008; County of Los Angeles, 2009). These polymers are connected with heat to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags.”*

Response 4.10

The commenter claims that the vast majority of reusable bags are imported, mostly from China and that more than 10,000 Americans are dependent on plastic bag manufacturing jobs in the United States. Thus, the commenter claims that a plastic bag ordinance would affect American jobs. The commenter also opines that imported reusable bags have toxicity issues.

The comment expresses concern about a potential economic impact of the proposed project, which is not CEQA’s purview. The purpose of the EIR is to address the project’s environmental effects, not its economic effects. CEQA Guidelines Section 15064(e) specifically states that “economic and social changes resulting from a project shall not be treated as significant effects on the environment.”

In regard to toxicity of reusable bags, the comment is speculative as the comment does not provide evidence to suggest that an increase of reusable bag use in the Study Area as a result of the Proposed Ordinance would result in significant impacts to the environment associated with toxic metals released. Further, as defined in the Draft Ordinance (see Appendix B), a reusable bag must meet a number of requirements, including that the bag does not contain lead,



cadmium, or any other heavy metal in toxic amounts and has printed on the bag, or on a tag that is permanently affixed to the bag, the name of the manufacturer, the location (country) where the bag was manufactured, a statement that the bag does not contain lead, cadmium, or any other heavy metal in toxic amounts, and the percentage of postconsumer recyclable material used, if any.

Response 4.11

The commenter opines that a switch to paper bags as a result of the Proposed Ordinance may have a significant negative net impact on the environment and then summarizes a number of studies that suggest that paper bags and reusable bags could have greater impacts than plastic bags.

The studies provided were utilized in the preparation of the Draft EIR to determine environmental impacts associated with the Proposed Ordinance including the Scottish Report and the Boustead report. The Draft EIR analysis is consistent with the commenter's opinion that the increased use of paper bags and reusable could potentially result in greater impacts (related to air quality, greenhouse gas emissions, hydrology/water quality and utilities) than existing conditions (with use of single-use plastic bags in the Study Area). However, as described in the Draft EIR, all impacts discussed were determined to be either less than significant or beneficial under CEQA. The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.

Response 4.12

The commenter suggests that all of the reports he listed in Response 4.11 show that based on equivalent carrying capacity, paper bags have a much worse environmental impact than plastic bags. Please see Response 4.11. The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR. Because the comment does not pertain to the Draft EIR, further responses are not required.

Response 4.13

The commenter suggests that an increase in paper bag use in the Study Area could result in significant environmental consequences resulting from logging and forestry practices, including impacts relating to climate change/greenhouse gas emissions, air pollution, and water pollution.

Impacts related to an increase in paper bag use as a result of the Proposed Ordinance within the Study Area are discussed throughout the Draft EIR. Section 4.1, *Air Quality*, determines the impacts associated with emissions from manufacturing and transportation of paper bags. Impacts were determined to be beneficial related to manufacturing and less than significant related to truck trips transporting carryout bags. Section 4.3, *Greenhouse Gas Emissions*, determines the impacts associated with the manufacturing, transportation and disposal (degradation) of paper bags and determined that impacts would not be significant. Section 4.4, *Hydrology and Water Quality*, analyzes the impacts to water quality related to the manufacturing

process of carryout bags (including paper bags). The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.

Response 4.14

The commenter suggests that if plastic bags are banned under the Proposed Ordinance, there would be an increase in the purchase of other types of plastic bags as people currently re-use plastic carryout bags for other uses.

Regarding the comment that many people reuse plastic bags, Section 2.0, *Project Description*, of the Draft EIR, acknowledges that single-use plastic bags can be re-used by customers and are recyclable. These uses may include bags for bin liners or collection of dog waste. However, the commenter does not provide data or evidence of such practices by Study Area residents.

Regarding the commenter's need to buy other types of plastic bags to replace the "re-use" of single-use plastic bags, the comment expresses concern about a potential economic impact of the proposed project, which is not CEQA's purview. The purpose of the EIR is to address the project's environmental effects, not its economic effects. CEQA Guidelines Section 15064(e) specifically states that "economic and social changes resulting from a project shall not be treated as significant effects on the environment."

Response 4.15

The commenter suggests that the switch to reusable bags may be significantly worse for the environment than existing conditions and states that even though a reusable bag can be used hundreds of times does not mean it will be used hundreds of times.

Impacts from Proposed Ordinance related to the increased use of reusable bags (as well as paper bags) in the Study Area are analyzed in the Draft EIR and include impacts related to air quality, biological resources, greenhouse gas emissions, hydrology/water quality and utilities. The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR. Further, in regard to the number of assumed uses of a reusable bag in the Draft EIR, please see Response 1.21 which describes why approximately 52 uses for a reusable bag is considered a conservative and reasonable assumption for the Draft EIR analysis.

Response 4.16

The commenter suggests that the Draft EIR must assume a reasonable worst-case scenario for the number of uses a reusable bag may be used before being discarded. While the Proposed Ordinance would require that a reusable bag has a minimum lifetime of 125 uses, the Draft EIR utilizes a conservative worst-case assumption that a reusable bag is used 52 times before discarded (please see Response 1.21 and 4.15). The comment does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR and therefore further responses are not required.



Response 4.17

The commenter suggests that the majority of consumers do not clean their reusable bags and would prefer to just replace them rather than wash them. This comment is speculative and does not provide any data to support this claim nor does the commenter provide evidence of such practices by Study Area residents. Regarding washing reusable bags, while the Proposed Ordinance would promote a shift toward the use of reusable bags, periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers. Single-use plastic bags also may require washing after use for carrying groceries and prior to being re-used (as described in Section 2.0, *Project Description*, of the Draft EIR). It is assumed that individuals would generally continue to practice good hygiene.

Response 4.18

The commenter suggests that reusable bags are the worst environmental alternative if they are discarded after one or only a few uses and that an assumption of two uses per reusable would be the highest reasonable worst-case scenario in the Draft EIR.

This comment is speculative and does not provide any data to support the claim that assuming two uses per reusable bag is reasonable, nor does the commenter provide evidence of such practices by Study Area residents. As noted in the Draft EIR, the Proposed Ordinance would require that a reusable bag has a minimum lifetime of 125 uses. In regard to assumptions used in Draft EIR related to reusable bags, please see Response 1.21.

Response 4.19

The commenter suggests that plastic carryout bags are recyclable in bins located at all AB 2449 stores, but that there is no recycling infrastructure for other kinds of reusable bags and that these bags must be disposed of in landfills. Impacts related to solid waste is discussed in Section 4.5, *Utilities and Service Systems*. Impacts related to the Proposed Ordinance on landfills in the Study Area were determined to be less than significant. The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.

Response 4.20

The commenter opines that a recent Oregon Public Disease Outbreak Report is conclusive evidence that the reusable bags carry viruses and can spread illness and that the Proposed Ordinance would increase the use of reusable bags and thus serious public health hazards would occur in the Study Area.

This comment is speculative. Regarding public health impacts of reusable bags, while the Proposed Ordinance would promote a shift toward the use of reusable bags, periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers (please refer to response 1.149 and 2.5). It is assumed that individuals would generally continue to practice good hygiene.



Response 4.21

The commenter states that a switch to reusable bags as a result of the Proposed Ordinance may have a significant impact on the environment as a result of heavy metals in reusable bags and suggests that the Proposed Ordinance should include a definition of “toxic amounts” consistent with the Health and Safety Code §25214.13.

In regard to impacts related to heavy metals in reusable bags, please see Response 4.10. In regard to the addition of a definition for toxic amounts in the Proposed Ordinance, the comment and suggestion is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance. As defined in the Draft Ordinance (see Appendix B), a reusable bag must meet a number of requirements, including that the bag does not contain lead, cadmium, or any other heavy metal in toxic amounts and has printed on the bag, or on a tag that is permanently affixed to the bag, the name of the manufacturer, the location (country) where the bag was manufactured, a statement that the bag does not contain lead, cadmium, or any other heavy metal in toxic amounts, and the percentage of postconsumer recyclable material used, if any.

Response 4.22

The commenter suggests that the Proposed Ordinance may result in a significant reduction in recycling. This comment is speculative as the commenter provides no evidence to support this claim. Impacts related to solid waste and landfills are discussed in Section 4.5, *Utilities and Service Systems*, of the Draft EIR and it was determined that impacts would not be significant. The commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.

Response 4.23

The commenter suggests that the Proposed Ordinance may result in a significant increase in dog waste on the streets. This comment is speculative as it provides no evidence to support the claim that the Proposed Ordinance would cause an increase in dog waste on Study Area streets. The Proposed Ordinance would only regulate single-use carryout bags and would not restrict the use of other plastic bags that could be used for picking up dog waste. Further, the commenter does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.

Response 4.24

The commenter summarizes the Los Angeles County EIR for a similar type of carryout bag ordinance and notes that the EIR determined that there would be a significant unavoidable impact related to greenhouse gas emissions. Based on this finding, the commenter concludes that the Proposed Ordinance in the Study Area may result in significant environmental impacts.

This comment is speculative as the Los Angeles County Bag Ordinance is a separate project under CEQA than the Proposed Ordinance and the comment does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR. Further, the



Los Angeles County EIR determined that emissions from that proposed ordinance would not exceed a threshold of 9.6 metric tons per capita but *“because there are no local, regional, State, or federal regulations establishing significance on a cumulative level, and because certain representatives of the plastic bag industry have claimed that paper bags are significantly worse for the environment from a greenhouse gas (GHG) emissions perspective, on this basis, and specific to this project only, and because the County is attempting to evaluate the impacts of the project from a very conservative worst-case scenario, it can be determined that the impacts may have the potential to be cumulatively significant.”*

The Draft EIR for the Proposed Ordinance determined that greenhouse gas emissions would not be significant.

Response 4.25

The commenter opines that it is unjustified and misleading to use LDPE reusable bags as the basis for reusable bag impact analysis for greenhouse gas emissions as LDPE are not a common reusable bag type (the commenter provides pictures from stores he visited to demonstrate the type of reusable bags), that other types of reusable bags have worse impacts related to greenhouse gas emissions than LDPE, and that the use of LDPE invalidates the findings of the Draft EIR. Further, the commenter suggests that GHG Impact Rate Per Bag used to calculate greenhouse gas emissions in comparison to single-use plastic bags should be 104 times rather than the 2.6 times used in Section 4.3, *Greenhouse Gas Emissions*.

Please see Response 1.77 regarding how the Draft EIR utilizes the best available information to disclose environmental impacts associated with the Proposed Ordinance. The analysis uses the LDPE carryout bag as a representation of reusable bags in evaluating GHG impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential GHG emissions. Further, the study that utilizes the 2.6 per bag rate assumption is from the Ecobilan (2004) and the Scottish Report (AEA Technology, 2005) that the commenter references in his previous comments (see Comment # 11 and Comment #24) and recommended for use in the Draft EIR analysis. As described in Response 1.77, this methodology is consistent with the greenhouse gas impact analysis contained in other CEQA documents pertaining to bag ordinances. This rate compared to an HDPE single-use plastic bag (2.6 times) is related to an LDPE bag being used once and then disposed. Given the high rate of reuse for all types of reusable bags (125 times or more as required by the Proposed Ordinance), the greenhouse gas emissions associated with the reusable bags, are expected to be comparable to an LPDE reusable bag or lower. As stated by *CEQA Guidelines* Section 15144, EIRs are to use the “rule of reason” with respect to content. The analysis contained in the Draft EIR satisfies the rule of reason.

In regard to the LDPE reusable bags being a common reusable bag type, the Final EIR has been edited as follows on page 4.1-9 to remove “one of the most common types”:

“However, because LDPE reusable bags are ~~one of the most~~ common types of reusable bags and are of similar durability and weight (approximately 50 to 200 grams) as other types of reusable bags, this Program EIR utilizes the best available information regarding specific metrics on a per bag basis to disclose environmental impacts associated with the Proposed Ordinance.”



In regard to using a GHG impact rate of 104 times that of a HDPE single-use carryout bag, while this rate appears to be unreasonably exaggerated and unreasonable in comparison to the 2.6 rate (as described above), even if it were used as the rate for GHG impact, as shown in the table below, the net increase of GHG emissions in the Study Area as a result of the Proposed Ordinance (approximately 0.0357 metric tons CO₂e per person per year) would not exceed the threshold of significance (4.6 metric tons per person per year) and thus the impact would remain less than significant (the same as in the Draft EIR using the rate of 2.6 for LDPE bags).

**Estimated Greenhouse Gas Emissions from Carryout Bags in Study Area
with Implementation of the Proposed Ordinance Using a GHG Impact Rate of 104 for
Reusable Bags**

Manufacture, Use and Disposal					
Bag Type	Proposed # of Bags Used per Year ¹	GHG Impact Rate per Bag	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons) ⁵
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags ²	878	0.0007
Single-use Paper	197,472,422	2.97	0.1188 per 1,000 bags ³	23,460	0.0189
Reusable	8,228,018	104	4.16 per 1,000 bags ⁴	34,229	0.276
<i>Subtotal</i>				58,567	0.047
Washing					
Bag Type	# of Loads per Year ⁶	Electricity Use Per Load (kW) ⁷	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons) ⁸	CO ₂ E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,578	3,279	0.0026
<i>Subtotal</i>				3,279	0.0026
Total GHG Emissions from Proposed Ordinance				61,846	0.05
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				44,293	0.0357

CO₂E = Carbon Dioxide Equivalent units

See Appendix D for emissions for each individual municipality

¹ Refer to Table 2.2 in Section 2.0, Project Description.

² Based on Boustead Report, 2007; Santa Monica Single use Carryout Bag Ordinance Final EIR, January 2011.

³ 10% reduction (from a rate of 3.3 or 1.32) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

⁴ Based on AEA Technology "Scottish Report, 2005; Santa Monica Single use Carryout Bag Ordinance Final EIR, Jan. 2011.

⁵ Emissions per person are divided by the existing population in the Study Area – 1,239,626 (Dept. of Finance, May 2012)

⁶ Assumes that half of all reusable bags would be machine washed. Assumes that each bag is washed once a month.

Assumes an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.). See Table 4.5-9 in Section 4.5, Utilities and Service Systems.

⁷ US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

⁸ See Appendix D for calculations

Response 4.26

The commenter opines that the assumption in the Draft EIR that a reusable bag will be used 52 times is unjustified and misleading as there is no evidence to support that "every" reusable bag



will be used on average 52 times. Thus, the commenter again suggests that two uses would be a reasonable worst-case scenario for reusable bag usage.

Please see Response 1.21 regarding reasonable and conservative estimates. The commenter's suggestion that two uses be used for reusable bag usage in the Draft EIR is speculative. The Draft EIR utilizes 52 uses per reusable bag as a conservative estimate. Since the Proposed Ordinance requires reusable bags to be able to withstand at least 125 uses, it is not unreasonable to assume that reusable bags could be used hundreds of times. However, since the usage of a bag will depend on the owner, the Draft EIR utilizes a conservative average of 52 uses per bag.

Response 4.27

The commenter opines that reusable bags are difficult or impossible to wash. Reusable bags of different materials can be washed in various ways and are required by the Proposed Ordinance to be washable, including by machine or by hand (rinsing and wiping down).

Response 4.28

The commenter objects to the description of reusable bags as recyclable products. The commenter is mistaken in his assumption that the Draft EIR claims that all reusable bags are recyclable. The only reference to recyclability for reusable bags is related to non-woven polypropylene bags on page 2-6 of the Draft EIR as these types of bags are made of generally a form of Polypropylene which is rated a "5" on the Society of Plastics Industry's (SPI) spectrum of recycled codes.

Response 4.29

The commenter opines that the Proposed Ordinance, which would ban single-use plastic bags and promote a shift to reusable bags, would result in a switch from recyclable products to non-recyclable products. Further, the commenter opines that once the Proposed Ordinance is passed, stores would not be required to provide recycling bins currently required by AB 2449 and SB 1219 and thus members of the public would not be able to recycle LDPE reusable bags, dry cleaning bags, newspaper bags, bread bags and produce bags.

This comment is speculative. In regard to solid waste impacts, the Draft EIR determined that the Proposed Ordinance would result in a less than significant impact. The comment does not address, question or challenge the assumptions, information, analysis or conclusions related to solid waste in the Draft EIR. In regard to recycling other types of plastic bags, please see Response 1.85.

Response 4.30

The commenter states that the Draft EIR does not disclose that stormwater capture devices are preventing and will prevent plastic bags from reaching the "LA River, Ballona Creek and the Ocean". The Los Angeles River and Ballona Creek are not located within the Study Area. Please see Response 1.28 related to stormwater capture devices and trash excluders in the Study Area.



Response 4.31

The commenter opines that the Draft EIR contains false and misleading statements regarding marine impacts as plastic bags are not responsible for the “entire universe of plastic debris in the ocean”. The commenter states an opinion that these statements are incorrect and that it is important that the EIR be accurate and informative. The commenter also opines that there is no evidence that any wildlife ingest or become entangled in plastic bags, “other than a handful of photographs on the Internet”.

The Draft EIR provides detailed information related to how litter from carryout bags (including single-use plastic bags, single-use paper bags and reusable bags) impact the marine environment. The purpose of the Draft EIR is to disclose the impacts associated with the Proposed Ordinance including how the decrease in the number of single-use plastic bags and the increase in the number of recyclable paper and reusable bags would impact biological resources. As shown in the Draft EIR, single-use plastic bags are more likely to become litter than paper and reusable bags and thus have a greater potential to enter creeks, storm drains and ultimately the marine environment. As such, reducing the number of plastic bags and thus reducing the potential for plastic bag litter would result in beneficial impacts related to biological resources. The commenter does not provide any evidence to suggest otherwise.

Response 4.32

The commenter states that there is no evidence that digesting a paper bag is harmless or that they can be digested by wildlife. The following has been edited in the Final EIR to reflect the comment:

Page 4.2-7: *“Single use paper carryout bags are also released into the environment as litter. However, they generally have less impact on wildlife because they are not as resistant to breakdown as is plastic; therefore, they are less likely to cause entanglement. ~~In addition, although not a healthy food source, if single use paper bags are ingested, they can be chewed effectively and may be digested by many animals.~~”*

Response 4.33

The commenter states an objection to references that plastic bags are made of petroleum, oil or natural gas. The commenter summarizes that domestic plastic bags are made of ethylene, which is made of ethane which is a waste by-product obtained from domestic natural gas refining and that 69.3% of plastic bags used in the USA are made in the USA. He also states that bags made in China (8.4% of bags used in USA) are made from naphta derived from oil. The commenter also objects to the fact that the Proposed Ordinance would not ban synthetic plastic production, but only bans plastic bags.

In regard to the manufacture of plastic bags, the commenter contradicts his assertion about what plastic bags are made of as his description cites both oil and natural gas use in production process (whether domestically using ethylene, which is formed from natural gas, or internationally using naphta, which is derived from oil or petroleum) of



plastic bags. This comment also contradicts the commenter's earlier comment (see Response 4.9) that 85% of plastic bags used in the USA are made in the USA. In regard to banning synthetic plastic production, this comment is speculative as the Draft EIR discusses the manufacture of plastic bags (and also paper and reusable bags), but does not refer to the production of other synthetic plastic as this is outside of the scope of the proposed project.

Response 4.34

The commenter objects to the use of the assumption that 20 billion plastic bags are used annually in California. Please see responses 1.9 and 1.15.

Response 4.35

The commenter states that the Draft EIR fails to properly disclose that trash is not a significant issue in waterways in Ventura County and that trash excluders and receptacles will be installed in high priority catch basins. Please see Response 1.28.

Response 4.36

The commenter requests recirculation of a revised Draft EIR and prominent notification to the public of "significant errors" in the initial Draft EIR. The commenter then provides the CEQA Guidelines related to recirculation and states his reasons for this request by summarizing his earlier comments in particular LDPE bags, the reusable bag use assumptions in the Draft EIR, that reusable bags are not recyclable, that plastic bags enter do not enter storm drains in the Study Area, that the impacts to biological resources from plastic bags is exaggerated, that plastic bags are not made of oil or natural gas, that the Draft EIR's assumption regarding 20 billion plastic bags per year in California is not accurate, that trash is not a significant problem in Ventura County waterways, and that Proposed Ordinance would not result in improvements to the environment.

As stated in CEQA Guidelines 15088.5, "A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification." "New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." Further, "Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR". Minor edits to the Draft EIR have been made in the Final EIR as discussed in this Response to Comments section. However, no new information related to the Proposed Ordinance has been implemented since the Draft EIR was released for public review and none of the changes in the Final EIR would be considered "significant" as no new significant impacts were identified, there are no substantial increases in the severity of an environmental impact in the Final EIR, no new



feasible alternatives that reduce the impacts of the Proposed Ordinance were identified since the Proposed Ordinance would not result in any significant impacts, and the Draft EIR is adequate (consistent with CEQA Guidelines 15088.5(a)(1-4)).

In regard to LDPE bags, see Response 4.25. In regard to reusable bag assumptions, see Response 4.26. In regard to recyclability of reusable bags refer to Response 4.28. In regard to plastic bags entering storm drains, refer to Response 4.30. In regard to impacts to biological resources, please see Response 4.31. In regard to oil and natural gas refer to 4.33. In regard to 20 billion bags used in California, refer to 4.34. In regard to trash in Ventura County waterways, refer to 4.35. In regard to improvements in the environment, the Draft EIR determined that the Proposed Ordinance would result in beneficial impacts related to air quality (production), biological resources, and hydrology/water quality (reduction of litter in storm drains). All other impacts were found to be no impact or less than significant.



Letter 5

25 March 2013

Mr. Gerald Comati, P.E.
Program Manager
Beach Erosion Authority for Clean Oceans and Nourishment
206 East Victoria Street
Santa Barbara, CA 93101

Subj: Comments on the Draft Environmental Impact Report (DEIR)

Ref: (a) Notice of Availability of a Draft Environmental Impact Report BEACON Single Use Carryout Bag Ordinance dated 12 February 2013
(b) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 4 March 2013
(c) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 15 March 2013

Encl: (1) "Detailed Comments on BEACON Draft EIR", by Anthony van Leeuwen, dated 25 March 2013

1. Detailed comments in Enclosure (1) are submitted in accordance with reference (a) as public input regarding the content of the BEACON Draft EIR and the proposed project.
2. Based on the magnitude of comments submitted in this letter and previously submitted in references (b) and (c) and that substantial changes to the Draft EIR are required, it requested that a revised Draft EIR be posted for a second 45-day public review and public comment period in accordance with CEQA Guidelines § 15088.5.
3. This memorandum and enclosures are submitted in accordance with reference (a) and should become part of the official record, including links to documents available on the internet, regarding the Preparation of this EIR and development of model ordinances. For more information, please feel free to contact Mr. Anthony van Leeuwen at 805-647-4738 or by email at vanleeuwenaw@roadrunner.com.

5.1

Respectfully,

Anthony van Leeuwen

Detailed Comments on Draft EIR

BEACON Single Use Carryout Bag Ordinance

By Anthony van Leeuwen, 25 March 2013

1. Page ES-1, 2nd Paragraph, Line 12. Allowing a regulated retail establishment to distribute reusable bags free of charge, other than for a short term promotion, will result a proliferation of reusable bags since customers would be issued a new reusable bag every time they forget to bring reusable bags to the store. In an article¹ titled *“Bag the bag: a new green monster is on the rise”* the author identifies Australia’s growing mountain of green reusable bags which end up in the landfill and are causing a concern. It turns out that stores profit from the sale of reusable bags and sell more than required by the public. Since the majority of reusable bags are not recyclable, except for LDPE or HDPE bags, they end up in the landfill. It follows that free giveaways unless limited to a short term promotion would result in a worse environmental problem than the use of plastic carryout bags. It is recommended, that the proposed ordinance limit reusable bag giveaways and modify language in the proposed ordinance to reflect that. 5.2
2. Page ES-2, 1st Paragraph, Line 6 and 7. The requirement that the recyclable paper bag contain no “old growth fiber” should be deleted. There is no way to determine that paper bags are not made from old growth fiber. This requirements is for appearance and political correctness only. Since there is no county, state, or federal agency identified in the ordinance assigned to test recyclable paper bags in the laboratory (if even possible) to verify no old growth fiber was used in manufacturing, it is recommended that this requirement be deleted. Furthermore, certification by the manufacturer is meaningless without certification from the paper manufacturer and without certification from the lumber jack that he did not harvest an old growth tree. Recommend you drop this unneeded requirement. See also comment #3 below. 5.3
3. Page ES-2, 1st Paragraph, Line 6 and 7. The requirement that recyclable paper bags have printed on them the amount or percentage of post-consumer content is also meaningless. For example, on the reverse side of the DEIR title page is printed: *“This report is printed on 50% recycled paper with 30% post-consumer content and chlorine-free virgin pulp.”* This statement likewise is meaningless and incorporated merely for appearance and political correctness. There is no guaranty that any printed copy of the DEIR used paper with 30% post-consumer content, despite the statement. Similarly, printing the percentage of post-consumer content on the recyclable paper bag doesn’t mean that the bag was manufactured from paper having that percentage of post-consumer or recycled content. Since, no testing of bags or of the paper is required by an independent laboratory, the requirement to print the percentage of post-consumer content on paper bags should be removed. The statement is for appearance and political correctness only. 5.4

¹ Munro, Peter. 24 January 2010. “Bag the bag: a new green monster is on the rise.” Located at: <http://www.theage.com.au/national/bag-the-bag-a-new-green-monster-is-on-the-rise-20100123-mrqq.html>

4. Page ES-4, Table ES-1, Impact BIO-1 and Impact GHG-1. General Comment. The terms “recycled paper bag” and “recyclable paper bag” are both used to describe paper bags. Which is correct? This occurs in multiple places. It is recommended, that the correct terminology be used and standardized throughout the Draft EIR. 5.5
5. Page ES-4, Table ES-1, Impact HWQ-2. The reference to AB 258 should be removed. AB 258 applies to pre-production plastic and is irrelevant to paper bag manufacturing. AB 258 applies only to manufacturers of single-use plastic carryout bags and potentially to manufactures of plastic reusable carryout bags. 5.6
6. Page 1-1, 2nd Paragraph, Line 3. Would the proposed ordinance be applicable to a fabric store that has a candy and soda machine on its premises to sell candy and soda to customers? Recommend that language in the DEIR and the Proposed Ordinance be clarified. 5.7
7. Page 2-6, 1st Paragraph. The following statement demonstrates a prejudicial bias in favor of paper bags since a corresponding statement on behalf of plastic bags was not provided: *“Paper bags have many other uses outside of grocery stores, including use as recycling and composting containers, school book covers, gift wrap, and other craft projects, and use for picnics or sporting events”*. In contrast, throughout the DEIR reuse of plastic carryout bags is described as follows: *“Post-use from a retail store, a customer may reuse a single use plastic bag at home, but eventually the bags are disposed of in the landfill, recycling facility, or discarded as litter.”* In the article² entitled *“Why not to Ban Plastic Carry Out Bags”* (DEIR, page 228 of 333) the author cites that plastic carry out bags are used for: trash bags, waste bin liners, dog or cat litter, lunch bags, gym or sports gear, picnic supplies, hold toys, hold wet clothes, and are used in a multitude of craft projects including making mats for the homeless, place mats, totes, and even items for sale. In fairness, it is recommend that plastic carryout bags also be described in the DEIR as having multiple uses just like paper carry out bags. 5.8
8. Page 2-6, 4th Paragraph. The statement *“The production stages in reusable bag life cycles depend on the materials used. Once used, these bags are reused until worn out through washing or regular use, and then typically disposed either in the landfill or recycling facility”* is nothing more than an assumption. The fact is, no one knows how long a reusable bag will be used before being discarded. It could be discarded when the bag gets dirty or contaminated or when the consumer receives a new free reusable bag or purchases a replacement bag. Furthermore only LDPE or HDPE reusable bags (these are hard to find) are recyclable and the most common bag made from non-woven polypropylene (PP) is not recyclable in Ventura County and most likely not in Santa Barbara county as well. The DEIR should address the recyclability and availability of recycling centers in Ventura and Santa Barbara Counties for all types of reusable bags. If recycling facilities are not available to consumers, than **consumers would be replacing a recyclable plastic carry out bag with a non-recyclable reusable bag** and thereby negatively impacting the landfill. 5.9
9. Page 2-7, Last Paragraph, Line 3. The DEIR should identify that in the event of a plastic carryout bag ban, that retail stores would no longer be required by state law to provide a recycling bin for 5.10

² Van Leeuwen, Anthony. 23 December 2012, “Why Not To Ban Plastic Carry Out Bags”, Located in Beacon Single Use Carryout bag Ordinance Draft Environmental Report SCH #2012111093 dated February 2013, Page 228 of 333.

plastic carryout bags. This means that the consumer would lose access to the only recycling facility available in Ventura County for produce bags, newspaper bags, plastic wraps, and reusable LDPE and HDPE plastic carryout bags. Hence, a loss of recycling capability available to the consumer. **The Draft EIR should make this information available to decision makers and to the public. The loss or potential loss of recycling facilities affect State and County goals to divert material from landfills for reuse, repurpose, or recycling.**

5.10

10. Page 2-8, 1st Paragraph. In the event of a plastic carryout bag ban, retail stores will no longer be required by state law to maintain records and make them available to CalRecycle. **The Draft EIR should make this information available to decision makers and to the public.**

5.11

11. Page 2-9, 1st Paragraph. Would the proposed ordinance be applicable to a “fabric” store that sells a limited line of snacks, soda, water, ice-cream on the premises? See also comment #6 above.

5.12

12. Page 2-9, 5th Paragraph, Line 8 and Line 9. How will you determine that the paper bag does not contain old growth fiber? How will you determine that the paper bag has 40% post-consumer recycled material? The proposed ordinance has no means identified to test paper bags either to determine that they have no old growth fiber or to determine the percentage of post-consumer content. In both cases, you have to take the word of the paper bag manufacturer and paper manufacturer, the lumber mill, the lumberjack. Hence it is recommended that these requirement be deleted since they are unenforceable. See also comment #2 and #3 above.

5.13

13. Page 2-10, 1st Paragraph. Stores that currently issue paper bags in Ventura County such as Trader Joes routinely double bag groceries because the paper handles have a tendency to tear off. It is expected that widespread use of paper bags will result in close to double the number of paper bags estimated because of double bagging. This means that environmental calculations will be off. Perhaps the proposed ordinance should require that paper bags have no handles in an effort to discourage double bagging. Also, in computing the number of paper bags used, a factor should be applied that would estimate the effect of double bagging on total quantities of paper bags estimated. In addition, the proposed ordinance should address double bagging in relation to the fee charged per paper bag.

5.14

14. Page 4.1-5, 2nd Paragraph, Line 7. **General Comment and applicable throughout this DEIR.** The LDPE reusable bag used for environmental analysis throughout the DEIR, is not representative of reusable bags used by the consumer. In fact, the LDPE reusable bags are hard to find and represent a very small fraction of reusable bags. The most common reusable bag is the non-woven Polypropylene bag and that is what most consumers use who are not using fabric bags. The environmental analysis in the EIR should be conducted using the type of bags most commonly used by consumers in the study area. It is suggested that BEACON consider the non-woven Polypropylene and Cotton reusable bags as being representative of reusable bags for analysis purposes.

5.15

15. Page 4.1-9, 2nd To Last Paragraph. **General Comment.** The following statement is **FALSE**:
*“However, because LDPE reusable bags are one of the most **common** types of reusable bags and are of similar durability and weight (approximately 50 to 200 grams) as other types of reusable bags, this Program EIR utilizes the best available Information regarding specific metrics on a per bag basis to disclose environmental impacts associated with the Proposed Ordinance.”* A Low

5.16

Density Polyethylene (LDPE) or High Density Polyethylene (HDPE) bag is a thick plastic bag. This bag is very hard to find. The most common bags are the nonwoven polypropylene (PP) and cotton bags. The statement that LDPE reusable bags are representative of all reusable bags because they are of similar durability and weight is **baseless and wrong**. The material from which the reusable bags are made from is critical to their environmental impacts. **To base the environmental analysis on an LDPE Reusable bag that almost no one uses invalidates the finding in the DEIR.** The DEIR should be based upon the most common bag types that will be available to consumers and it suggested that BEACON consider the non-woven Polypropylene (PP) and Cotton bags for this analysis. This comment affects many of the sections in the DEIR having to do with environmental analysis and calculations.

5.16

16. Page 4.1-9, 2nd To Last Paragraph. This a general comment and is applicable to other places in the DEIR. The assumption that a reusable bag is used weekly for 52 weeks with a lifespan of 1 year is not based upon factual evidence, but on guesswork. Since most reusable bags must be used more than a 100 times in order to offset the negative environmental impacts it is recommended that the usage model for the reusable bag be changed, such that the environmental impacts of reusable bags on a per use basis is less than using a plastic carry out bag. Unless this is accomplished, the environmental impact of the proposed ordinance would be greater than the status quo, or Alternative 1.

5.17

17. Page 4.2-12, 2nd Paragraph, Line 5. The following statement does not make sense: *“Therefore sensitive species such as sea turtles, mammals, and bird species would benefit from the Proposed Ordinance, which would reduce the amount of litter that could enter the marine environment.”* The benefit a marine species receives from the proposed ordinance does not cause a reduction in the amount of litter that would enter the marine environment. It should be noted that the TMDL program and installation of trash excluders or full capture devices will reduce the amount of litter that enters the marine environment, thereby preventing harm to marine wildlife! Furthermore, the proposed ordinance will have little benefit on marine wildlife. The sentence needs to be rewritten.

5.18

18. Page 4.3-13, Table 4.3-3. This is a general comment and applicable to other places in the DEIR. The **GHG Impact Rate per Bag for Reusable Bag Type** of 2.6 is applicable to the LDPE reusable bags but not to other types of reusable bags. According to the British report³ with 40.3% of plastic carryout bags re-used as bin liners or trash bags a Paper bag must be used 4 times to equal a plastic carryout bag; an LDPE reusable bag, 5 times; a Non-woven PP reusable bag, 14 times; and a Cotton reusable bag, 173 times. The Los Angeles County DEIR⁴ uses a figure of 104 to represent an averaging of the most commonly available PP and Cotton bags. The DEIR should update the environmental impacts of reusable bags by using realistic assumptions. Note: This comment is applicable to Table 6-5, Table 6-10, Table 6-15, and Table 6-20.

5.19

19. Page 4.3-16, Table 4.3-6. The statement in the item “Solid Waste Reduction Strategy” is incomplete: *“An objective of the Proposed Ordinance is to reduce single use plastic and paper*

5.20

³ UK Environment Agency, “Lifecycle assessment of supermarket carrier bags available in 2006” Report SC030148. Page 61.

⁴ County of Los Angeles, 2 June 2010. “Ordinances to Ban Plastic Carryout Bags in Los Angeles County – Draft Environmental Impact Report “. SCH # 2009111104. Available at: <http://ladpw.org/epd/aboutthebag/PDF/DEIR.pdf>

bag waste in landfills. The Proposed Ordinance would require reusable bags to be available for sale at retail establishments and would require paper bags to be made from recyclable material. Since the most common reusable bags are not recyclable in Ventura County, the DEIR should address the impact to local landfills, since reusable bags weigh many times more than plastic carry out bags the impact to landfills due to disposal of reusable bags and paper bags would result in a negative environmental impact of the proposed ordinance. The DEIR should identify impacts to landfill because most of the commonly available types of reusable bags are not recyclable and decision makers and the public need to know the impact of the proposed ordinance on landfills.

↑
5.20

20. Page 4.3-16, Table 4.3.6. The statement in the Project Consistency column for the item on “Recycling Education” is not addressed by the response: *“The Proposed Ordinance would require reusable and recyclable paper bags to be available at retail establishments.”* The DEIR should be updated to reflect the education requirements by retail establishments in recycling of paper and reusable bags.

5.21

21. Page 4.4-2, 1st Paragraph, Line 9. The statement “Only about 5% of the plastic bags in California are currently recycled” is incomplete and prejudicial since it does not provide a complete picture to the public and decision makers. You should change the statement to something like: “Only about 5% of the plastic bags in California are recycled and about 40% are reused as trash bags.”

5.22

22. Page 4.4-2, 1st Paragraph, Line 11. The statement: *“The majority of single use plastic bags end up as litter or in the landfill.”* is prejudicial and implies more plastic bags end up as litter. The statement should be rewritten as: *“The majority of single use plastic bags end up in the landfill or as litter.”* With the exception of LDPE or HDPE reusable bags (very hard to find), **the majority of reusable bags will end up in the landfill or as litter.** Why is this not discussed?

5.23

23. Page 4.4-2, 3rd Paragraph, line 6. The DEIR states that reusable bags are typically disposed of either in the landfill or recycling facility. The most common bags made from non-woven Polypropylene (PP) and cotton are **not** recyclable in Ventura County and most likely not in Santa Barbara county as well. Decision makers and the public need to know the impact that the proposed ordinance will have on landfills and recycling facilities. The impact of a typical reusable bag on the landfill is equivalent to 30 plastic carry out bags. Therefore, the impact on landfills should be analyzed in the DEIR not only for paper bags, but also for reusable bags. Both the weight and volume should be estimated based on the best statistics available.

5.24

24. Page 4.4-2, 3rd Paragraph, line 5. The statement *“Reusable bags are typically reused until worn out through washing or multiple uses, ...”* is not necessarily substantiated by evidence. While common sense may indicate that this is the case, reusable bags are often disposed because the consumer got a new “free” bag, or because the old bag got dirty (bacteria buildup or contamination by a hazardous substance such as a pesticide?) and a replacement was purchased. Recommend that the statement be expanded to include some of the other reasons why bags may be replaced.

5.25

25. Page 4.4-3, 4th Paragraph. The following statement is false and borders on nonsense: *“Water quality may be affected by bags in two different ways: litter from bags and the use of materials for processing activities. ... While single use plastic bags are more likely to affect water quality as a result of litter, the plastic bag manufacturing process utilizes “pre-production plastic pellets,”*

5.26
↓

which may also degrade water quality if released either directly to a surface water body or indirectly through storm water runoff.” It should be noted that pre-production plastic pellets are raw materials and **not plastic bags**. Pre-production plastic pellets are raw materials that could be molded into any of thousands of different plastic items besides plastic carryout bags.

- The handling and transportation of Pre-production plastic pellets are controlled under AB 258 which prescribes requirements for manufacturers to contain pellets and prevent release into the environment.
- **Also, since plastic bags are the intent of the proposed ordinance, there is NO requirement to cover pre-production plastic pellets as part of the DEIR anymore than the potential of toxic emissions that would result from a fire in a plastics plant.**
- **Since no manufacturing facilities are located in the study area that use pre-production plastic pellets to manufacture plastic carryout bags or plastic reusable bags, there is no requirement to cover pre-production plastic pellets.**
- **Even if a plastic carryout bag or a plastic reusable bag manufacturer were to establish facilities in the Study Area, their activities with respect to AB 258 and pre-production plastic pellets would not be regulated by the proposed ordinance, and hence there is no need to cover this information.**
- **Even if a truck carrying pre-production plastic pellets were traveling through the Study Area and overturned on the freeway or roadway the material spilled would be treated in accordance with current regulations and require an environmental cleanup. None of these activities are regulated by the proposed ordinance and therefore there is no need to cover this information.**
- **Please remove all references in the DEIR to pre-production plastic pellets and AB 258.**

5.26

26. Page 4.4-3, 5th and 6th Paragraph. This paragraph talks about paper bags and that paper bags as litter may cause a discharge of chemicals and materials into water bodies and increase the potential for higher than natural concentrations of trace metals, etc. What is missing in the discussion is that reusable bags also may contain lead, cadmium, and other heavy metals although not in amounts toxic to humans, the amounts could be toxic to biological resources both plant and animal life including endangered species if released from reusable bags that end up as litter in the environment.

5.27

27. Page 4.4-3, 5th and 6th Paragraph. General Comment - applicable to other places in the DEIR, as well. Both paragraphs talk about the use of fertilizers and pesticides in the production of resources such as trees (that produce wood pulp) and cotton. It is highly unlikely that fertilizers would be present in the wood pulp or cotton used in the manufacturing of paper bags and cotton reusable bags. Fertilizers are used in agriculture to grow tomatoes and vegetables. Since tomatoes and vegetables are consumed by Study Area residents in great quantities and no harm has been detected it would suggest that fertilizers are not consumed by residents. It should be noted, that plants absorb the nutrients from the soil and fertilizers in the soil and the nutrients are reused by complex chemical processes involved in plant growth. Furthermore, it should be noted that both the tree and cotton absorb CO₂ from the atmosphere and produce oxygen which is a great an environmental benefit!

5.28

28. Page 4.4-4, 3rd Paragraph. The reference to AB 258 and pre-production plastic pellets should be removed from the DEIR. Pre-production plastic pellets are not plastic carry out bags and are not the subject of the proposed ordinance. See also comment # 25 above. 5.29
29. Page 4.4-6, 3rd Paragraph. In a presentation⁵ about the Ventura County Municipal Stormwater Permit a director of the Ventura County Watershed Protection District stated that: (1) “Trash is not a significant issue in the water-ways of Ventura County ...”; (2) “we [watershed protection district] support taking an aggressive approach to trash management ...”; and (3) that “Trash Excluders and Receptacles” would be installed “in all High Priority catch basins, ...”. The fact that the watershed protection district does not think trash (which would include plastic carry out bags) in Ventura County water-ways to be a significant issue and that aggressive steps are already being taken to solve what problem there is, should have been disclosed in the DEIR, and made available to the public and to decision makers. 5.30
30. Page 4.4-7, Impact HWQ-1. The assertion that a reduction in plastic bags in the study area would result in a reduction in the amount of litter and waste entering storm drains is **unsubstantiated and highly speculative** because plastic carry out bags represent less than 1% of roadside litter. You need to reword the impact statement. 5.31
31. Page 4.4-8, 1st Paragraph, Line 6. The reference to the 64% reduction in the overall number of carryout bags appears to be correct based upon numbers in the DEIR. The 64% reduction of plastic carryout bags is **misleading**, since a portion of those bags are replaced by other plastic bags. Approximately 40% of plastic carryout bags were reused as waste can liners and to dispose of trash, consumers will have to replace those bags with other plastic bags. Hence the net reduction in plastic bags is much less than the 64% cited for carryout bags. The DEIR should address secondary effects of the proposed ordinance as well as the primary effects. In other words, the fact that consumers will purchase replacement plastic bags for the plastic carryout bags that were banned should be part of the environmental analysis. The DEIR should analyze the environmental impact of consumers purchasing replacement trash bags for the “reused” carryout bags used to dispose of trash. 5.32
32. Page 4.4-8, 4th Paragraph, Line 3 and Line 4. The statement that the “*Proposed Ordinance would be expected to reduce the amount of litter that could enter storm drains and local waterways*” is not exactly true. Trash Excluders on storm drain outfalls would prevent litter from entering the waterways. Also, the amount of litter in Ventura County waterways is not significant. See comment # 29 above. 5.33
33. Page 4.4-9, 1st Paragraph. This paragraph fails to adequately address reusable bags and the levels of lead, cadmium, and other heavy metals allowed in non-toxic amounts. There are no standards defined in the proposed ordinance as to what the maximum levels of lead, cadmium, or other heavy metals that are allowed or what the toxic limits are. Since most reusable bags are not recyclable, vast quantities of reusable bags each containing minute amounts of heavy 5.34

⁵ Hubner, Gerhardt. 15 July 2009. “Update on Adopted Ventura County Municipal Stormwater Permit” Presentation to Calleguas Creek Watershed Steering Committee, Page 34. Available at: http://www.calleguas creek.org/ccwmp/meetings/Steering_Comm/071509/CC%20Steering%20Committee%20Final%20Permit%20SW%20Permit%20Overview%2007-14-.pdf

- metals will be sent to the landfill and potentially pose a problem. In addition, reusable bags that are littered could leach heavy metals into the environment and potentially harm wildlife including endangered species. The DEIR should address this issue, as decision makers and the public need to know if there are any restrictions to disposal of reusable bags in the landfill and the hazards of reusable bags disposed of as litter in the environment. 5.34
34. Page 4.4-9, 1st Paragraph. Please remove the reference to pre-production plastic pellets. **Pre-production plastic pellets are not plastic carryout bags, paper bags, or reusable bags.** 5.35
35. Page 4.4-9, 2nd Paragraph. The statement is not accurate: *“The Proposed Ordinance is anticipated to reduce the overall number of single use plastic bags used in the Study Area by 95% and reduce the use of all types of bags (including plastic, single use paper, and reusable) by 64%. These shifts in the types and amounts of bags used could potentially alter processing activities related to bag production.”* First, the reduction in single use plastic carryout bags by 95% will also result in an increased consumption of single-use plastic trash bags by 40%. Hence, the reduction in all types of bags could not be 64%. Second, the phrase *“could potentially alter processing activities related to bag production”* is confusing and should be rewritten. What is meant by processing activities related to bag production? Please rewrite. 5.36
36. Page 4.4-9, 3rd and 4th Paragraph. Please remove the reference to pre-production plastic pellets and AB 258. **Pre-production plastic pellets are not plastic carryout bags, paper bags, or reusable bags.** 5.37
37. Page 4.4-10, Last Paragraph. Paragraph fails to disclose that the reusable bag may contain levels of lead, cadmium, and or other heavy metals in less than toxic amounts. See comment # 33. 5.38
38. Page 4.4-11, 4th Paragraph. Please remove the reference to pre-production plastic pellets and AB 258. **Pre-production plastic pellets are not plastic carryout bags, paper bags, or reusable bags.** 5.39
39. Page 4.5-3, 1st Paragraph. The “reusable bags (used 52 times) use 1.096 liters of water” refers to the LDPE reusable bags. LDPE reusable bags are not representative of reusable bags. See comment # 14. 5.40
40. Page 4.5-7, 1st Paragraph, Line 6. The amount of waste generated by a reusable (used 52 times) is the full weight of the bag, not the weight divided by 52 to produce a per use weight of 0.001 kg of waste per bag. As an aside, Rincon measured the weight of a reusable bag as 6.8 ounces or 192.7798 grams or 0.1927798 kg. A plastic carryout bag weighs 6.5 grams or 0.0065 kg. In other words, **Rincon’s reusable bag weighs 30 times as much as a plastic carryout bag.** So the waste per use for this reusable bag is 0.003707 kg per bag. This is different that the figure of 0.001 kg cited. It seems that calculating the amount of waste per bag depends upon the type of reusable bag and the material it is made from. The material a bag is made from is central to the environmental analysis in the DEIR. Please update. 5.41
41. Page 4.5-9, 4th Paragraph. This paragraph talks about washing reusable bags so that they can be cleaned or disinfected. The DEIR does not identify why reusable bags should be washed and 5.42

disinfected. In the article⁶ titled “*Negative Health and Environmental Impacts of Reusable Shopping Bags*”, the author explains that bacteria buildup and cross-contamination by food and non-food items, as well as fomite transmission of viruses pose a health threat. In addition, in article⁷ titled “*Grocery Bag Bans and Foodborne Illness*” the authors show that **immediately following a plastic bag ban in San Francisco that Emergency Room visits for intestinal illnesses and deaths from food poisoning increased by about 50%**. Although not stated in the article, it is suspected that the population of people with compromised immune systems are particularly susceptible to bacteria buildup and cross-contamination hazards in reusable bags. Hence, the importance of washing and sanitizing reusable bags on a regular basis. It is recommended that some information be provided in the DEIR so that the public and decision makers understand why washing of reusable bags is so important.

5.42

42. Page 4.5-11, 2nd To Last Paragraph. The amount of plastic, paper, and reusable bags in terms of weight and volume together with estimates for recycling should be identified in the DEIR.

5.43

43. Page 6-1, Paragraph 6.1.1. This paragraph should be updated to include baseline conditions and specify the percentages of consumers that uses reusable bags, plastic bags, and paper bags. The public and decision makers need to know the current baseline condition, since that condition is a result of California State Law AB 2449 and SB 1219 and represents the status quo.

5.44

44. Page 6-1, Last Paragraph, Line 12. The following statement is FALSE: “*On the other hand, this alternative would not achieve the Proposed Ordinance's beneficial effects relative to air quality and biological resources (sensitive species).*” Alternative 1 or the status quo is superior to the adoption of the proposed ordinance because it avoids: (1) Increased water, energy, and generation of greenhouse gases as a result of washing reusable bags; (2) Increased truck trips to transport paper bags to retailers; and (3) Increased use of plastic trash bags and manufacturing of those trash bags that replace plastic carryout bags originally repurposed as trash bags. All three items increase GHG emissions. The TMDL program and installation of trash excluders or trash screens on storm drains will have a beneficial effect on biological resources including sensitive species by eliminating not only plastic bags but other plastic debris that is harmful to wildlife. The only benefit of the proposed ordinance is an aesthetic one in eliminating less than 1% of roadside litter.

5.45

45. Page 6-1, Last Paragraph, Line 13. The following statement is FALSE: “*As discussed in Section 4.4, Hydrology and Water Quality, several programs are in place to reduce trash and pollution in Ventura Comity waterways. These existing programs would be in place in the No Project alternative and may reduce the plastic bag waste that enters and impairs waterways. However, these programs are not expected to reduce litter as much as the Proposed Ordinance and do not apply to the entire Study Area; therefore, this alternative would not result in the general benefits with respect to litter reduction, hydrology, and water quality that are expected to result from*

5.46

⁶ Van Leeuwen, Anthony. 12 December 2012. “Negative Health and Environmental Impacts of Reusable Shopping Bags”. Located in Beacon Single Use Carryout bag Ordinance Draft Environmental Report SCH #2012111093 dated February 2013, Page 197 of 333.

⁷ Klick, Jonathan and Wright, Joshua D., Grocery Bag Bans and Foodborne Illness (November 2, 2012). U of Penn, Inst for Law & Econ Research Paper No. 13-2. Available at SSRN: <http://ssrn.com/abstract=2196481> or <http://dx.doi.org/10.2139/ssrn.2196481>

implementation of the Proposed Ordinance. Solid waste generation would not change from existing conditions and, therefore, there would be no impact related to solid waste facilities.” The statement refers to the Total Maximum Daily Loads program and the installation of trash capture devices that prevent plastic carryout bags and plastic debris from entering waterways and flowing down the river to the ocean and negatively impacting the marine coastal and ocean environments and marine wildlife. Plastic carryout bag litter are only a concern where people live, work, travel, and play. This area is smaller than the Study Area and is expected to be so, since there are large areas in both counties that consist of mountainous and remote terrain. While Alternative 1 does not reduce roadside litter, it uses less water and energy, and trash excluders will improve water quality by capturing trash including plastic bags.

5.46

46. Page 6-5, 3rd Paragraph. There is no evidence that paper bags cause entanglement of biological species, hence the risk is null. Remove the statement since it is unsubstantiated. This is a general comment and applies to other areas in the DEIR as well.

5.47

47. Page 6-7, 2nd Paragraph, Line 4. The reference to AB 258 should be removed. AB 258 is only applicable to pre-production plastic and not paper manufacturing.

5.48

48. Page 6-12, Table 6-10. The Total Electricity Use Per Year (KW) is 13,608,210 vice 9,938,578. Please correct.

5.49

49. Page 6-13, 2nd Paragraph, Line 4. The reference to AB 258 should be removed. AB 258 is only applicable to pre-production plastic and not paper manufacturing.

5.50

50. Page 6-13, 3rd Paragraph, Line 7. What is the increase in energy consumption with respect to washing reusable bags for Alternative 3?

5.51

51. Page 6-8, Paragraph 6.3.1. Clarification Requested. At first glance it appears that Alternative 3 changes the \$0.10 charge for paper bags to \$0.25. However, Alternative 3 also appears to include Alternative 2, as indicated in the statement: “This alternative would continue to prohibit Study Area retail establishment from providing single-use plastic bags ...”. Alternative 3 needs clarification so that the public and decision makers know exactly how it is different from the proposed ordinance. On page 6-9, 1st Paragraph, Line 4 the phrase “Because this alternative would apply to the same retailers as the Proposed Ordinance ...” is one clue that this Alternative does not include Alternative 2. Clarification requested.

5.52

52. Page 6-10, 1st Paragraph, Line 2. General Comment. By referencing the “Initial Study (Appendix A)” in the DEIR means that the initial study must be included with the final EIR. Unless required by CEQA guidelines, recommend that the information referenced be included in the current document.

5.53

53. Page 6-11, 4th Paragraph, Line 7. The reference to “2.6 times the emissions” applies only to LDPE reusable bags and not to the reusable bags that are most commonly used by consumers. See comment # 14.

5.54

54. Page 6-13, 2nd Paragraph, Line 4. The reference to AB 258 should be removed. AB 258 is only applicable to pre-production plastic and plastic manufacturers and potentially to plastic reusable bag manufacturers and not paper bag manufacturers.

5.55

55. Page 6-13, 4th Paragraph, Line 5. Alternative 3 does not necessarily generate less waste. All calculation are with respect to an LDPE reusable bag that weighs 10 times as much as a reusable bag, while Rincon’s reusable bag (6.8 ounces) weighs 30 times as much as a reusable bag. Since

5.56

- non-woven Polypropylene reusable bags are not recyclable in Ventura County, all such bags must be disposed of in the landfill. In addition, since consumers must replace plastic carryout bags reused as trash bags, the total amount of plastic going to the landfill will more than likely increase. Recommend a new analysis. 5.56
56. Page 6-13, Last Paragraph. Alternative 4 needs to be clarified as to whether it applies to all retail establishments or just the regulated retail establishments in the Proposed Ordinance. 5.57
57. Page 6-17, 3rd Paragraph, Line 7. The reference to “2.6 times the emissions” applies only to LDPE reusable bags and not to the reusable bags that are most commonly used by consumers. This comment also applies to Table 6-15 on page 6-18. See comment # 14. 5.58
58. Page 6-18, Table 6-15. The Total Electricity Use Per Year (KW) is 13,608,210 vice 9,938,578 based upon 3,557,702 loads per year cited. The number of loads per year was not updated based upon the increased/decreased quantity of reusable bags for this alternative. Please correct. 5.59
59. Page 6-19, 3rd Paragraph, Line 7. What is the increase in electrical energy for washing reusable bags for Alternative 4? The Total Electricity Use Per Year (KW) is 13,608,210 vice 9,938,578 based upon 3,557,702 loads per year cited. The number of loads per year was not updated based upon the increased/decreased quantity of reusable bags for this alternative. Please correct. 5.60
60. Page 6-25, 3rd Paragraph, Line 7. What is the decrease in electrical energy for washing reusable bags for Alternative 5? 5.61
61. Page 6-27, Paragraph 6.7. Alternative 4 is identified in the DEIR as the Environmentally Superior Alternative because it bans both plastic carryout and paper carryout bags. But is it? Alternative 4 accomplishes the following and demonstrates it is inferior to Alternative 1, the status quo: 5.62
- Has negligible impact on litter in county waterways and marine environment.
 - Reduces or eliminates less than 1% of roadside litter.
 - Increases consumption of energy (by 13,608,210 kW) and water (by 688 AFY) for washing reusable bags.
 - Non-woven polypropylene and cotton reusable bags are NOT recyclable in Ventura County and Santa Barbara County.
 - Each reusable bag weighs (Rincon’s bag = 6.8 ounces) as much as 30 plastic carryout bags resulting in the **equivalent of 361 million** plastic carryout bags deposited in landfills each year.
 - **31,266,466** plastic carryout bags will end up in landfill (95% of 32,912,070)
 - **263 million** plastic trash bags purchased to replace plastic carryout bags reused by consumers. (40% of **658,241,406** plastic carryout bags reused as trash bags).
 - $361 + 263 + 31 = \mathbf{655 \text{ million}}$ plastic carryout bag “equivalents” deposited in landfills.
62. Page 6-27, Paragraph 6.7. I would suggest that the environmentally superior alternative is Alternative 1. Alternative 1 avoids the increase in water and energy consumption and generation of greenhouse gases to wash reusable bags. In addition, Alternative 1 avoids increased truck traffic due to transport of paper bags. Plastic and paper bags are recyclable whereas the majority of reusable bags are **not recyclable** in Ventura County and must be 5.63

deposited in the landfill at the end of life. Alternative 1 also avoids the purchase of 263 million trash bags by consumers to replace 40% of plastic carryout bags that are repurposed as trash bags.

5.63

63. Page 6-27, Last two Paragraphs. These paragraphs are misleading. The following statement indicates that are impacts from implementing the proposed ordinance or one of the alternatives: *“It should be noted that the Proposed Ordinance would not result in any significant impacts;”* Therefore, the impacts associated with the proposed and each alternative compared to doing nothing (Alternative 1) should be clearly identified. For example in comment # 61 above, we demonstrate that there are real impacts and in the end, it doesn’t make a lot of difference, other than angering the public.

5.64

64. Page 6-28, Table 6-21. **Rework table. The table compares each alternative to the proposed ordinance rather than to the baseline condition which is Alternative 1. In so doing, it misleads and hides from the public and from decision makers the true impact upon the environment that the proposed ordinance and the alternatives provide. Alternative 1 has the least impact to the environment. Every other Alternative including the propose ordinance are detrimental to the environment.**

5.65

65. Entire Document. Recommendation. The DEIR can be simplified by not regurgitating the same information over and over. For example, the manufacturing of plastic, paper, and reusable bags could be placed in one section of the DEIR, discussed and left there. Since no plastic, paper, or reusable bag manufacturers are located in the Study Area, this information does not have to be repeated over and over again.

5.66

66. Entire Document. The environmental analysis in the DEIR is based upon an LDPE reusable bag. These bags are extremely rare and not normally found in major supermarkets. The most common bag is the non-woven polypropylene bag which cannot be recycled in Ventura County and most likely not in Santa Barbara County either. The DEIR analysis should be based upon the most common reusable bags such as the non-woven polypropylene bag and the cotton bag. **The DEIR as written is INVALID since the analysis was not based upon the reusable bags that consumers in the study area are expected to use.**

5.67

67. Entire Document. While the Total Maximum Daily Loads (TMDL) program is discussed in one section with a few words about reduction of trash in waterways the information is largely segregated from the rest of the document. No mention that the Trash TMDLs could eliminate plastic bags and other plastic debris from flowing into the ocean and sensitive environmental habitat areas thereby preventing harm to marine wildlife. The document continues to describe plastic bags flowing from the storm drain to the river and to the ocean and trash excluders are never mentioned. It is important for the public and for decision makers to accurately understand the magnitude of the problem as well as other projects that solve all or part of the problems this project intends to solve. **In addition, the public and decision makers also need to know that Watershed Protection District directors have stated that trash in county waterways is NOT a significant problem.** (See comment # 29 above.)

5.68

Letter 5

COMMENTER: Anthony van Leeuwen

DATE: March 25, 2013

Response 5.1

The commenter summarizes the information provided throughout the comment letter. Please see responses 5.2 through 5.68.

Response 5.2

The commenter speculates that the Proposed Ordinance would result in a proliferation of reusable bags since customers would be issued new reusable bags when they forget reusable bags and this would increase solid waste. The commenter recommends that the Proposed Ordinance limit reusable bag giveaways and limit the promotion and sale of reusable bags. The commenter does not provide any data to support this claim; therefore, the comment is speculative. The Draft EIR does analyze impacts to solid waste from carryout bags as a result of the Proposed Ordinance in Section 4.5, *Utilities*.

Response 5.3

The commenter requests that the requirement in the Proposed Ordinance that recyclable paper bags contain no old growth fiber be removed. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. The requested change would not address an identified significant environmental impact.

Response 5.4

The commenter requests that the requirement that recyclable paper bags have printed on them the amount of post-consumer content be removed. This comment pertains to the merits of the Proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR. The requested change would not address an identified significant environmental impact.

Response 5.5

The commenter notes that the terms “recycled paper bag” and “recyclable paper bag” are used interchangeably throughout the EIR. The Final EIR has been revised to consistently use the term “recyclable paper bag” to be consistent with the Proposed Ordinance.

Response 5.6

The commenter requests that the reference to AB 258 in Impact HWQ-2 in Table ES-1 be removed as this is applicable to pre-production plastic and not paper manufacturing. The following has been edited in the Final EIR to reflect the comment:



Page ES-5: Impact HWQ-2 A shift toward reusable bags and potential increase in the use of recyclable paper bags could increase the use of chemicals associated with their production, which could degrade water quality in some instances and locations. However, bag manufacturers would be required to adhere to existing regulations, including NPDES Permit requirement, ~~AB 258~~, and the California Health and Safety Code. Therefore, impacts to water quality from altering bag processing activities would be Class III, less than significant.

Response 5.7

The commenter asks if the proposed ordinance would be applicable to a fabric store that sells candy and soda and recommends that the language in the EIR and Proposed Ordinance be clarified regarding which stores would be regulated by the Proposed Ordinance. The Draft EIR uses the definition provided in the Proposed Ordinance. The Proposed Ordinance would apply to stores over 10,000 square feet which sell non-food items and some perishable food items.

Response 5.8

The commenter states an opinion that the EIR is biased in favor of paper bags because page 2-6 lists other uses of paper bags, but does not list other uses for plastic bags. The Draft EIR specifically states on page 2-5 that “single-use plastic bags can be reused by customers and are recyclable.”

Response 5.9

The commenter requests that the EIR address the recyclability and lifespan of all types of reusable bags. Please see responses 1.77 and 4.25.

Response 5.10

The commenter requests that the EIR address the potential loss of recycling bins for plastic bags that may result from the Proposed Ordinance. See Response 1.85.

Response 5.11

The commenter states a concern that with a plastic bag ban, retail stores would no longer be required by state law to maintain records. Under AB 2449, supermarkets and pharmacies that provide plastic carryout bags to customers are required to provide bins to collect plastic bags for recycling and maintain records describing the collection, transport and recycling of plastic bags collected. With the Proposed Ordinance, stores would no longer provide plastic carryout bags to customers and therefore would not be subject to AB 2249 requirements. However, the removal of the requirement to maintain records would not affect the findings of the Draft EIR. For more information on AB 2449 please also see responses 1.66 and 1.85.



Response 5.12

The commenter again questions which stores would be regulated by the Proposed Ordinance and asks if the Proposed Ordinance would apply to a fabric store that sells a limited line of snacks. Please see Response 5.7.

Response 5.13

The commenter again requests that the provisions in the Proposed Ordinance requiring paper bags to contain no old growth fiber and have 40% post-consumer recycled material be removed. Please see Response 5.3.

Response 5.14

The commenter speculates that most grocery stores would double bag paper bags so that the number of paper bags used would be higher than estimated. This comment is speculative. The number of plastic bags in the Study Area may also be underestimated because some grocery stores double bag plastic bags since plastic bags may rip or tear.

Response 5.15

The commenter states an opinion that the LDPE reusable bag used for the analysis throughout the Draft EIR is not representative of reusable bags used by the consumer. See Response 1.77.

Response 5.16

The commenter reiterates the previous comment that LDPE reusable bags are not one of the most common types of reusable bags. See Response 1.77.

Response 5.17

The commenter suggests that the Draft EIR's assumption that a reusable bag is used 52 times with a lifespan of 1 year is not valid and states that reusable bags must be used 100 times in order to offset their negative environmental impact. The Proposed Ordinance requires reusable bags to have a minimum lifetime of 125 uses. Please see responses 1.21 and 4.26.

Response 5.18

The commenter states that trash excluders would reduce the amount of litter that enters the environment and prevent harm to marine life. Please see Response 1.28.

Response 5.19

The commenter requests that the EIR should use the Los Angeles County's EIR assumption about the greenhouse gas impact rate per bag to show the greenhouse gas impacts from multiple types of reusable bags and not just LDPE reusable bags. Please see Response 1.77.



Response 5.20

The commenter requests that the EIR address impacts to landfills from reusable bags. The Draft EIR addresses these impacts in Section 4.5, *Utilities*, and finds that impacts to landfills would not be significant.

Response 5.21

The commenter states in Table 4.3-6 the description of consistency with “Recycling Education” is not adequate. Please see Response 1.150 regarding education.

Response 5.22

The commenter states that page 4.4-2 should clarify that 5% of plastic bags in California are recycled and 40% are reused as trash bags. The Draft EIR states on page 4.4-2 that “Only about 5% of the plastic bags in California are currently recycled.” The commenter does not provide a source for the number that 40% of plastic bags are reused as trash bags; therefore, this comment is speculative.

Response 5.23

The commenter suggests that a statement on page 4.4-2 is prejudicial because it says that “the majority of single use plastic bags end up as litter or in the landfill”, which implies that more of them end up as litter than at the landfill. The following change has been made to Page 4.4-2 to address this comment.

The majority of single use plastic bags end up ~~as litter or~~ in the landfill or as litter.

Response 5.24

The commenter requests consideration of the impact of reusable bag disposal on area landfills. Impacts to landfills are discussed in Draft EIR Section 4.5, *Utilities*.

Response 5.25

The commenter states that the Draft EIR’s assertion that reusable bags are typically reused until worn out is not accurate and speculates that reusable bags are often disposed of because the consumer got a new free bag or the bag got dirty. Please see responses 1.21 and 4.26.

Response 5.26

The commenter questions the discussion of pre-production plastic pellets on page 4.4-3 and requests that the reference to AB 258 and pre-production plastic pellets be removed from the EIR. The discussion on 4.4-3 relates to the manufacture of plastic bags and is intended to provide setting information related to the potential impacts that the manufacturing for various carryout bags (plastic, paper or reusable) may have on the existing environment. This



information is relevant to describing the potential impacts from carryout bags and therefore will not be removed from the discussion.

Response 5.27

The commenter states that the EIR should discuss chemicals in reusable bags and how they may affect plant and animal life. Please see responses 4.10 and 4.21.

Response 5.28

The commenter claims that it is unlikely that fertilizers would be present in the wood pulp or cotton used in the manufacture of paper bags and reusable bags, as is stated on page 4.4-3. The source for this claim is not given. Further, this information is not relevant to the EIR analysis. The information on page 4.4-3 is given as background information about the potential environmental impacts from the manufacturing of carryout bags.

Response 5.29

The commenter again requests that the reference to AB 258 and pre-production plastic pellets be removed. See Response 5.26.

Response 5.30

The commenter states that according to information from the Ventura County Watershed Protection District trash is not a significant issue in Ventura waterways and that this information should be disclosed in the EIR. Please see Response 1.28.

Response 5.31

The commenter states that plastic carryout bags represent less than 1% of roadside litter and, therefore, the conclusion that the Proposed Ordinance would result in a reduction in the amount of litter entering storm drains is inaccurate. The source for this data is not given. Regardless, even if true, this statistic would not change any of the Draft EIR conclusions.

Response 5.32

The commenter claims that the estimate of a 64% reduction in the number of carryout bags as a result of the Proposed Ordinance is too high since 40% of plastic carryout bags are used as waste can liners and consumers would have to replace these bags with other plastic trash bags. The source for this data is not given. Regardless, whether plastic carryout bags are used as waste can liners or not does not affect the assumption of the number of carryout bags reduced as a result of the Proposed Ordinance.

Response 5.33

The commenter claims that the amount of litter in Ventura waterways is not significant and trash excluders would prevent litter from entering the waterways. Please see Response 1.28.



Response 5.34

The commenter suggests that the EIR should address chemical levels in reusable bags and how chemicals may leach into the environment. Please see responses 4.10 and 4.21.

Response 5.35

The commenter again requests that the reference to pre-production plastic pellets on page 4.4-9 be removed. Please see Response 5.26.

Response 5.36

The commenter states that the reduction of plastic bags would be less than expected because there would be an increase in consumption of single-use plastic trash bags. The source for this data is not given; therefore, the comment is speculative.

Response 5.37

The commenter again requests that the reference to pre-production plastic pellets on page 4.4-9 be removed. Please see Response 5.26.

Response 5.38

The commenter restates the assertion in comment 5.34. Please see Response 5.34.

Response 5.39

The commenter again requests that the reference to pre-production plastic pellets and AB 258 on page 4.4-11 be removed. Please see Response 5.26.

Response 5.40

The commenter states that the numbers for water use for reusable bags are not representative because they only refer to LDPE bags. Please see Response 1.77.

Response 5.41

The commenter questions the estimates for the amount of reusable bag waste. In regard to solid waste impacts from reusable bags, please see response 2.32.

Response 5.42

The commenter requests that information about public health risks from reusable bags be included in the discussion on page 4.5-9 about washing reusable bags. Please see responses 2.5 and 4.20.



Response 5.43

The commenter requests inclusion of the amount of plastic, paper and reusable bags in terms of weight and volume together with estimates for recycling on page 4.5-11. Please see responses 1.117 and 2.14.

Response 5.44

The commenter suggests that baseline conditions should include the percentage of customers who use reusable, plastic and paper bags currently as this represents the baseline condition. Please see Response 1.57.

Response 5.45

The commenter opines that Alternative 1 (No Project) is superior to the Proposed Ordinance in regards to greenhouse gas emissions for various reasons as stated in several previous comments. The commenter goes on to state that installation of trash excluder will have a beneficial impact on sensitive species and that the remaining benefits of the proposed Ordinance are aesthetic.

The EIR in its analysis considers greenhouse gas emissions and water use associated with washing of reusable bags (see Response 2.13). Impacts related to an increase in paper bag use within the Study Area as a result of the Proposed Ordinance, including truck trips associated with transport of paper bags to retailers, are also discussed in the Draft EIR (see Response 4.13). Finally, and as previously discussed in Response 1.47, while the Draft EIR acknowledges that single-use plastic bags can be re-used by customers and are recyclable, the amount of reuse of plastic bags by the public in the Study Area is speculative.

The Draft EIR reasonably concludes that overall life cycle impacts attributable to reusable bags (if used multiple times as intended), whether made of plastics such as LDPE, or other materials such as cotton, are less than overall impacts due to plastic carryout bags (which are intended for a single use). Therefore, a switch from the use of plastic carryout bags to the use of reusable bags would generally result in a reduction in environmental impacts compared to the No Project Alternative, as discussed in Chapter 6.0, *Alternatives*.

Also, please see Response 1.28, which discusses the impacts of trash excluders.

Response 5.46

The commenter suggests that while Alternative 1 (No Project) would not reduce roadside litter, it would use less water and energy than the Proposed Ordinance and installation of trash excluders in Ventura County would improve water quality by capturing trash, including plastic bags. Please see Response 5.45 for a comparison of impacts between the Proposed Ordinance and No Project Alternative. Also, please see Response 1.28, which discusses the impacts of trash excluders.

Response 5.47

The commenter states that there is no evidence that paper bags cause entanglement of biological species. Please see Response 1.62.

Response 5.48

The commenter states that the reference to AB 258 should be removed as this is applicable to pre-production plastic and not paper manufacturing. The following has been edited in the Final EIR to reflect the comment:

Page 6-7: *"This alternative would be expected to result in the use of more paper carryout bags in the Study Area than would implementation of the Proposed Ordinance. However, as with the Proposed Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, ~~AB 258~~ and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as under the Proposed Ordinance and would remain Class III, less than significant."*

Response 5.49

The commenter states that the Total Electricity Use Per Year (KW) reported in Table 6-10 is 13,608,210 not 9,938,578. As the commenter notes, there was a transcription error in Table 6-10. The calculations in Appendix F of the Draft EIR contain the correct electricity use of 13,608,210 KW. The table in the Final EIR has been updated accordingly. However, the greenhouse gas emissions in the table in the Draft EIR are correct and thus the edits to the table in the Final EIR do not change the emissions level or the impact related to greenhouse gas emissions.

Response 5.50

The commenter states that the reference to AB 258 should be removed as this is applicable to pre-production plastic and not paper manufacturing. The following has been edited in the Final EIR to reflect the comment:

Page 6-13: *"This alternative would be expected to result in the use of fewer single-use paper carryout bags in the Study Area as compared to the Proposed Ordinance. However, it would not completely eliminate paper bags. As with the Proposed Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, ~~AB 258~~ and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as the Proposed Ordinance and would continue to be Class III, less than significant."*



Response 5.51

The commenter requests information on the increase in energy consumption with respect to washing reusable bags for Alternative 3. As shown in Table 4.3-3 of the Draft EIR, the total electricity use per year associated with washing reusable bags under the Proposed Ordinance would be 9,938,578 kW. Based on the revised figure of 13,608,210 kW included in Table 6-10, Alternative 3 would result in an estimated 3,669,632 kW increase in energy consumption due to washing reusable bags compared to the Proposed Ordinance. This information has been updated in Table 6-10. Please note that the greenhouse gas emissions in the table in the Draft EIR are correct and thus the edits to the table in the Final EIR do not change the emissions level or the impact related to greenhouse gas emissions.

Response 5.52

The commenter requests clarification as to whether Alternative 3 also includes the additional restrictions on distribution of single-use plastic carryout bags all retail establishments, except restaurants, included in Alternative 2.

Alternative 3 does not include the additional restriction included in Alternative 2. The sentence referenced in the comment, "This alternative would continue to prohibit Study Area retail establishments from providing single-use plastic bags at the point of sale..." refers to the retail establishments that would subject to the prohibition under the Proposed Ordinance. Please see Section 2.4 of the Draft EIR for a description of these retail establishments.

The following has been edited in the Final EIR to provide the requested clarification:

Page 6-8: *"This alternative would continue to prohibit Study Area retail establishments included in the Proposed Ordinance from providing single-use plastic bags to customers at the point of sale, but would increase the mandatory charge for a single-use paper bag from \$0.10 to \$0.25."*

Response 5.53

The commenter states that the Initial Study (Appendix A of the Draft EIR) should be included with the Final EIR. The Initial Study is included in Appendix A of the Final EIR.

Response 5.54

The commenter opines that the GHG emission rate used in the Draft EIR analysis applies only to LDPE reusable bags and not to the reusable bags most commonly used by consumers. Please see Response 4.25.

Response 5.55

The commenter again states that the reference to AB 258 should be removed as this is applicable to pre-production plastic and not paper manufacturing. See Response 5.50.



Response 5.56

The commenter disagrees with the figure used to represent the weight of the reusable bag. The commenter also notes that some types of reusable bags are not recyclable in Ventura County. The commenter goes on to repeat his previous assertion that the total amount of plastic going to landfill will increase due to the need to purchase additional trash can liners. In response to recyclability of reusable bags, please see Response 4.28. In regard to purchasing trash can liners, please see Response 1.47.

Response 5.57

The commenter requests clarification as to whether Alternative 4 applies to all retail establishments or just the retail establishments that would be regulated under the Proposed Ordinance. Alternative 4 would apply all retail establishments that would be regulated under the Proposed Ordinance. Please see Section 2.4 of the Draft EIR for a description of these retail establishments.

The following has been edited in the Final EIR to provide the requested clarification:

Page 6-13: *"This alternative would prohibit specified Study Area retail establishments, as defined by the Proposed Ordinance, from providing single-use plastic and paper carryout bags to customers at the point of sale."*

Response 5.58

The commenter suggests that the reference to "2.6 times the emissions" applies only to LDPE reusable bags and not to the reusable bags that the commenter suggests would be most commonly used by consumers. The commenter also notes that this comment applied to Table 6-15. Please see Response 5.56.

Response 5.59

The commenter states that the Total Electricity Use Per Year (KW) reported in Table 6-18 is 13,608,210, not 9,938,578 based upon the 3,557,702 loads cited. The commenter also states that the number of loads per year was not updated based upon the change in quantity of reusable bags for this alternative. As the commenter notes, there was a transcription error in Table 6-18. The calculations in Appendix F of the Draft EIR for Alternative 5 contain the correct KW and number of loads. The table in the Final EIR has been updated accordingly. However, the greenhouse gas emissions in the table in the Draft EIR are correct and thus the edits to the table in the Final EIR does not change the emissions level or the impact related to greenhouse gas emissions.

Response 5.60

The commenter requests information on the increase in energy consumption with respect to washing reusable bags for Alternative 4. As the commenter notes, there was a transcription error in Table 6-15. The calculations in Appendix F of the Draft EIR for Alternative 4 contain the



correct KW and number of loads. The table in the Final EIR has been updated accordingly. However, the greenhouse gas emissions in the table in the Draft EIR are correct and thus the edits to the table in the Final EIR does not change the emissions level or the impact related to greenhouse gas emissions.

Response 5.61

The commenter requests information on the reduction in energy consumption with respect to washing reusable bags for Alternative 5. As the commenter notes, there was a transcription error in Table 6-20. The calculations in Appendix F of the Draft EIR for Alternative 5 contain the correct KW and number of loads. The table in the Final EIR has been updated accordingly. However, the greenhouse gas emissions in the table in the Draft EIR are correct and thus the edits to the table in the Final EIR does not change the emissions level or the impact related to greenhouse gas emissions.

Response 5.62

The commenter questions the identification of Alternative 4 (Ban on Both Single-Use Plastic and Paper Carryout Bags) as the Environmentally Superior Alternative, citing various reasons the commenter believes that Alternative 4 is inferior to Alternative 1 (No Project).

Section 6.7 of the Draft EIR discusses the concept of the Environmentally Superior Alternative in comparison to the significance thresholds used throughout the Draft EIR, not the select reasons identified by the commenter. Also, unlike Alternative 1, Alternative 4 would meet the project objectives as identified in Section 2.6.

In addition, please see Responses 1.28, 1.47, 1.73, 1.117 and 4.19, which address each the following points: litter (Response 1.28), the availability of reusable bag recycling (Response 4.19), the number of reusable and plastic carry out bags which will be sent to landfill (Responses 1.116 and 2.32), and the need to replace plastic carryout bags with purchased trash can liners (Response 1.47). These responses were made in response to comments on the impacts of the Proposed Ordinance, but would be applicable to impacts resulting from implementation of Alternative 4 as well.

Response 5.63

The commenter states an opinion that Alternative 1 would be the environmentally superior alternative as it avoids: the increase in water use, energy use and greenhouse gas emissions associated with washing of reusable bags; the increase in truck traffic due to transport of paper bags; and the fact that many reusable bags are not recyclable in Ventura County. The commenter also states that Alternative 1 would avoid the purchase of additional trash bags to replace plastic carryout bags currently used as trash bags.

The commenter's support for Alternative 1 is noted and will be considered by the decision-makers as they review the Proposed Ordinance. However, the EIR determined that Alternative 4 would be the environmentally superior alternative when compared to the Proposed



Ordinance based on the totality of impacts expected to occur under each of the issue areas examined. Also, please see Response 5.65.

Response 5.64

The commenter suggests that the last two paragraphs on page 6-27 of the Draft EIR are misleading, including the reference to the fact that the Proposed Ordinance would not result in any significant impacts. The commenter also suggests that the impacts associated with the Proposed Ordinance and each alternative should be compared to the No Project Alternative.

The statement that the Proposed Ordinance would not result in any significant impacts is based on the analysis included in Sections 4.1 through 4.5 of the Draft EIR. The analysis and determination of impact significance in each of these sections is based on significance thresholds derived from Appendix G of the *State CEQA Guidelines*. As shown in the Draft EIR analysis, the Proposed Ordinance would not generate impacts exceeding any of the identified thresholds and therefore no significant impacts would occur.

The purpose of discussion in Section 6.7 is to compare the potential impacts associated with each of the alternatives against the potential impacts associated with the Proposed Ordinance, which in turn were determined based on the significance thresholds used in the analysis throughout the Draft EIR. As discussed in Section 6.7, Alternative 4 (Ban on Both Single-use Plastic and Paper Carryout Bags) would be considered environmentally superior among the alternatives based on the thresholds used in the Draft EIR, not the No Project Alternative as asserted by the commenter.

Response 5.65

The commenter suggests that Table 6-21 should compare the Proposed Ordinance and other alternatives considered against the No Project Alternative. The comment goes on to state that the No Project Alternative would have the least impact on the environment.

The purpose of Table 6-21 is to compare the potential impacts associated with each of the alternatives against the potential impacts associated with the Proposed Ordinance, which in turn were determined based on the thresholds used in the analysis throughout the Draft EIR. As such, each alternative is shown as either having superior, inferior or similar impacts in each of the examined issue areas when compared to the Proposed Ordinance. As discussed in Section 6.7 of the Draft EIR, Alternative 4, the Ban on Both Single-use Plastic and Paper Carryout Bags alternative, would be considered environmentally superior among the alternatives, not the No Project Alternative as asserted by the commenter.

Response 5.66

The commenter states an opinion that the EIR could be simplified by presenting certain types of information only once. This comment is noted.



Response 5.67

The commenter suggests that while the analysis in the Draft EIR includes an analysis of an LDPE reusable bag, the cotton reusable bag or non-woven polypropylene bag should also be evaluated as the commenter suggests that these bags are more commonly used. Please see Response 1.77.

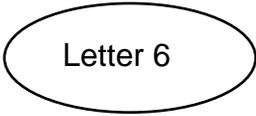
Response 5.68

The commenter suggests that the EIR should mention Trash TMDLs and trash excluders and the role they play in reducing trash entering the ocean and sensitive habitat areas. The commenter also references statements by Ventura County officials about the significance of trash in Ventura County waterways.

Please see Response 1.28. The opinions of the Ventura County officials cited are noted. However, the proposed project Study Area includes not only Ventura County and its municipalities (excluding Ojai) but also Santa Barbara County and its municipalities (excluding Carpinteria).



Mr. Gerald Comati, P.E.
Program Manager
Beach Erosion Authority for Clean Oceans and Nourishment
206 East Victoria Street
Santa Barbara, CA 93101



Subj: Comments on the Draft Environmental Impact Report (DEIR)

- Ref: (a) Notice of Availability of a Draft Environmental Impact Report BEACON Single Use Carryout Bag Ordinance dated 12 February 2013
- (b) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 4 March 2013
- (c) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 15 March 2013
- (d) Letter, From Anthony van Leeuwen To Gerald Comati (BEACON) dated 25 March 2013

6.1

Encl: (1) "Detailed Comments on BEACON Draft EIR", by Anthony van Leeuwen, dated 26 March 2013

1. Detailed comments in references (b), (c), and (d) were previously submitted in accordance with reference (a) as public input regarding the content of the BEACON Draft EIR and the proposed project.

2. In reviewing the totality of comments I submitted as public input in references (b), (c), and (d) the following observations are submitted:

6.2

- a. The team putting the BEACON draft EIR together should be commended for modeling the environmental impacts of consumers washing/sanitizing their reusable bags.
- b. Based upon a thorough review of the BEACON Draft EIR including my comments as submitted, the BEACON Draft EIR is deemed to be **deficient** and will require a complete **rewrite** for the following reasons:

6.3

- **Fails** to establish reasonable project objectives designed to achieve the best possible solution for the public and the environment and instead chose overly restrictive objectives leading to a preconceived solution.

6.4

- **Fails** to use the status quo as the baseline condition and instead **uses** the proposed ordinance as the baseline condition to hide detrimental impacts to the environment from the public and decision makers.

6.5

- **Fails** to establish a reasonable baseline condition for the status quo that reflects current plastic carryout bag, paper bag, and reusable bag usage by consumers.

- **Fails** to inform the public and decision makers that trash in county water-ways is not a "significant issue".

6.6

- **Fails** to inform the public and decision makers that the Watershed Protection District is taking aggressive action against what trash (including plastic bags) there is by installing trash excluders in storm drain catch basins.

<ul style="list-style-type: none"> • Fails to acknowledge that trash excluders will <u>prevent</u> trash including plastic carryout bags from flowing into rivers and creeks and the ocean thereby preventing harm to wildlife. 	6.6
<ul style="list-style-type: none"> • Fails to identify that rubbish traps and catch basins are inspected and cleaned out on a regular maintenance schedule to prevent clogging and flooding. 	
<ul style="list-style-type: none"> • Fails to identify that discarded fishing gear, nets, and fishing line are <u>responsible for entanglement</u> of wildlife and not plastic carryout bags. 	6.7
<ul style="list-style-type: none"> • Fails to acknowledge that <u>increased water</u> use for washing reusable bags might not be desirable in view that future water supplies are uncertain. 	6.8
<ul style="list-style-type: none"> • Fails to disclose that plastic carryout bags make up <u>less than 1%</u> of roadside litter. 	6.9
<ul style="list-style-type: none"> • Fails to disclose the danger reusable bags pose to the environment due to allowed amounts of <u>lead, cadmium, and other heavy metals</u> if discarded as litter. 	6.10
<ul style="list-style-type: none"> • Fails to disclose that reusable bags affect the <u>security posture</u> of a retail store resulting in increased shoplifting with losses recouped by higher prices. 	6.11
<ul style="list-style-type: none"> • Creates a perpetual <u>financial and paperwork burden</u> in reporting bag usage statistics to the controlling agency (county or municipality) 	6.12
<ul style="list-style-type: none"> • Creates a perpetual <u>expenditure of public funds</u> for enforcing the proposed ordinance, analyzing retail store reports, and creating reports for the city council or board of supervisors. 	6.13
<ul style="list-style-type: none"> • Fails to treat all members of the public equally by <u>granting an exemption</u> to the paper bag fee for those who are on public assistance and who will receive free paper bags each and every time they shop and who will have no <u>reason</u> to use reusable bags. 	6.14
<ul style="list-style-type: none"> • Fails to provide an exemption to the paper bag fee to the elderly living on meager social security earnings while granting that exemption for those on certain public assistance programs. 	
<ul style="list-style-type: none"> • Fails to use <u>reasonable</u> quantities for plastic carryout bags used in California, on a per capita basis, and in the Study Area. 	6.15
<ul style="list-style-type: none"> • Fails to use a <u>reasonable</u> quantity for reusable bags used in the study area. 	6.16
<ul style="list-style-type: none"> • Uses the <u>wrong</u> methodology to determine quantity of reusable bags. 	6.17
<ul style="list-style-type: none"> • Fails to account for <u>double bagging</u> of paper bags in quantities estimated. 	6.17
<ul style="list-style-type: none"> • Fails to perform the environmental analysis using the <u>type of reusable bags</u> most commonly used by consumers. 	6.18
<ul style="list-style-type: none"> • Uses an LDPE Reusable Bag that is very <u>rare</u> to do the environmental analysis. 	
<ul style="list-style-type: none"> • Fails to include <u>LDPE plastic carryout bags</u> in the environmental analysis. 	6.19
<ul style="list-style-type: none"> • Fails to identify that the most reusable bags are <u>not</u> recyclable in the Study Area. 	6.20
<ul style="list-style-type: none"> • Fails to identify that approximately 40% of plastic carryout bags were <u>repurposed</u> for use as trash bags. 	6.21

- **Fails** to identify that consumers will have to purchase replacement plastic bags for the plastic carryout bags that would have been repurposed as trash bags. | 6.21
 - **Fails** to include those replacement plastic bags purchased by consumers in the environmental analysis. |
 - **Fails** to identify that paper bags come in many different sizes. | 6.22
 - **Fails** to identify that plastic carryout bags are made from both HDPE and LDPE plastic resins. | 6.23
 - **Fails** to acknowledge the increased use of non-regulated plastic bags to prevent contamination of reusable bags by meat and poultry products. | 6.24
 - **Fails** to acknowledge the increased use of non-regulated plastic bags to protect paper bags from moisture condensation from frozen foods. |
 - **Fails** to address impacts on landfills and recycling activities by disposal of plastic, paper, and reusable bags. |
 - **Fails** to estimate the weight and volume of reusable bags headed for the landfill or recycling facility. | 6.25
 - **Fails** to estimate the weight and volume of paper bags headed for the recycling facility or the landfill. |
 - **Fails** to identify that banning plastic carryout bags may result in a loss of recycling facilities at retail stores for plastic bags and wraps since retail stores would no longer be obligated by state law to maintain recycling bins. | 6.26
 - **Fails** to include an integral recycling component in the proposed ordinance. |
 - **Fails** to include education about recycling of carryout bags as a component of the proposed ordinance. | 6.27
 - **Fails** to compute waste generated by a reusable carryout bags correctly. | 6.28
3. This memorandum is submitted in accordance with reference (a) and should become part of the official record, including links to documents available on the internet, regarding the Preparation of this EIR and development of model ordinances. For more information, please feel free to contact Mr. Anthony van Leeuwen at 805-647-4738 or by email at vanleeuwenaw@roadrunner.com. | 6.29

Respectfully,

Anthony van Leeuwen

Detailed Comments on Draft EIR

BEACON Single Use Carryout Bag Ordinance

By Anthony van Leeuwen, 26 March 2013

1. Page 4.4-2, 1st Paragraph, Line 1. The following statement needs some additional clarification: *“Single use bags that enter the storm drain system as litter may affect storm water flow by clogging drains and redirecting flow. ... Single use plastic bags that become litter can enter storm drains and may clog catch basins or be transported to the local watershed, the Study Area’s river systems, or the Pacific Ocean.”* First, installation of trash excluders in storm drain catch basins will prevent litter (including plastic bags and other plastic debris) from flowing into storm drains, rivers, and the ocean. The photo below shows a typical trash excluder installation in a storm drain catch basin in Ventura. It should be noted that each trash excluder is specifically designed for each application and that designs vary.



Figure 1. Photo of trash excluder. Photo Courtesy of the City of Ventura.

6.30

2. Page 6-1, Last Paragraph, line 13. The following statement fails to take into account that quantities of trash are decreasing in coastal areas: *“As discussed in Section 4.4, Hydrology and Water Quality, several programs are in place to reduce trash and pollution in Ventura County waterways. These existing programs would be in place in the No Project alternative and may reduce the plastic bag waste that enters and impairs waterways. However, these programs are not expected to reduce litter as much as the Proposed Ordinance and do not apply to the entire Study Area; therefore, this alternative would not result in the general benefits with respect to litter reduction, hydrology, and water quality that are expected to result from implementation of the Proposed Ordinance.”* In Figure 2, in a presentation¹, an official representing a municipality in Ventura County noted that the amount of trash collected during coastal cleanup events, despite an increase in the number of volunteers, are finding less litter and debris. Since most trash excluders have been or are being installed after 2010, it would be expected that litter in coastal areas would decrease significantly. In 2011 Coastal Cleanup² in Ventura County, 3,165 volunteers collected 12,810 lbs of trash; and in 2012, 3,346 volunteers collected 9,077 lbs of trash. Future collection events should see even less trash. In fact other public officials in

6.31

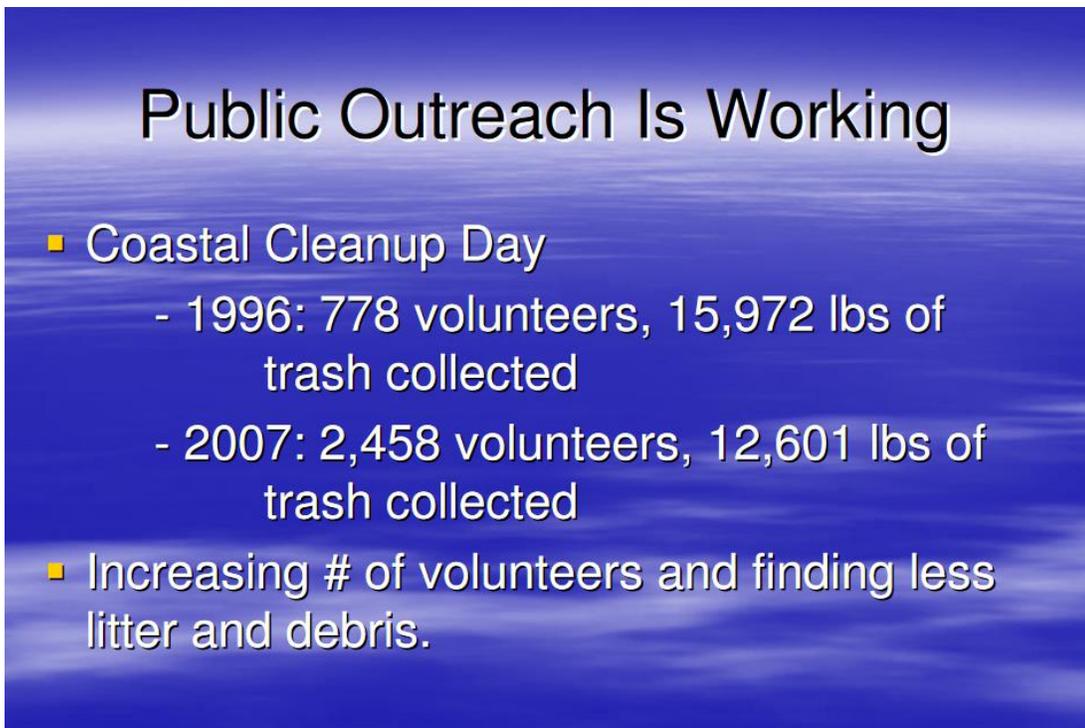


Figure 2. Less Litter and Debris

¹ Kroes, Shaun, City of Moorpark. “Trash Excluders” available at: http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/07_0920/presentation/Shawn_Kroes_City_of_Moorpark.pdf

² Ventura County Coastal Cleanup Website: <http://www.vccoastcleanup.org/>

Ventura County have stated that trash in Ventura County water-ways is **not a significant issue** as seen in the following slide.³ Furthermore, officials indicate an aggressive approach to trash management that includes installation of Trash Excluders and Receptacles in high priority catch basins.



Trash Management Program

- Trash is not a significant issue in the water-ways of Ventura County - less than 12 miles of water ways (vs. X total) listed;
- Nevertheless, we support taking an aggressive approach to trash management that provides flexibility to the municipality.
- Permit includes:
 - Prioritize all Catch Basin – 1 year
 - Install Trash Excluders and Receptacles in all High Priority catch basins, or enhanced trash management program;
 - Public Events – Temporary screens or clean out catch basins, receptacles and grounds within 24 hrs

6.31

³ Hubner, Gerhardt. 15 July 2009. "Update on Adopted Ventura County Municipal Stormwater Permit" Presentation to Calleguas Creek Watershed Steering Committee, Page 34. Available at: http://www.calleguascreek.org/ccwmp/meetings/Steering_Comm/071509/CC%20Steering%20Committee%20Final%20Permit%20SW%20Permit%20Overview%2007-14-.pdf

Letter 6

COMMENTER: Anthony van Leeuwen

DATE: March 26, 2013

Response 6.1

The commenter references previous comments submitted in response to the Notice of Availability for the Draft EIR. Please see responses to Letters 1, 2 and 5, which address these previously submitted comments.

Response 6.2

The commenter commends the EIR for modeling the environmental impacts associated with washing/sanitizing reusable bags. This comment is noted.

Response 6.3

The commenter prefaces the reasons that he believes the Draft EIR is deficient and needs to be rewritten. Please see responses 6.4 through 6.28 for responses to specific comments.

Response 6.4

The commenter suggests that the Draft EIR fails to establish reasonable project objectives. Please see responses 1.2 through 1.8.

Response 6.5

The commenter suggests that baseline conditions should include the current paper and reusable bag use in the Study Area. Please see Response 1.57.

Response 6.6

The commenter states an opinion that trash in the county waterways is not a significant issue and that the Watershed Protection District is installing trash excluders in storm drain catch basins. He goes on to state that trash excluders will prevent trash from entering waterways and that these facilities are regularly maintained. Please see Response 1.28.

Response 6.7

The commenter states that the Draft EIR does not identify that discarded fishing gear, nets and fishing line can cause entanglement of wildlife. While it is true that discarded fishing gear, nets and fishing line can cause entanglement of wildlife, the Draft EIR is not evaluating the impacts of these. The purpose of the Draft EIR is to evaluate the potential environmental impacts of the Proposed Ordinance, not other types of litter.



Response 6.8

The commenter states that the Draft EIR fails to acknowledge that increased washing of reusable bags might not be desirable given the uncertainty of future water supplies. Please see Response 1.29.

Response 6.9

The commenter opines that plastic carryout bags make up less than 1% of roadside litter. The commenter does not provide a source for 1% of roadside litter; therefore, this information cannot be verified and is speculative. Also, please see Response 4.6.

Response 6.10

The commenter claims that reusable bags pose a danger to the environment if discarded as litter due to the presence of heavy metals. Please see Response 4.10.

Response 6.11

The commenter speculates that an increase in reusable bag use would lead to an increase in shoplifting. Please see Response 2.4.

Response 6.12

The commenter speculates that the proposed Ordinance would result in an administrative and financial burden on the counties and municipalities. This comment pertains to the merits of the proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR, which is focused on the environmental effects of the Proposed Ordinance, as required by CEQA.

Response 6.13

The commenter asserts that enforcement and reporting on implementation of the proposed Ordinance would result in long term expenditure of public funds. This comment pertains to the merits of the proposed Ordinance and does not challenge or question the analysis or conclusions in the Draft EIR, which is focused on the environmental effects of the Proposed Ordinance, as required by CEQA.

Response 6.14

The commenter suggests that the Proposed Ordinance does not treat all members of the public equally by granting an exemption to the paper bag fee to some groups and not others. This comment relates to the merits of the Proposed Ordinance, and does not address, question or challenge the assumptions, information, analysis or conclusions in the Draft EIR.



Response 6.15

The commenter states an opinion that the Draft EIR does not use reasonable quantities for plastic carryout bag use per capita. Please see Responses 1.9, 1.15 and 1.17.

Response 6.16

The commenter states an opinion that the Draft EIR does not use a reasonable quantity for reusable bags used in the Study Area and that the wrong methodology was used to determine the quantity of reusable bags. Please see responses 1.21 and 1.22.

Response 6.17

The commenter states that the Draft EIR does not account for the practice of double bagging of paper bags in the quantities estimated. Please see Response 4.12.

Response 6.18

The commenter suggests that the type of reusable bag used in the analysis in the Draft EIR is rare and is not the type commonly used by customers. Please see Response 1.77.

Response 6.19

The commenter states that the Draft EIR does not include LDPE plastic carryout bags in the analysis. Please see responses 1.36 and 1.55.

Response 6.20

The commenter states that the Draft EIR does not identify that most reusable bags are not recyclable in the Study Area. The commenter does not provide a source for this assertion; therefore, this information cannot be verified and is speculative. In addition, as described in Response 1.117, Section 4.5, *Utilities and Service Systems*, provides information on the estimated solid waste generation rate for each type of bag utilizing EPA recycling rates to estimate the amount of solid waste that could eventually be sent to a landfill. In regard to the opportunity for recycling of reusable bags, this information is not pertinent to the impact threshold for solid waste, which relates to whether the Proposed Ordinance would generate waste exceeding the capacity of local waste disposal facilities. As discussed the Proposed Ordinance's projected future solid waste generation would remain within the capacity of regional landfills.

Response 6.21

The commenter suggests that the Draft EIR should identify that a percentage of plastic carryout bags are reused as trash bags and that an increase in purchase of plastic trash liners would occur as a result of the proposed Ordinance. Please see Response 1.47.



Response 6.22

The commenter notes that the Draft EIR does not consider that paper bags come in different sizes. Please see Response 1.46.

Response 6.23

The commenter notes that plastic carryout bags can be made from both LDPE and HDPE plastic resins. Please see responses 1.36 and 1.55.

Response 6.24

The commenter speculates that a shift to paper bag use would increase plastic bag use because frozen food items placed in paper would cause the paper bags to get wet and tear. The commenter also speculates that a shift to reusable bag use will increase plastic bag use due to wrapping of meat and poultry products. Please see Response 1.37.

Response 6.25

The commenter opines that more information needs to be supplied on impacts to landfills and recycling activities and information regarding volume and weight of material projected to go to landfill or recycling facilities is needed. Please see Response 1.117.

Response 6.26

The commenter speculates that the Proposed Ordinance would result in the loss of plastic bag recycling bins at stores, which also collect other recyclable products such as other plastic bags and plastic wraps. Please see Response 1.85.

Response 6.27

The commenter states that Draft EIR does not include a recycling component in the Proposed Ordinance, nor does it include education about recycling of carryout bags as a component of the proposed Ordinance. The Draft EIR determined that the proposed Ordinance would not result in any potentially significant impacts and did not require any mitigation measures since all impacts were determined to be less than significant. Therefore, the EIR does not require that a recycling component or education recycling program be added to the proposed Ordinance. However, this does not preclude decision-makers from including these components in any future Bag Ordinance considered for adoption by the individual counties and cities, subject to any required additional CEQA documentation.

Response 6.28

The commenter suggests that the Draft EIR does not compute waste generated by reusable carryout bags correctly. Please see Response 2.32.



Response 6.29

The commenter provides contact details and states that the letter should be treated as part of the public record. The comment letter is included as part of the Final EIR for the proposed project, which is part of the public documentation prepared in compliance with CEQA.

Response 6.30

The commenter recommends clarifying the Line 1, Paragraph 1 on page 4.4-2 of the Draft EIR to reflect the use of trash excluders in storm drains, suggesting that installation of trash excluders in storm drain catch basins would prevent litter from flowing into storm drains, rivers and the ocean. Please see Response 1.28.

Response 6.31

The commenter suggests that the discussion of the impacts of the No Project Alternative, when compared to the Proposed Ordinance in sub-section 6.1.2 of the Draft EIR, does not take into account a decreasing trend in litter observed during coastal cleanup events or statements by Ventura County officials about the significance of trash in Ventura County waterways.

As noted in the Section 4.4, *Hydrology and Water Quality*, and transcribed in text of the comment, there are several programs in place to reduce trash and pollution in Ventura County waterways. These programs include installation of trash excluders. Section 6.1.2 of the Draft EIR goes on to acknowledge that these existing programs would be in place in the No Project alternative and may reduce the plastic bag waste that enters and impairs waterways.



STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0037
(916) 319-2037
FAX (916) 319-2137

DISTRICT OFFICE
101 WEST ANAPAMU STREET
SUITE A
SANTA BARBARA, CA 93101
(805) 564-1649
FAX (805) 564-1651



March 26, 2013

Letter 7

Gerald Comati, P.E., Program Manager
BEACON
206 East Victoria Street
Santa Barbara, CA 93101

RE: Single Use Carryout Bag Ordinance Draft Environmental Impact Report

Dear Mr. Comati,

Thank you for undertaking this regional EIR to study a Single Use Carryout Bag Ordinance for the Santa Barbara and Ventura County area.

Environmental impacts from single use plastic carryout bags are countless, and our region's residents have already begun to change behavior by bringing more reusable bags out when shopping, but I believe that public policy and laws are needed to carry us that final mile.

7.1

While I would encourage adoption of the Proposed Ordinance, I would want to make sure that by leaving paper bags in the equation, we do not end up with the unintended consequence of increasing paper bag use.

I would suggest that a consumer educational component about the emissions caused by paper bag production and recycling is included as the ordinance is rolled out. This education component would be an additional disincentive to the ten cent fee per paper bag, arming consumers with knowledge about why reusable bags are superior to single-use paper bags.

7.2

Thank you for your work on this EIR and for your continued commitment to protecting and enhancing our precious environment on the Central Coast.

Sincerely,

DAS WILLIAMS
Assemblymember, 37th District

Letter 7

COMMENTER: Das Williams, Assemblymember, 37th District

DATE: March 25, 2013

Response 7.1

The commenter states the opinion that while he encourages adoption of the Proposed Ordinance, an unintended consequence of increasing paper bag use may occur. As stated in Section 2.0 (*Project Description*), the Draft EIR assumes that plastic bag use will be reduced by 95% and paper bag use will increase by 30%. These assumptions are conservative and are considered reasonable based upon the best available sources of information. The analyses included in the Draft EIR are based on the assumption that paper bag use will increase following adoption of the Proposed Ordinance and the consequences of this increase are discussed throughout the Draft EIR.

Response 7.2

The commenter suggests inclusion of a consumer educational program regarding the emissions caused by paper bag production as an additional disincentive to the ten cent per paper bag fee. This suggestion is noted and may be considered by the individual county and city decision makers as they review the project. The Proposed Ordinance allows for use of the charges collected by a store for paper carryout bags to fund educational materials or an education campaign encouraging the use of reusable bags. The implementation and content of these campaigns would be at the discretion of the individual stores under the existing text of the Proposed Ordinance, but could include information on the emissions associated with paper bag production.



714 Bond Avenue
Santa Barbara, CA 93103

tel 805.563.3377
fax 805.687.5635

info@sbck.org
www.sbck.org

March 28, 2013

Beach Erosion Authority for Clean Ocean and Nourishment (BEACON)
Gerald Comati, P.E., Program Manager
206 East Victoria Street
Santa Barbara, CA 93101
Email: comati@Beacon.ca.gov

Letter 8

Re: *Draft EIR for Single Use Carryout Bag Ordinance*
State Clearing House #: 2012111093

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Dear Mr. Comati:

Santa Barbara Channelkeeper is a non-profit environmental organization dedicated to protecting and restoring the Santa Barbara Channel and its watersheds through science-based advocacy, education, field work and enforcement. Channelkeeper has reviewed the Draft Environmental Impact Report (DEIR) for the Single Use Carryout Bag Ordinance, and we are pleased with the analysis and conclusion that the benefits of eliminating single-use disposable bags are significant. We are writing to express our support for BEACON to adopt the DEIR so that BEACON members can move forward on adopting proposed bag ordinances in their jurisdictions.

8.1

As of March 25, 2013, 72 local jurisdictions in California have already taken similar action. Santa Barbara and Ventura counties are literally surrounded by municipalities that have enacted bag reduction ordinances. To the north, San Luis Obispo County and all its municipalities and to the south Los Angeles County, Santa Monica, Calabasas all have active bag ordinances, not to mention that the City of Los Angeles will also be adopting a bag ordinance in the near future. The timing is perfect for municipalities within Ventura and Santa Barbara counties to also take action to address the impacts of single-use bags.

8.2

Under the Municipal Regional Stormwater Permits (MRP) adopted by Ventura and Santa Barbara counties and municipalities, there is already significant pressure to reduce litter and trash makings its way to the waterways. Due the nature of the single-use plastic bags, they all too often end up as unintended litter. Bag ordinances, such as the proposed project for this DEIR will go a long way towards reducing their incidents as litter.

8.3

Channelkeeper also thanks you for the opportunity to provide additional, detailed comments on the DEIR.

Definition of Single-Use Plastic Bag

Section 2.4 defines single-use carryout bags as bags made predominantly of plastic derived from either petroleum, or biologically-based sources. But as the DEIR later states in Section 2.3.1, most bags in the United States are made from natural gas. Therefore, we would strongly encourage all definitions of single-use plastic bags to be defined as bags made predominantly of plastic derived from petroleum, natural gas or biologically-based sources.

8.4



We also recommend that data analyzed for the Table 2.2 “Replacement Assumption” also take in account more recent actual data available from the County of Los Angeles Department of Public Works¹ rather than older, estimated data. This is especially important since this data from this table is cited throughout the DEIR.

Thank you for your consideration of the above comments. Please feel free to contact us should you have any questions.

Sincerely,



Penny Owens
Education Coordinator
Santa Barbara Channelkeeper

¹ “About the Bag: County Staff Update.” County of Los Angeles. Dept. of Public Works. 2012:9. Web. 25 March 2013.
<http://ladpw.org/epd/aboutthebag/>

Letter 8

COMMENTER: Penny Owens, Education Coordinator, Santa Barbara Channelkeeper

DATE: March 28, 2013

Response 8.1

After introducing and describing the Santa Barbara Channelkeeper organization, the commenter states general agreement with the analysis and conclusions in the Draft EIR and expresses support for the adoption of the Final EIR by BEACON. This comment is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 8.2

The commenter lists other jurisdictions in the region that have enacted, or will soon enact, similar single-use bag reduction ordinances. The comment is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 8.3

The commenter states an opinion that plastic bags present a litter issue and that Proposed Ordinance would reduce the incidents of plastic bags as litter. Reduction of litter is one of the project objectives, as noted in Draft EIR Section 2.0, *Project Description*.

Response 8.4

The commenter states an opinion that the definition of plastic bags in the Proposed Ordinance should explicitly reference natural gas in the definition of single use plastic bags. The recommendation to amend the text of the Proposed Ordinance to explicitly reference the fact that plastic derived from natural gas can be used in the manufacture of plastic bags is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance. As noted by the commenter, Section 2.3 (*Existing Characteristics*) of the Draft EIR acknowledges that the HDPE (high density polyethylene) bag cycle begins with either the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers. Inclusion of a reference to natural gas in the text of the Proposed Ordinance would not affect the findings of the Draft EIR.

Response 8.5

The commenter provides a link to the County of Los Angeles Department of Public Works website, indicating that recent data is available that could be used in the EIR.



It is assumed that the information being referenced on the County of Los Angeles Department of Public Works website is the fact that the Los Angeles County ordinance, which banned single-use plastic carryout bags at stores in the County unincorporated areas and imposed a charge of ten cents per paper bag provided to customers, has resulted in a 95% reduction in overall single use bag usage (both plastic and paper), which includes eliminating all single use plastic bags and a reduction of over 30% in paper bag usage.

As acknowledged throughout the Draft EIR as well as in the response to a number of comment letters, the Draft EIR assumptions and analysis are conservative to allow for identification of the worst case scenario. While acknowledging that the cited information has merit, a conservative approach is prudent, particularly as no significant impacts or potentially significant impacts requiring mitigation are identified in the Draft EIR. The information cited by the commenter is acknowledged and referenced via this comment letter.



Letter 9

March 28, 2013

Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)
501 Poli Street
Ventura, CA 93001
Contact: Gerald Comati, P.E., Program Manager. Staff@BEACON.ca.gov
Sent via email and mail

RE: Comments on BEACON Bag Ban Project Draft Environmental Impact Report

Dear Mr. Comati,

On behalf of the undersigned and our thousands of members, we thank you for giving us the opportunity to provide written comments on the BEACON Bag Ban Project Draft Environmental Impact Report ('DEIR') for the proposed ordinance addressing single-use checkout bags.

Hundreds of millions of single-use plastic checkout bags are used in Santa Barbara and Ventura Counties every year.¹ Despite both voluntary and statewide efforts to implement recycling programs, the statewide recycling rate for plastic bags remains around five percent or less;² the majority of single-use plastic checkout bags – even if reused once or twice by consumers – end up in our landfills or as part of the litter stream, polluting our inland and coastal communities and wasting taxpayer dollars on cleanup costs.³

9.1

For these reasons, we fully support the steps that BEACON and member agencies have taken to draft a model ordinance for the region banning plastic single-use bags and completing the CEQA

¹ BEACON. 'Single-Use Bag Reduction Ordinance DEIR.' January 2013, pg 2-3.

² County of Los Angeles. Dept. of Public Works. *Los Angeles County Plastic Bag Study: Staff Report to the Los Angeles County Board of Supervisors.* Aug. 2007: 2. Print; See also *2009 Statewide Recycling Rate for Plastic Carryout Bags: At-Store Recycling Program* (Apr. 6, 2011) Cal. Dept. of Resources Recycling & Recovery <<http://www.calrecycle.ca.gov/Plastics/AtStore/AnnualRate/2009Rate.htm>> [as of Dec. 6, 2012] [reporting that the statewide recycling rate for plastic bags was only about 3 percent in 2009].

³ For example, California spends approximately \$25 million annually to landfill discarded plastic bag waste. See "Shopping? Take Reusable Bags!" CalRecycle. 23 Nov. 2011. Web. 16 Oct. 2012. <<http://www.calrecycle.ca.gov/publiced/holidays/ReusableBags.htm>>. These cleanup costs do not reflect the energy costs associated with producing single-use bags, impacts to recycling processors or the negative socio-economic, public health and environmental costs associated with single-use bag litter.

review process. A ban on plastic bags coupled with a fee on single-use paper bags will be a major step in reducing the economic waste and environmental impacts that checkout bags create.

We do not believe that the proposed ordinance will result in negative environmental impacts. Rather, similar ordinances have changed consumer behavior and have resulted in an increased use of reusable bags, a more sustainable alternative to single-use bags. Accordingly, an Environmental Impact Report (“EIR”) may not be necessary for the proposed ordinance.⁴ We recognize BEACON’s desire to assess new information and address issues that have been the subject of past bag ban legal challenges. With these points in mind, we request that the following comments be carefully considered in preparing the Final EIR.

9.2

I. Replacement Assumption and Effectiveness of Bag Bans

In Table 2-2, the 'Replacement Assumption' should take into consideration that some people will opt-out of a bag(s) as a result of the ordinance and the Replacement Assumption should total slightly less than 100%. Recent data from LA County Dept. of Public Works shows a decrease in paper bag usage after a similar carryout bag ordinance as the one proposed by BEACON went into effect.⁵

9.3

In addition, the table uses old estimated data rather than newer actual data, so that also distorts impacts in multiple places in the DEIR. The recent actual data reported from LA County Dept. of Public Works should at least be mentioned in the final EIR.

The proposed charge on single-use paper bags and a ban on plastic bags are intended to reduce the use of these bags and encourage consumers to use a reusable bag.⁶ However, many of the environmental concerns expressed in the Project Description appear to stem from the assumption that the proposed ordinance may lead to a shift from plastic to paper single-use bags. We do not believe that the proposed ordinance will lead to an increase in the use of paper bags, and the experiences in nearby Los Angeles County supports the effectiveness of point of sale charges in preventing this increase from occurring. Specifically, Los Angeles County recently announced that its ordinance, which became fully effective in 2012 and imposes a charge on paper bags, has resulted in a 94% reduction in overall single-use bag usage (both plastic and paper).⁷

9.4

Additionally, a recent study by Team Marine at Santa Monica High School that observed over 50,000 shoppers showed a marked increase of customers opting for no bag after the Santa Monica checkout bag ordinance was implemented.⁸

⁴ A number of California cities and counties found that the proposed bag ordinances would not have a significant effect on the environment and issued negative declarations or mitigated negative declarations. *See, e.g.*, the City of Dana Point, the City of Malibu, the County of Santa Clara, the County of Santa Cruz (mitigated negative declaration), and the City of Laguna Beach.

⁵ LA County Staff Update, Nov. 2012. <http://ladpw.org/epd/aboutthebag/PDF/Bag%20Ban%20Status%20Nov%202012.pdf>

⁶ BEACON. 'Single-Use Bag Reduction Ordinance DEIR.' January 2013, pg ES-1

⁷ “About the Bag.” County of Los Angeles. n.d. Web. 16 Oct. 2012. <<http://dpw.lacounty.gov/epd/aboutthebag/index.cfm>>.

⁸ “The Effects of the Plastic Bag Ban on Consumer Bag Choice at Santa Monica Grocery Stores.” Team Marine at Santa Monica High School. http://www.teammarine.org/wp-content/uploads/2013/03/Grocery-Store-Bag-Research_Press-Release-12-13.pdf

Charges on single-use bags in Ireland (PlasTax on plastic single-use bags) and Washington, D.C., (5-cent charge on both plastic and paper single-use bags) have also dramatically reduced single-use bag consumption in those locations.⁹ This type of data and the effectiveness of bag ordinances in addressing single-use bag waste should be considered further as BEACON finalizes the CEQA analysis.

9.4

Eleven months after the City of San Jose enacted its plastic bag ban, its 2012 litter surveys indicate that plastic bag litter has been reduced by “approximately 89 percent in the storm drain system, 60 percent in the creeks and rivers, and 59 percent in City streets and neighborhoods, when compared to pre-ordinance data.”¹⁰

II. Reusable Bags

The proposed model ordinance would ban plastic checkout bags and place a ten-cent fee on paper checkout bags as an incentive for people to remember their reusable bag, or go without a bag for small purchases. It is important to wash reusable bags and page 4.5-9 states of the DEIR that “50+% of reusable bags are being washed in existing loads” but the analysis following that statement assumes ALL bags would be washed separately.

9.5

We believe that 100% of reusable bags being washed separately overstates the water supply and wastewater generation impacts. Stating that an estimated 60-90% of bags would be washed separately would still represent a conservative estimate while providing a more realistic look at the water supply and wastewater generation impacts. All of the reusable bags are still being washed, just not in separate loads.

III. Discussion of Alternatives

While the model ordinance language was well refined over time by the Santa Barbara City Council, it is good to explore other options. The proposed project would ban plastic single-use carryout bags at the point of sale in certain retail stores, require retailers to provide reusable bags to consumers for sale or at no charge, and mandate a \$0.10 fee on recycled content paper single-use carryout bags at the point of sale.¹¹

9.6

We feel the project as proposed is the best option and offer the following insight on the other alternatives.

⁹ The 5-cent fee on single-use bags was implemented in Washington, D.C. in January 2010. The District of Columbia Office of Tax and Revenue estimated that establishments covered by the fee issued approximately 3 million bags in January 2010 (post-fee), an 86 percent decrease from the 22.5 million bags issued per month in 2009. See <<http://www.washingtonpost.com/wp-dyn/content/article/2010/03/29/AR2010032903336.html>>. More recently, officials in Washington, D.C. note that a drop in fee revenue is an indication that paper and plastic bag usage continues to be down. See, “Officials rejoice over low 5-cent bag fee revenue.” WTOP 4 Oct. 2012. Web. 16 Oct. 2012 <<http://www.wtop.com/?nid=893&sid=3062667>>. Similarly, after imposing a levy on plastic carry-out bags, usage in Ireland dropped by over 90%. See “Plastic Bags.” Ireland Department of the Environment, Heritage & Local Government. n.d. Web. 16 Oct. 2012. <<http://www.environ.ie/en/Environment/Waste/PlasticBags/>>.

¹⁰ City of San Jose Staff Report. December 2012.

www3.sanjoseca.gov/clerk/CommitteeAgenda/TE/20121203/TE20121203_d5.pdf

¹¹ BEACON. ‘Single-Use Bag Reduction Ordinance DEIR.’ January 2013, pg ES-1

Alternative 1: “No Project Alternative”

As reflected in the DEIR, plastic carryout bags impact Santa Barbara and Ventura County communities and pose local environmental threats. If Alternative 1 were selected, there would be no policy adopted and implemented. We agree with the statement that under this scenario “this alternative would not result in the general benefits with respect to litter reduction, hydrology, and water quality that are expected to result from implementation of the Proposed Ordinance.” Given the extensive environmental and economic impacts associated with single-use bag litter, we do not support selection of the “no project” alternative.

9.7

It is a requirement to look at the no project alternative but it is clear this alternative is not desirable because it would not adopt the beneficial environmental aspects of the proposed project.

Alternative 2: Ban on Single-Use Plastic Bags at all Retail Establishments, Except Restaurants

Expanding the model ordinance to include all retailers would be a desirable option. Many people claim that ‘a plastic bag is a plastic bag’ and say that all retailers should be covered. We did not see a place in the DEIR or model ordinance language that analyzes what percentage of plastic checkout bags would be eliminated by the model ordinance. Would ‘big box’ stores that don’t sell food be covered by the model ordinance? Either way, expanding the ordinance to more retailers would increase the environmental benefits of the project.

9.8

Additionally, the ordinance should consider covering restaurants, as part of the ordinance. In September 2012, the City of San Francisco successfully defended litigation, brought by the Save the Plastic Bag Coalition, which centered on the legality of bag bans in restaurants. The Superior Court ruled that a bag ban in all retail stores and restaurants complied with the relevant sections of the California Environmental Quality Act and the California Retail Food Code.¹²

9.9

Alternative 3: Mandatory Charge of \$0.25 for Paper Bags

A higher mandatory charge for paper bags would likely reduce the consumption of paper bags and be an added benefit to the environment. However, the ordinance structure proposed in Alternative 3 would differ from other single-use bag ordinance enacted by nearby municipalities, including San Luis Obispo County, the County of Los Angeles and City of Malibu. Accordingly, while we support Alternative 3 as a policy likely to change consumer behavior and promote broad use of reusable bags, we urge BEACON and member agencies to adopt the proposed project.

9.10

Alternative 4: Ban on Both Single Use Plastic and Paper Carryout Bags

Alternative 4, which prohibits single-use plastic and paper carryout bags, would achieve great

9.11

¹² Surfrider Legal Blog, “San Francisco Wins Legal Battle Over Plastics Industry,” available at <http://www.surfrider.org/coastal-blog/entry/city-of-san-francisco-wins-legal-battle-over-plastics-industry>.

environmental benefits by significantly reducing the number of single-use carryout bags in Santa Barbara and Ventura Counties, thereby encouraging retail customers to shift to reusable bags (or no bags). However, the ordinance structure proposed in Alternative 4 would differ from other single-use bag ordinance enacted by nearby municipalities, including San Luis Obispo County, the County of Los Angeles and City of Malibu. Accordingly, while we support Alternative 4 as a policy likely to change consumer behavior and promote broad use of reusable bags, we urge BEACON and member agencies to adopt the proposed project.

9.11

Alternative 5: Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags

Statewide legislation recently expired (AB 2449) that prevented municipalities from placing a pass-through fee on plastic bags. In addition, legal decisions in favor for paper bag fees in checkout bag ordinances in relation Prop 26 have paved the ways for municipalities to enact fee-based ordinances for plastic checkout bags. While a ten-cent charge for paper or plastic checkout bags would have a moderate positive impact compared to no project, it would not meet the same litter reduction as a ban on plastic bags. We often support fee-based options but this is one of the weaker alternatives considered.

9.12

It will also be important to include a provision in the model ordinance that will place a minimum charge on reusable bags. This would help prevent a flood of reusable bags to be given away that barely meet the minimum requirements and may be abused like current checkout bags. Exceptions should be considered for short-term giveaways around Earth Day, etc.

9.13

As a side note, it was good to see that an exception for bioplastic bags was rejected as an alternative.

9.14

Section 6.7, the 'Environmentally Superior Alternative', should also take into account or make note of which type of ordinance would be most accepted by municipalities in the study area and truly be superior. It is important that there is not a patchwork of different ordinances in the study area and the EIR can help prevent that with further analysis and proper recommendation.

9.15

IV. Additional Considerations

Documents Considered during the CEQA Analysis

Moving forward with the CEQA analysis, BEACON should review and consider the studies, reports, articles, videos and other documents referenced in the attached Appendix. The information and data presented in these documents will be relevant to the BEACON's review of potential environmental impacts associated with single-use and reusable bags. These documents may also assist in further developing the public education component of the ordinance.

9.16

Prop 26 and Reusable Bag Health Concerns

Proposition 26 lawsuits in regards to paper bag charges have been decided in favor of bag ordinances as courts decide that a pass-through bag fee is not a tax under the definition.¹³ Health scares related to reusable bags have made headlines in the past year but appear to be unfounded.¹⁴¹⁵

9.17

Summary

As BEACON continues to develop the final EIR, it is critical that the comments above and the information in the attached Appendix are considered in the analysis. We appreciate the commitment to reduce the economic waste and environmental impacts associated with checkout bag litter by drafting the proposed ordinance, and we urge BEACON to move forward as quickly as possible in completing the CEQA review process. A checkout bag ordinance for the area municipalities is long overdue.

9.18

Sincerely,

Bill Hickman, Rise Above Plastics Coordinator
Surfrider Foundation

Kirsten James, Water Quality Director
Heal the Bay

Leslie Mintz Tamminen, Ocean Program Director
Seventh Generation Advisors

¹³ <http://www.surfrider.org/coastal-blog/entry/appeals-court-rules-for-la-county-bag-ban-and-against-plastics-industry>

¹⁴ San Francisco Dept. of Public Health Memo. February 8, 2013, updated February 10, 2013. Tomas J. Aragon, MD, DrPH, Health Officer. http://blogs.berkeley.edu/wp-content/uploads/2013/02/SF-Health-Officer-MEMO-re-Reusable-Bag-Study_V8-FIN1.pdf

¹⁵ <http://www.surfrider.org/coastal-blog/entry/reusable-bags-are-dangerous-dont-believe-the-hype>

Appendix

Forthcoming Documents

California. State Water Resources Control Board. Statewide Policy for Trash Control in Waters of the State. Forthcoming.

Environmental Impact Reports, TMDLs and Related Policies, Reports, and Legal Documents

California Plastic Bag Amicus Brief. December 2012.

<https://dl.dropbox.com/u/2494842/LA%20Plastic%20Bag%20Amicus%20Brief%20%2812.13.12%29.pdf>

California. State Water Resources Control Board. Los Angeles Regional Water Quality Control Board. "Marine Debris TMDL for Santa Monica Bay Nearshore and Offshore." Print.

---. ---. "Trash TMDL for Ballona Creek and Wetlands." Print.

---. ---. "Trash TMDL for Los Angeles River Watershed." Print.

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California Ocean Protection Council. *Resolution on Reducing and Preventing Marine Debris.*"

8 Feb. 2007. Web. 16 Oct. 2012 <<http://www.opc.ca.gov/2007/02/resolution-of-the-california-ocean-protection-council-on-reducing-and-preventing-marine-debris/>>.

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City of San Jose. *Draft Environmental Impact Report: Single-Use Carryout Bag Ordinance*. Oct. 2010; *First Amendment to Draft Environmental Impact Report*. Oct. 2010). Web. 16 Oct. 2012 <<http://www.sanjoseca.gov/planning/eir/eir.asp>>.

City of Santa Monica. *Single-use Carryout Bag Ordinance: Initial Study*. Mar. 2010. Web. 16 Oct. 2012 <http://www.smgov.net/uploadedFiles/Departments/OSE/Task_Force_on_the_Environment/TFE_2010/Attachment%205_Bag%20Ordinance_Final%20Initial%20Study.pdf>.

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<http://www.smgov.net/uploadedFiles/Departments/OSE/Business/Santa_Monica_Single-use_Carryout_Bag_Ordinance_FEIR%5B1%5D.pdf>.

County of Los Angeles. Dept. of Public Works. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County: Initial Study*. Dec. 2009. Web. 16 Oct. 2012
<http://ladpw.org/epd/aboutthebag/PDF/Initial_Study_12012009.pdf>.

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Green Cities California. *Master Environmental Impact Assessment on Single-Use and Reusable Bags*. Mar. 2010. Print.

Hilex Poly Company, LLC v. Chicoeco, Inc. dba ChicoBag, No.3-11-cv-0016 (D.S.C. 2011), expert report of Jenna R. Jambeck (on file with 7th Generation Advisors).

Maryland. Dept. of the Environment. "TMDL for Trash for Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and District of Columbia." Print.

Schmeer v. County of Los Angeles (Los Angeles Cnty. Super. Ct. No. BC 470705) (holding that the 10-cent charge on paper bags is not a tax under the California Constitution). Web. 16 Oct. 2012.
<<http://plasticbaglaws.org/litigation/los-angeles-county/>>.

Schmeer v. County of Los Angeles (B240592, app. pending). Respondent's brief. *Forthcoming* post on LA Law Library. Web. <<http://www.lalawlibrary.org/research/briefs/B240592/>>. (Also on file with 7th Generation.)

Marine Debris Articles and Websites

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Browne M, Dissanayake A, Galloway T, Lowe D, Thompson R. "Ingested Microscopic Plastic Translocates to

- the Circulatory System of the Mussel, *Mytilus edulis* (L.).” *Environmental Science & Technology* 42.13 (2008): 5026-5031. Print
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- Jacobsen, J.K., et al. "Fatal ingestion of floating marine debris by two sperm whales (*Physeter macrocephalus*)." *Marine Pollution Bulletin* 60 (2010):765-767. Print
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Letter 9

COMMENTER: Bill Hickman, Rise Above Plastics Coordinator, Surfrider Foundation; Kirsten James, Water Quality Director, Heal the Bay; and, Leslie Mintz Tamminen, Ocean Program Director, Seventh Generation Advisors

DATE: March 28, 2013

Response 9.1

The commenters express thanks for the opportunity to comment on the content of the Draft EIR and state their support for the steps taken to date to draft a model ordinance banning single use plastic bags. The support for the model ordinance is noted.

Response 9.2

The commenters state an opinion that the Proposed Ordinance would not result in negative environmental impacts and that an EIR may not be necessary for the Proposed Ordinance. The Draft EIR concludes that the Proposed Ordinance would not result in any significant environmental impacts.

Response 9.3

The commenters state an opinion that Table 2-2 should consider that some people will opt out of using bags as a result of the proposed Ordinance and therefore the replacement assumption should total less than 100%. They go on to state that data gathered by the Los Angeles County Department of Public Works shows a decrease in paper bag use after a similar ordinance was adopted and that this information should be incorporated into Table 2-2.

As acknowledged throughout the Draft EIR as well as in the response to a number of comment letters, the Draft EIR assumptions and analysis are conservative to allow for identification of the “worst case” scenario. While acknowledging that the cited information has merit, a conservative approach is prudent, particularly as no significant impacts or potentially significant impacts requiring mitigation are identified in the Draft EIR. The information cited by the commenter is acknowledged and referenced via this comment letter.

Response 9.4

The commenters state that the Proposed Ordinance would not result in a shift from single use plastic to single use paper bags and cites various sources of information as reference. This opinion is noted. Please see Response 9.3.

Response 9.5

The commenters state an opinion that assuming 100% of reusable bags are being washed separately overstates the water supply and wastewater generation impacts included in Section



4.5 of the Draft EIR. Instead, they suggest that an estimated 60-90% of bags would be washed separately and suggest that this be used as the basis for analysis in the EIR. The commenter does not provide a source for the estimate of 60 to 90% of reusable bags being washed separately; therefore, this information cannot be verified and is speculative. As acknowledged throughout the Draft EIR as well as in the response to a number of comment letters (including in Response 9.3), the EIR assumptions and analysis are conservative. In the absence of information otherwise, in this instance the worst case scenario would be 100% of reusable bags being washed separately.

Response 9.6

The commenters state support for the Proposed Ordinance in the context of the alternatives considered. This support is noted.

Response 9.7

The commenters discuss the merits of the No Project Alternative and state that they do not support selection of this alternative. The lack of support for the No Project Alternative is noted.

Response 9.8

The commenters state an opinion that expanding the Proposed Ordinance to include more retailers, as analyzed in Alternative 2 (Ban on Single-Use Plastic Bags at all Retail Establishments, Except Restaurants), would increase the environmental benefits of the project. In addition, they ask what type of retailers would be covered by the Proposed Ordinance and what percentage of plastic checkout bags would be eliminated by the Proposed Ordinance.

As discussed in Section 2.4 of the Draft EIR, the Proposed Ordinance would apply to two categories of retail establishments:

1. A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the Revenue and Taxation Code) which sells a line of dry grocery or canned goods, or non-food items and some perishable food items for sale or a store that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or
2. A drug store, pharmacy, supermarket, grocery store, convenience food store, food mart, or other similar retail store or entity engaged in the retail sale of a limited line of grocery items or goods which typically includes, but is not limited to, milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 liquor license issued by the state Department of Alcoholic Beverage Control.

As discussed in Section 2.5 of the Draft EIR, the analysis assumes that as a result of the Proposed Ordinance, 95% of the volume of plastic bags currently used in the Study Area (658,241,406 plastic bags per year) would be replaced by recyclable paper bags and reusable bags. It is assumed that 5% of the existing single-use bags used in the Study Area would remain



in use since the Proposed Ordinance does not apply to some retailers who distribute plastic bags (e.g., restaurants) and these retailers would continue to distribute single-use plastic bags after the Proposed Ordinance is implemented.

Response 9.9

The commenters suggest that the Proposed Ordinance should consider inclusion of restaurants. This suggestion is noted, but pertains to the content of the Proposed Ordinance rather than the Draft EIR. The suggestion will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 9.10

The commenters discuss the merits of Alternative 3 (Mandatory Charge of \$0.25 for Paper Bags) and state an opinion that while Alternative 3 would likely change consumer behavior, they support adoption of the Proposed Ordinance. The preference for the Proposed Ordinance is noted.

Response 9.11

The commenters discuss the merits of Alternative 4 (Ban on Single Use Plastic and Paper Carryout Bags) and state the opinion that while Alternative 4 would likely change consumer behavior, they support adoption of the Proposed Ordinance. The preference for the Proposed Ordinance is noted.

Response 9.12

The commenters discuss the merits of Alternative 5 (Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags) and state an opinion that this is one of the weaker alternatives considered. This opinion is noted.

Response 9.13

The commenters state an opinion that the proposed Model Ordinance should include a minimum charge on reusable bags. This opinion is noted, but the suggestion pertains to the content of the Proposed Ordinance rather than the Draft EIR. The suggestion will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 9.14

The commenters support the rejection of bioplastic bags as an alternative to be considered in the EIR. This support is noted.



Response 9.15

The commenters state an opinion that Section 6.7 (Environmentally Superior Alternative) of the Draft EIR should take into account which type of ordinance would be most accepted by municipalities in the Study Area. This opinion is noted. However, the comment expresses concern about the potential for a patchwork of ordinances to be adopted in the Study Area, which is not CEQA's purview. The purpose of the Program EIR is to address the project's environmental effects. The consideration of which ordinance is most likely to be acceptable in each of the municipalities is at the discretion of the individual decision making bodies. As discussed in Chapter 2.0 of the Draft EIR, both Santa Barbara and Ventura counties and each participating municipality will consider whether to adopt the Proposed Ordinance or some variation of it.

Response 9.16

The commenters state an opinion that BEACON should review and consider the studies, reports, articles, videos and other documents referenced in the appendix to the comment letter provided and that these may be pertinent to the analysis of potential environmental impacts associated with the Proposed Ordinance and may be useful in developing the future public education component of the Ordinance. This suggestion is noted.

Response 9.17

The commenter provides information on legal developments regarding paper bag charges as well as on health scares related to reusable bags. This information will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 9.18

The commenters state an opinion that adoption of a single use bag ordinance for the study area is overdue and that the CEQA process should be completed as quickly as possible. These opinions are noted.





March 28, 2013

Gerald Comati, P.E., Program Manager
Beach Erosion Authority for Clean Oceans and Nourishment
206 East Victoria Street
Santa Barbara, California 93101
comati@beacon.ca.gov

Letter 10

RE: Single Use Carryout Bag Ordinance Draft EIR

Dear Mr. Comati,

The following comments on the Draft Environmental Impact Report (EIR) for BEACON's proposed Single Use Carryout Bag Ordinance are submitted by the Environmental Defense Center (EDC). EDC is a non-profit public interest law firm that represents community organizations in environmental matters affecting California's south central coast.

10.1

We appreciate BEACON's proactive approach to protecting our coastal environment from pollution, and we hope that each of BEACON's member jurisdictions will use this EIR to adopt meaningful measures to control the environmental impacts of single use bags. Specific comments on the Draft EIR are below.

Project Objectives

The Project Objectives listed on page 2-11 should include some reference to the use of this Program EIR by member jurisdictions. The purpose of a single use carryout bag ordinance (as ultimately adopted by member jurisdictions) is to reduce environmental impacts; the purpose of BEACON's project is to equip member jurisdictions with the tools and information necessary to adopt an ordinance.

10.2

Impact Analysis

Biological Resources

Section 4.2.1 should include a discussion of the effects of plastic bag pollution on coral reefs. The National Oceanic and Atmospheric Association (NOAA) lists plastic bag pollution as a significant anthropogenic threat to coral reefs and their ecosystems. For example, see coris.noaa.gov/about/hazards.

10.3

Hydrology and Water Quality

Impact HWQ-2 suggests that a ban on plastic bags would have the effect of "altering bag processing activities." This language should be revised to be consistent with earlier language which suggests that a ban on plastic bags may *increase* (rather than "alter") paper and reusable bag production, due to increased demand for these products. This may be an important nuance, because *altering* production or processing activities might implicate *new* environmental impacts associated with the new/altered process, whereas increasing production could merely exacerbate existing impacts (of existing paper and reusable bag production).

10.4

Alternatives

Range of Alternatives

The EIR should include at least one alternative which extends the proposed limitations on carryout bags to restaurants. Ideally, the EIR would include one alternative which bans both plastic and paper from restaurants, and one alternative which bans plastic and requires a fee for paper. One (primary) purpose of the EIR is to support future decision-making by BEACON's member jurisdictions, and it makes sense to include the broadest possible menu of regulatory/policy options for member jurisdictions to consider.

10.5

Environmentally Superior Alternative

The Draft EIR correctly concludes that a ban on *both* plastic and paper single use bags is "environmentally superior." We encourage BEACON's member jurisdictions to act accordingly when considering the adoption of individual implementing ordinances.

10.6

Conclusion

Thank you for this opportunity to comment on the Draft EIR. Please do not hesitate to contact us with questions or for clarifications.

Respectfully submitted,



Nathan G. Alley
Staff Attorney

Cc: Community Environmental Council
Santa Barbara Channelkeeper
Surfrider Foundation

Letter 10

COMMENTER: Nathan G. Alley, Staff Attorney, Environmental Defense Center

DATE: March 28, 2013

Response 10.1

After introducing and describing the Environmental Defense Center organization, the commenter states support for use of the EIR to adopt measures to control the environmental impacts of single use bags. This comment is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.

Response 10.2

The commenters express the opinion that the project objectives should include reference to use of the Program EIR by member jurisdictions. The commenter correctly observes that the purpose of the Proposed Ordinance is to provide a carryout bag waste reduction ordinance that participating agencies within Santa Barbara and Ventura counties can consider for adoption. The Draft EIR contains the assessment of environmental impacts that could occur as a result of adoption of the proposed ordinance and would be considered along with the Proposed Ordinance by decision makers in each jurisdiction prior to adoption. Section 2.6 references the objectives for the Proposed Ordinance rather than the EIR; therefore, no change to the text of this section is deemed necessary. Section 2.7 of the Draft EIR describes the adoption process and references the use and certification of the Program EIR by the individual cities and counties during that process.

Response 10.3

The commenter states an opinion that Section 4.2.1 should discuss the effects of plastic bag pollution on coral reefs. As discussed in Section 4.2.2, the Proposed Ordinance would reduce the amount of single use plastic bags entering creeks and coastal habitat as litter, thus reducing litter-related impacts to sensitive wildlife species and sensitive habitats. This would include impacts to coral reefs if located within the Study Area. As requested, the information cited by the commenter is acknowledged and referenced via this comment letter.

Response 10.4

The commenter suggests that the language in the impact statement HWQ-2 be revised to state that the ban on single use plastic bags may increase rather than alter paper and reusable bag production, as the word alter implies that the method of processing or production of paper and reusable bags would change as a result of implementation of Proposed Ordinance. This change has been made in the Final EIR.



Response 10.5

The commenter states an opinion that the EIR should consider at least one alternative that extends the proposed limitations on carryout bags to restaurants and makes suggestions as to what form these could take.

The Draft EIR did not consider an alternative that applied the Proposed Ordinance to restaurants. The Draft EIR determined that the Proposed Ordinance would not result in any potentially significant impacts and did not require any mitigation measures since all impacts were determined to be less than significant. Section 6.0 included a reasonable range of alternatives to the Proposed Ordinance, including the following alternatives: No Project; Ban on Single-Use Plastic Bags at all Retail Establishments, Except Restaurants; Mandatory Charge of \$0.25 for Paper Bags; Ban on Both Single Use Plastic and Paper Carryout Bags; and Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags. Therefore, consideration in the EIR of an alternative that extends the proposed limitations on carryout bags to restaurants is not considered to be required.

Response 10.6

The commenter agrees with the finding in the EIR that a ban on both plastic and paper single use bags is the environmentally superior alternative. This comment is noted and will be reviewed by the BEACON Board and the individual decision makers for each jurisdiction that would consider adopting the Proposed Ordinance.



NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-6251
ds_nahc@pacbell.net
www.nahc.ca.gov
 (916) 657-5390 - Fax



Letter 11

March 11, 2013

Mr. Gerald Comati, P.E., Project Planner

Beach Erosion Authority for Clean Oceans and Nourishment

206 East Victoria Street
 Santa Barbara, CA 93101

RE: SCH# 2012111093 CEQA Notice of Completion; draft Environmental Impact Report (DEIR) –
"BEACON Single-Use Carry-out Bag Ordinance Project;" located throughout Santa
 Barbara and Ventura counties, California

Dear Mr. Comati:

The Native American Heritage Commission (NAHC) has reviewed the CEQA Notice regarding the above referenced project. In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resources, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064(b)). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a record search to determine:
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources, which we know that it has.
 - The NAHC recommends that known cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report.
- ✓ If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure pursuant to California Government Code Section 6254.10.
- ✓ Contact has been made to the the Native American Heritage Commission for:
 - A Sacred Lands File Check, and cultural resources have been identified to your agency.
 - A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter.
 - Lack of surface evidence of archeological resources does not preclude their subsurface existence once ground-breaking activity begins. If that occurs, the NAHC suggests that inadvertent discoveries be coordinated with the NAHC;

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally

11.1

**Santa Barbara County
March 12, 2013**

Ernestine DeSoto
1311 Salinas Place # 5
Santa Barbara CA 93103
805-636-3963

Chumash

Patrick Tumamait
992 El Camino Corto
Ojai , CA 93023
(805) 640-0481
(805) 216-1253 Cell

Chumash

Beverly Salazar Folkles
1931 Shadybrook Drive
Thousand Oaks, CA 91362
805 492-7255
(805) 558-1154 - cell

Chumash
Tataviam
Fernandeño

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
1030 Ritchie Road
Grover Beach CA 93433
(805) 481-2461
(805) 474-4729 - Fax

Chumash

Santa Ynez Band of Mission Indians
Vincent Armenta, Chairperson
P.O. Box 517
Santa Ynez , CA 93460
varmenta@santaynezchumash.
(805) 688-7997
(805) 686-9578 Fax

Chumash

John Ruiz
1826 Stanwood Drive
Santa Barbara CA 93103
(805) 965-8983

Chumash

Barbareno/Ventureno Band of Mission Indians
Julie Lynn Tumamait-Stennslie, Chair
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214

Chumash

Gilbert M. Unzueta Jr.
571 Citation Way
Thousand Oaks, CA 91320
uhuffle@aol.com
(805) 375-7229

Chumash

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012111093; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the BEACON Single Use Carry-out Bag Ordinance; locate in Santa Barbara County, California.

Santa Barbara County
March 12, 2013

Owl Clan
Qun-tan Shup
48825 Sapaque Road Chumash
Bradley , CA 93426
mupaka@gmail.com
(805) 472-9536 phone/fax
(805) 835-2382 - CELL

Coastal Band of the Chumash Nation
Toni Cordero, Chairwoman
P.O. Box 4464 Chumash
Santa Barbara CA 93140
cordero44@charter.net
805-964-3447

Stephen William Miller
189 Cartagena Chumash
Camarillo , CA 93010
(805) 484-2439

Charles S. Parra
P.O. Box 6612 Chumash
Oxnard , CA 93031
(805) 340-3134 (Cell)
(805) 488-0481 (Home)

Santa Ynez Tribal Elders Council
Adelina Alva-Padilla, Chair Woman
P.O. Box 365 Chumash
Santa Ynez , CA 93460
elders@santaynezchumash.org
(805) 688-8446
(805) 693-1768 FAX

Santa Ynez Band of Mission Indians
Tribal Admin/Counsel Sam Cohen
P.O. Box 517 Chumash
Santa Ynez , CA 93460
info@santaynezchumash.org
(805) 688-7997
(805) 686-9578 Fax

Randy Guzman - Folkes
6471 Cornell Circle Chumash
Moorpark , CA 93021
ndnRandy@yahoo.com Fernandeno
(805) 905-1675 - cell Tataviam
Shoshone Paiute
Yaqui

Carol A. Pulido
165 Mountainview Street Chumash
Oak View , CA 93022
805-649-2743 (Home)

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Santa Barbara County
March 12, 2013

Melissa M. Parra-Hernandez
119 North Balsam Street Chumash
Oxnard , CA 93030
envyy36@yahoo.com
805-983-7964
(805) 248-8463 cell

Barbareno/Ventureno Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Court Chumash
Camarillo , CA 93012
805-987-5314

Frank Arredondo
PO Box 161 Chumash
Santa Barbara CA 93102
ksen_sku_mu@yahoo.com
805-617-6884
805-893-1459
ksen_sku_mu@yahoo.com

Coastal Band of the Chumash Nation
Janet Darlene Garcia
P.O. Box 4464 Chumash
Santa Barbara CA 93140
805-689-9528

Santa Ynez Tribal Elders Council
Freddie Romero, Cultural Preservation Conslt
P.O. Box 365 Chumash
Santa Ynez , CA 93460
805-688-7997, Ext 37
freddyromero1959@yahoo.
com

Coastal Band of the Chumash Nation
Crystal Baker
P.O. Box 4464 Chumash
Santa Barbara CA 93140
805-689-9528

Barbareno/Ventureno Band of Mission Indians
Kathleen Pappo
2762 Vista Mesa Drive Chumash
Rancho Pales Verdes CA 90275
310-831-5295

Coastal Band of the Chumash Nation
Michael Cordero
5246 El Carro Lane Chumash
Carpinteria , CA 93013
805-684-8281

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012111093; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the BEACON Single Use Carry-out Bag Ordinance; locate in Santa Barbara County, California.

Letter 11

COMMENTER: Dave Singleton, Program Analyst, Native American Heritage Commission

DATE: March 11, 2013

Response 11.1

The commenter states that the Native American Heritage Commission (NAHC) has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects. The commenter goes on to recommend several actions that could be useful in complying with the provisions of CEQA.

As described in the Initial Study (see Appendix A), the proposed project involves adoption of an ordinance that would prohibit the free distribution of single use carryout paper and plastic bags and require retail establishments to charge customers for recyclable paper bags and at the point of sale. The project does not include any development or alterations of physical sites or structures. The project would not result in substantial adverse changes in the significance of a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or geologic feature, nor would it disturb any human remains. Therefore, no impacts related to any Native American cultural resources would occur.



SAVE THE PLASTIC BAG COALITION

SUPPLEMENTAL SUBMISSION

- 1. OBJECTIONS TO BEACON REGIONAL DRAFT EIR ON PROPOSED SINGLE-USE CARRYOUT BAG ORDINANCE FOR SANTA BARBARA AND VENTURA COUNTIES**
- 2. DEMAND FOR REVISION AND NEW FINDINGS OF SIGNIFICANT NEGATIVE ENVIRONMENTAL IMPACT**
- 3. DEMAND FOR RECIRCULATION OF REVISED DRAFT EIR AND PROMINENT NOTIFICATION TO THE PUBLIC OF SIGNIFICANT ERRORS IN INITIAL DRAFT EIR**
- 4. NOTICE OF INTENT TO LITIGATE TO ENFORCE CEQA, INCLUDING PETITION FOR WRIT OF MANDATE OR PRELIMINARY INJUNCTION TO REQUIRE RECIRCULATION OF REVISED DRAFT EIR**

March 26, 2013

Stephen L. Joseph, Counsel
SAVE THE PLASTIC BAG COALITION
11693 San Vicente Blvd. #150
Los Angeles, CA 90049
Phone: (310) 266-6662
Fax: (310) 694-9067

E-mail: savetheplasticbag@earthlink.net

Website: www.savetheplasticbag.com

SUPPLEMENTAL SUBMISSION

On March 16, 2013, Santa Monica High School issued a report on bag choice at Santa Monica grocery stores based on extensive surveys. (Doc # 306.) The report contains these charts:

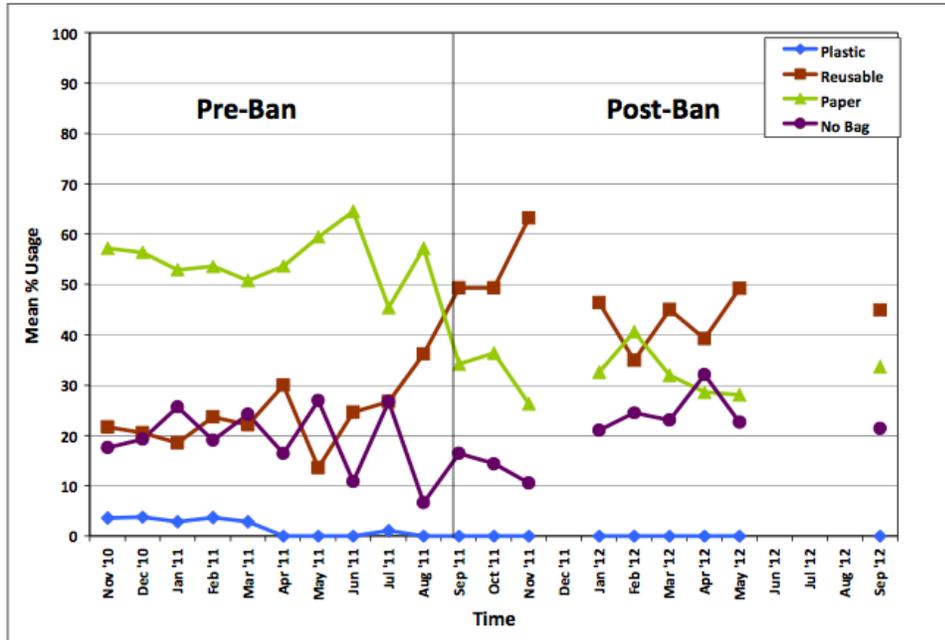


Figure 3. Mean percent usage of different bag choices per month (eco-friendly stores pooled) before and after the plastic bag ban. Gaps represent months no data were collected (see Table 1 below).

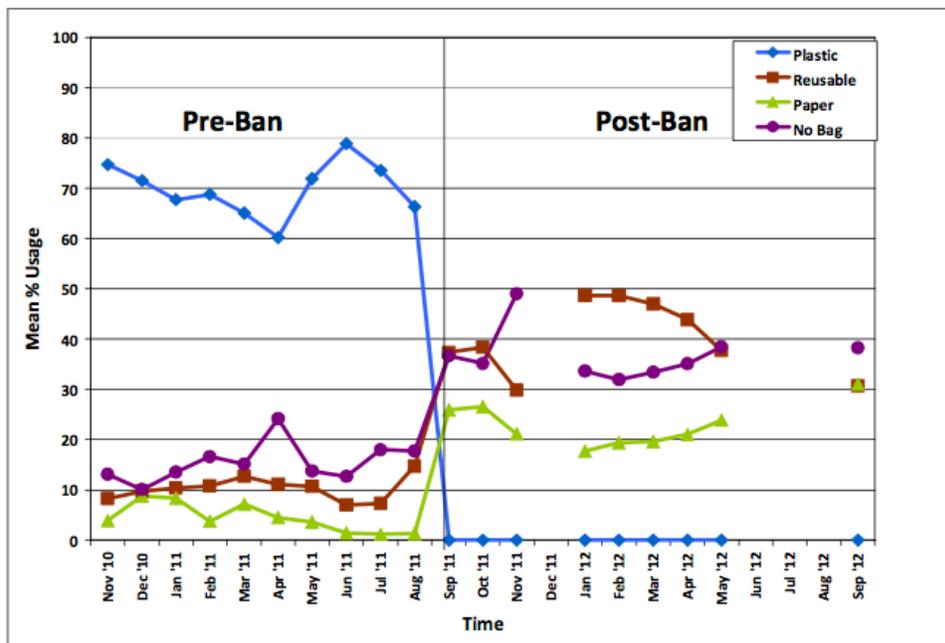


Figure 4. Mean percent usage of different bag choices per month (regular stores pooled) before and after the plastic bag ban. Gaps represent months no data were collected (see Table 1 below).

12.1

Figure 3 shows a timeline for Whole Foods and Trader Joe's, which are described in the report as "eco-friendly" stores. Customers at these stores are generally quite affluent and would take steps that they have been told are good for the environment.

Figure 4 shows a timeline for Albertsons, Vons, and Ralphs, which are described in the report as "regular" stores. Customers at these stores are more representative of the general public, and include less affluent customers. There are far more regular-type stores in Santa Barbara and Ventura Counties than eco-friendly stores. Eco-friendly stores would be a tiny percentage of the stores that would be covered by the proposed ordinances.

The Santa Monica report figures are supported by extensive pre-ban and post-ban surveys and constitute substantial evidence. The survey lasted for 19 months and is based on the observation of 50,400 customers. In contrast, Los Angeles County's claims about paper bag reduction are not based on any pre-ban data or surveys whatsoever and are therefore not substantial evidence.

With respect to "regular" stores, figure 4 is substantial evidence that:

1. Paper bag usage was between 0 and 10% of market share before the Santa Monica ordinance took effect. At times it was very close to zero percent.
2. When the ban took effect in September 2011, paper bag usage increased dramatically to about 27%. It then dropped and rose again to about 30% by September 2012.
3. The paper bag trend line shows that paper bag usage is *increasing*.
4. When the ban took effect in September 2011, reusable bag usage increased dramatically to about 49%. It then dropped to 30% by September 2012.
5. The reusable bag trend line shows that reusable bag usage is *decreasing*.

When a ban ordinance takes effect, consumers are initially very responsive. However, over the course of time, the responsiveness wears off. In just one year after the ban took effect, reusable bag usage had *dropped* by 20%. As of March 2013, reusable bag usage probably dropped further and paper bag usage probably increased further, based on the trend lines.

A South African study is provided herewith in support of this supplemental submission to explain figure 4 in the Santa Monica report. (Doc. # 307.) Based on extensive data, the South African study (at pages 78-79) reached the following conclusion:

The initial response by most consumers (Firms 2 and 3) to the introduction of the legislation [imposing a levy on each carryout bag] was the most significant. A common argument is that price elasticity is greater in the long run than in the short run since consumers take time to adjust their spending patterns after a price change. South Africa's plastic bag experience suggested the opposite: the initial 'price shock' had the greatest impact. Even after allowing for changing bag size and quality, it is clear that as the public became accustomed to the charge, its effectiveness declined.

The authors of the Santa Monica report reach a similar conclusion. They state as follows:

The upward drift in paper bag use at regular stores in 2012 warrants further investigation. Specifically, it would be of interest to ensure grocery stores, one year after the ban, are following the law; are they continuing to disincentivize paper bag use by charging 10 cents per paper bag? Other variables could be contributing as well, including patron apathy, regulars stores undercharging for the number of paper bags used, and stores prematurely removing strategic parking lot and store signage reminding customers to bring in their reusable bags. A study comparing the number of paper bag sold to the volume purchased should establish if any undercharging is occurring, and ultimately, whether regular stores are obeying the law. If undercharging is not occurring, a steeper fee of more than 10 cents may need to be considered.

12.1

Based on the foregoing, an EIR must disclose that the 10-cent fee may not be sufficiently high to prevent significant negative environmental impacts resulting from an increase in paper bag usage.

STPB DEMANDS THAT THE SANTA MONICA REPORT BE DISCUSSED IN A REVISED DRAFT EIR, WITHOUT MISREPRESENTATION OR AMBIGUITY AND IN A TOTALLY NON-MISLEADING WAY. STPB DEMANDS THAT FIGURE 4 OF THE SANTA MONICA REPORT BE INCLUDED IN THE REVISED DRAFT EIR. STPB OBJECTS IF THERE IS A FAILURE TO DO SO.

Further, on February 21, 2013, an independent report on the South Australia legislation regarding plastic bags was presented to the South Australia House of Assembly. (Doc. # 308.) It was first reported in the press on March 24, 2013. (Doc. # 309.) The report states:

Page 6: Most consumers have a more than sufficient stock of reusable bags at home, with an average of 25 bags per household.

12.2

Page 8: The ban on lightweight single-use plastic shopping bags has resulted in a significant increase in bin liner sales in South Australia. Nine out of 10 households line their bins. Households have not stopped lining their bins as a result of the ban. Previously many households used lightweight single-use plastic shopping bags to line their bins, as a result of the ban more consumers have turned to purchasing bin liners. Pre-ban 15% of consumers purchased bin-liners and post-ban 80% purchase bin liners. This change in behaviour will have an environmental impact and may negate the success of the ban. As one of the overarching aims of the ban was to cause consumers to behave in a greener way, future initiatives should examine how also to change bin-lining behaviour.

In addition, figure 2 in the South Australia report shows that plastic bags are only about half of one percent of litter across Australia.

For the purpose of the BEACON Draft EIR, the South Australia report is substantial evidence that:

1. Banning plastic carryout bags will result in people buying plastic bags for bin liners and other purposes. This also happened in Ireland. (Doc. # 901). Therefore, the EIR must factor in an increased in plastic bag purchases for bin liners and other purchases to replace banned plastic carryout bags. The DEIR does not reflect such replacement purchases of plastic bags in any of the calculations of environmental impacts. The DEIR assumes that plastic carryout bags will be replaced *only* by paper carryout bags and reusable carryout bags. (For example, see DEIR at page 2-10: “The analysis in this EIR assumes that as a result of the Proposed Ordinance, 95% of the volume of plastic bags currently used in the Study Area (658,241,406 plastic bags per year) would be replaced by recycled paper bags (approximately 30%) and reusable bags (approximately 65%), as shown in Table 2-2.”) This is a critical error in the DEIR that must be corrected.
2. There will be an over proliferation of reusable bags, driving down the number of uses per reusable bag. (See also Doc. ## 517, 518.) An unused or underused plastic bag has a negative environmental impact.
3. Plastic retail bags are only about half of one percent of litter, confirming the litter studies presented with STPB’s initial submission.

12.2

STPB DEMANDS THAT THE FOREGOING FINDINGS IN THE SOUTH AUSTRALIA REPORT REGARDING BIN LINERS, OVER PROLIFERATION OF REUSABLE BAGS, AND PERCENTAGE OF PLASTIC BAGS IN THE LITTER STREAM BE DISCUSSED IN A REVISED DRAFT EIR, WITHOUT MISREPRESENTATION OR AMBIGUITY AND IN A TOTALLY NON-MISLEADING WAY. STPB OBJECTS IF THERE IS A FAILURE TO DO SO.

CORRECTIONS TO ORIGINAL SUBMISSION

There were some typographical errors in the original submission dated March 25, 2013. Corrections are in bold and underlined.

Page 86: Third paragraph. The sentence “In the Los Angeles County EIR, the reasonable figure of 104 was used as the number of times a reusable bag would have to be used to offset its impact compared to a reusable bag.” Correct to read: “In the Los Angeles County EIR, the reasonable figure of 104 was used as the number of times a reusable bag would have to be used to offset its impact compared to a **plastic carryout** bag.”

Page 97: The first sentence on the page reads: “Disclosing the facts about plastic bag litter in the marine environment is of critical importance, because alleged marine are one of the

12.3

main reasons cited for banning plastic bags.” Correct to read: “Disclosing the facts about plastic bag litter in the marine environment is of critical importance, because alleged marine **impacts** are one of the main reasons cited for banning plastic bags.”

RESERVATION OF RIGHTS

This supplemental submission adds to and does not replace STPB’s submission dated March 25, 2013.

All rights are reserved. No rights are waived by any statement or omission herein.

SAVE THE PLASTIC BAG COALITION



By: STEPHEN L. JOSEPH, Counsel

Letter 12

COMMENTER: Stephen L. Joseph, Counsel, Save the Plastic Bag Coalition

DATE: March 26, 2013

Response 12.1

The commenter provides data from a study from the City of Santa Monica that states that paper bag usage after a bag ordinance was implemented increased to approximately 30% and that reusable bag usage initially rose to 49% but then dropped to 30%. The commenter further states that the 10-cent fee for paper bags associated with the Proposed Ordinance may not be sufficiently high to prevent environmental impacts related to the increase in paper bag usage.

The study the commenter provides and the statement that the paper bag usage once a bag ordinance is implemented would actually increase to approximately 30% is consistent with the bag use assumptions in the Draft EIR and confirms the reasonableness of the assumption that approximately 30% of the plastic bags currently used in the Study Area would be replaced by recyclable paper bags (see Table 2-2 in Section 2.0, *Project Description*, of the Draft EIR). In regard to reusable bags, the commenter fails to mention the statistic provided in the comment letter (see Figure 4 in the comment letter) that approximately 35% of customers chose to use no-bag at all after the ordinance went into effect (an increase of approximately 25% from pre-ordinance conditions). The Draft EIR assumes that approximately 65% of plastic bags would be replaced by approximately 65% reusable bags after implementation of the Proposed Ordinance (see Table 2-2 of the Draft EIR). As described in Response 1.21, this is considered a reasonable assumption and is intended to provide a worst-case scenario related to environmental impacts. As such, if approximately 35% of the customers did not use any type of carryout bag, impacts would actually be reduced compared to the analysis in the Draft EIR. This confirms that the Draft EIR provides a reasonable, worst case approach to evaluating impacts related to switching from plastic carryout bags to either reusable or recyclable paper bags.

Response 12.2

The commenter provides a South African report and states that by banning plastic bags, there would be an increase in the number of trash bin liners purchased as people would no longer be able to use plastic carryout bags to line their trash cans at home. The commenter further states that impacts that result from the increase of plastic trash liners needs to be included in the EIR.

See Response 1.47. As stated above, there may likely be an increase in plastic trash liners used in the Study Area. However, these types of trash bags are intended for such use and are not the type of bags that generally end up as litter (which impact biological resources, clog storm drains, and enter the marine environment). The objective of the Proposed Ordinance is intended to reduce existing impacts associated with plastic carryout bags including those impacts related to biological resources (plastic bag litter affecting wildlife species and habitat) and water quality (plastic bag litter clogging storm drains and entering creeks and waterways within the Study Area).



Response 12.3

The commenter provides some corrections to typographical errors from his previous comment letter (See Letter #4).

Comment is noted. No response is necessary.





Appendix A

*Notice of Preparation, Initial Study, and
NOP Comment Letters*



**NOTICE OF PREPARATION
OF A DRAFT ENVIRONMENTAL IMPACT REPORT
BEACON SINGLE USE CARRYOUT BAG ORDINANCE**

DATE: November 30, 2012

TO: State Clearinghouse, Responsible Agencies, Organizations and Interested Parties

LEAD AGENCY: Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)

Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) intends to prepare an Environmental Impact Report (EIR) for a proposed ordinance regulating single use carryout bags throughout the incorporated and unincorporated areas in Santa Barbara and Ventura counties. In accordance with Section 15082 of the State CEQA Guidelines, BEACON has prepared this Notice of Preparation to provide Responsible Agencies and other interested parties with information describing the proposal and its potential environmental effects. The environmental factors that BEACON has determined would potentially be affected by the project include:

- Air Quality
- Biological Resources
- Greenhouse Gas Emissions
- Hydrology/Water Quality
- Utilities and Service Systems

PROJECT SPONSOR: Beach Erosion Authority for Clean Oceans and Nourishment
c/o City of Ventura Engineering Division
501 Poli Street, PO Box 99
Ventura, CA 93001

PROJECT LOCATIONS: The proposed Single Use Carryout Bag Ordinance would apply to two categories of retail establishments that are located within or doing business within the geographical limits of the following municipalities:

Santa Barbara County

- Unincorporated Santa Barbara County
- Buellton
- Carpinteria*
- Goleta
- Guadalupe
- Lompoc
- Santa Barbara
- Santa Maria
- Solvang

Ventura County

- Unincorporated Ventura County
- Camarillo
- Fillmore
- Moor Park
- Ojai*
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura

**Please note that the cities of Ojai and Carpinteria currently have bag ordinances that apply to retail stores located in these jurisdictions. The EIR will include these jurisdictions and their existing ordinances as part of cumulative impacts for the overall region.*

Any of the following retail establishments located and operating within the locations listed above could be subject to the Proposed Ordinance if adopted by the individual jurisdiction:

1. A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the Revenue and Taxation Code) which sells a line of dry grocery or canned goods, or non-food items and some perishable food items for sale or a store that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or
2. A drug store, pharmacy, supermarket, grocery store, convenience food store, food mart, or other similar retail store or entity engaged in the retail sale of a limited line of grocery items or goods which typically includes, but is not limited to, milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 liquor license issued by the state Department of Alcoholic Beverage Control.

PROJECT DESCRIPTION: The proposed Single Use Carryout Bag Ordinance (Proposed Ordinance) would regulate the use of paper and plastic single use carryout bags within the geographical limits of Santa Barbara and Ventura counties, including the unincorporated areas as well as the 18 incorporated cities listed above under Project Locations. The intent of the ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags. It is anticipated that by prohibiting single use plastic carryout bags and requiring a mandatory charge for each paper bag distributed by retailers, the Proposed Ordinance would provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single use plastic and paper bags within the participating municipalities.

The ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags and (2) require retail establishments to charge customers for recycled paper bags and at the point of sale. Regulated retail establishments would be allowed to sell reusable bags or distribute them free of charge. The ordinance sets forth that the minimum charge for single use recyclable paper bags would be ten cents (\$0.10). Plastic carryout bags are defined in the Proposed Ordinance as any bag made predominately of plastic derived from either petroleum or biologically-based sources, such as corn or other plant sources, which is provided to a customer at the point of sale. Regulated bags would not include reusable bags, produce bags, or product bags (as defined). The Proposed Ordinance would not apply to restaurants and other food service providers, allowing them to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider's premises.

As noted above, the Proposed Ordinance would prohibit the sale or distribution of single use carryout plastic bags, and would require regulated retailers to impose a mandatory charge of \$0.10 for each paper carryout bag provided. Retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction.

REVIEW PERIOD: As specified by the State CEQA Guidelines, the Notice of Preparation will be circulated for a 30-day review period. The Lead Agency welcomes agency and public input during this period regarding the scope and content of environmental information that must be included in the Draft EIR. **Responses to this Notice of Preparation may be submitted, in writing, by 5:00 p.m. on December 31, 2012, to:**

Gerald Comati, P.E., Program Manager
BEACON
206 East Victoria Street
Santa Barbara, CA 93101
email: comati@Beacon.ca.gov
fax: (805) 962-5209

PUBLIC SCOPING MEETINGS: Scoping meetings will be held during the comment period to take comments related to the scope of the environmental issues to be analyzed within the Draft EIR. The dates, times, and locations of the scoping meetings are listed below.

- **December 12, 2012 at 6:00 pm, David Gebhard Public Meeting Room, Public Works Building, 630 Garden Street, Santa Barbara, CA 93101**
- **December 19, 2012 at 6:00 pm, Oxnard City Council Chambers, 305 West Third Street, Oxnard, CA 93030**

BEACON

Single Use Carryout Bag Ordinance

Initial Study

January 2013

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INITIAL STUDY

1. **Project title:** Single Use Carryout Bag Ordinance
2. **Lead agency name and address:** Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)
501 Poli Street
Ventura, CA 93001
3. **Contact person and phone number:** Gerald Comati, P.E., Program Manager
(805) 654-7827
4. **Project location:** Santa Barbara and Ventura Counties and participating incorporated cities within the counties
5. **Project sponsor's name and address:** Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)
501 Poli Street, PO Box 99
Ventura, CA 93001
6. **General Plan designation:** All designations throughout Santa Barbara and Ventura Counties and participating incorporated cities within the counties
7. **Zoning:** All designations throughout Santa Barbara and Ventura Counties and participating incorporated cities within the counties

8. **Project Description:**

The proposed Single Use Carryout Bag Ordinance (Proposed Ordinance) would apply to two categories of retail establishment that are located within or do business within the geographical limits of unincorporated Santa Barbara or Ventura Counties or any of the following incorporated municipalities:

Santa Barbara County

- Buellton
- Goleta
- Guadalupe
- Lompoc
- Santa Barbara
- Santa Maria
- Solvang

Ventura County

- Camarillo
- Fillmore
- Moor Park
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura



The area within the geographical limits of Santa Barbara and Ventura Counties, including the incorporated municipalities listed above, are referred to in this document as the “Study Area.”

The Proposed Ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags and (2) require retail establishments to charge customers for recycled paper bags and at the point of sale. Regulated retail establishments would be allowed to sell reusable bags or distribute them free of charge. The ordinance sets forth that the minimum charge for single use recyclable paper bags would be ten cents (\$0.10).

The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use carryout bags. It is anticipated that by prohibiting single use plastic carryout bags and requiring a mandatory charge for each paper bag distributed by retailers, the Proposed Ordinance would provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single-use plastic and paper bags within the Study Area.

Single-use carryout bags are defined in the Proposed Ordinance as bags made predominantly of plastic derived from either petroleum or a biologically-based sources, such as corn or other plant sources, which is provided to a customer at the point of sale. Regulated plastic carryout bags would include compostable and biodegradable bags would not include bags without handles exclusively used to carry produce, meats, or other food items from a display case within a store to the point of sale inside a store or to prevent such food items from coming into direct contact with other purchased items. Recyclable paper carryout bags are defined in the Proposed Ordinance as bags that (1) contain no old growth fiber, (2) are 100% recyclable overall and contain a minimum of 40% post-consumer recycled material, (3) is capable of composting, (4) is accepted for recycling in curbside programs, (5) has printed on the bag the name of the manufacturer, the location (country) where the bag was manufactured, and the percentage of postconsumer recycled material used, and (6) displaces the word “recyclable” in a highly visible manner on the outside of the bag.

As noted above, the Proposed Ordinance would prohibit the sale or distribution of single use carryout plastic bags, and would require regulated retailers to impose a mandatory charge of \$0.10 for each paper carryout bag provided. Retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction.

The Proposed Ordinance would apply two categories of retail establishments that are located within the limits of the Study Area. These types include:

1. A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the



Revenue and Taxation Code) which sells a line of dry grocery or canned goods, or non-food items and some perishable food items for sale or a store that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or

2. A drug store, pharmacy, supermarket, grocery store, convenience food store, food mart, or other similar retail store or entity engaged in the retail sale of a limited line of grocery items or goods which typically includes, but is not limited to, milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 liquor license issued by the state Department of Alcoholic Beverage Control.

The Proposed Ordinance would not apply to restaurants and other food service providers, allowing them to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider’s premises.

As shown in Table 1 on the following page, based on the current statewide data which estimates that almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (Green Cities California MEA, 2010; and CIWMB, 2007), retail customers within the Study Area are estimated to use about 658 million plastic bags per year. The customer base of retailers located within the Study Area may include residents of communities located within or outside of the Study Area (i.e., visitors who live outside the Study Area but travel to shop within the Study Area). However, for this analysis, in order to estimate the current number of plastic bags used per year in the Study Area, the Program EIR applies the rate discussed above (531 bags used per person/per year) to the number of residents in the Study Area. This estimate is considered reasonable and conservative for the purposes of this analysis.

**Table 1
Estimated Single-Use Plastic Bag Use in the Study Area**

Area	Population*	Number of Plastic Bags Used per Person**	Total Bags Used Annually
Santa Barbara County			
Unincorporated Areas	134,890	531	3,581,330
Buellton	4,858	531	128,980
Goleta	29,930	531	794,642
Guadalupe	7,097	531	188,425
Lompoc	42,854	531	1,137,774
Santa Barbara	89,082	531	2,365,127
Santa Maria	100,199	531	2,660,283
Solvang	5,281	531	140,211
Ventura County			
Unincorporated Areas	96,589	531	51,288,759
Camarillo	66,407	531	35,262,117



Table 1
Estimated Single-Use Plastic Bag Use in the Study Area

Area	Population*	Number of Plastic Bags Used per Person**	Total Bags Used Annually
Fillmore	15,145	531	8,041,995
Moor Park	34,826	531	18,492,606
Oxnard	200,390	531	106,407,090
Port Hueneme	21,682	531	11,513,142
Santa Paula	107,166	531	56,905,146
Simi Valley	29,882	531	15,867,342
Thousand Oaks	125,317	531	66,543,327
Ventura	128,031	531	67,984,461
Total	1,239,626	Total	658,241,406

* California Department of Finance, "City/County Population and Housing Estimates" (May 2012).

**Based on annual statewide estimates of plastic bag use from the CIWMB (2007) - 531 bags per person = 20 billion bags used statewide per year (CIWMB, 2007) / 37,678,563 people statewide (California's current population according to the State Department of Finance, 2012).

The analysis in this Initial Study assumes that as a result of the Proposed Ordinance, approximately 95% of the volume of plastic bags currently used in the Study Area (635,329,336 plastic bags per year) would be replaced by recycled paper bags (approximately 30%) and reusable bags (approximately 65%), as shown in Table 2. It is further assumed that 5% of the existing single-use bags used in the Study Area would remain in use, as the Proposed Ordinance does not apply to some retailers who distribute plastic bags (e.g., restaurants). Thus, for this analysis, it is assumed that 32,912,070 plastic bags would continue to be used annually within the Study Area after implementation of the Proposed Ordinance. It is also assumed that approximately 197,472,422 paper bags would replace approximately 30% of the plastic bags currently used in the Study Area. This 1:1 replacement ratio is considered conservative, because the volume of a single-use paper carryout bag (20.48 liters) is generally equal to approximately 150% of the volume of a single-use plastic bag (14 liters), such that fewer paper bags would ultimately be needed to carry the same number of items.

In order to estimate the number of reusable carryout bags that would replace 427,856,914 plastic bags (65% of the existing number of plastic bags used annually in the Study Area), it is assumed that a reusable carryout bag would be used by a customer once per week for one year (52 times). According to the March 2010 *Master Environmental Assessment [MEA] on Single-use and Reusable Bags* (Green Cities California, March 2010), a reusable bag may be used 100 times or more; therefore the estimate of 52 uses per year for reusable bags is conservative. Based on the estimate of 52 uses, 427,856,914 single-use plastic bags that would be removed as a result of the Proposed Ordinance would be replaced by 8,228,018 reusable bags. This amounts to about seven reusable bags per person per year based on a Study Area population of 1,239,626. This analysis assumes that as a result of the Proposed Ordinance the approximately 658 million single-use plastic carryout bags currently used



in the Study Area annually would be reduced to approximately 239 million total bags as a result of the Proposed Ordinance.

Table 2
Existing Plastic Bag Replacement Assumptions in the Study Area

Type of Bag	Replacement Assumption	Bags used Post-Ordinance	Explanation
Single-use Plastic	5% (remaining) ¹	32,912,070	Because the Proposed Ordinance does not apply to all retailers (e.g. restaurants), some single-use plastic bags would remain in circulation.
Single-use Paper	30% ²	197,472,422	Although the volume of a single-use paper carryout bag is generally 150% of the volume of a single-use plastic bag, such that fewer paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.
Reusable	65% ²	8,228,018	Although a reusable bag is designed to be used up to hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Carryout Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.
Total		238,612,510	

¹ Rate utilized in the City of Huntington Beach Draft EIR, Draft EIR, SCH # 2011111053, February 2012

² Rates utilized in the City of San Jose Final EIR, SCH # 2009102095, October 2010.

9. Surrounding land uses and setting:

The Proposed Ordinance would apply to the geographical limits of unincorporated Santa Barbara and Ventura Counties as well as the participating incorporated municipalities. Santa Barbara County is bounded by San Luis Obispo County to the north, Ventura County to the east, Kern County to the northeast, and the Pacific Ocean to the south and the west. Ventura County is bounded by Los Angeles County to the west, Kern County to the north, Santa Barbara County to the east, and the Pacific Ocean to the south.

10. Other public agencies whose approval is required:

For unincorporated Santa Barbara and Ventura Counties, the Proposed Ordinance would require an amendment to the county's ordinance code with discretionary approval by the county's Board of Supervisors. For each of the participating municipalities, the Proposed Ordinance would require an amendment to the city's municipal code with discretionary approval by the municipality's city council.



ENVIRONMENTAL FACTORS AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is “Potentially Significant” or “Potentially Significant Unless Mitigation Incorporated” as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |



DETERMINATION:

On the basis of this initial evaluation:

- I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed Project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature

Date

Printed Name



Environmental Checklist	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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I. AESTHETICS – Would the Project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags.

The Proposed Ordinance would not include development of any physical structures or involve any construction activity. As such, the Proposed Ordinance would not adversely affect a scenic vista. Moreover, the Proposed Ordinance would not damage scenic resources such as trees, rock outcroppings, or historic buildings. In addition, since the Proposed Ordinance would not change any existing land uses or add any physical development or new structures within the Study Area, it would not degrade the existing visual character of the Study Area or the surrounding area. It is anticipated that implementation of the Proposed Ordinance may incrementally reduce litter in and around the Study Area by reducing the use of single use carryout bags, a potential beneficial effect. In summary, impacts would be *less than significant* and further analysis of these issues in an EIR is not warranted.

d) Existing sources of light at retail establishments within the Study Area include street lights, light structures in surface parking areas, and security lighting on buildings. The Proposed Ordinance would not add any physical development that would create additional sources of light and glare. Therefore, there would be *no impact* related to the creation of a new source of light or glare and further analysis in an EIR is not warranted.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. <u>AGRICULTURE AND FOREST RESOURCES</u>				
-- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the Project:				
a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



a-e) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recycled paper and reusable bag distributed by these stores. The Proposed Ordinance would not include any physical development or change any existing land uses. As such, the Proposed Ordinance would not conflict with existing zoning for agricultural use, or a Williamson Act Contract. Moreover, the Proposed Ordinance would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. *No impacts* would occur and further discussion of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY -- Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Generally, a project would conflict with or potentially obstruct implementation of an air quality plan if the project would contribute to population growth in excess of that forecasted in the air quality management plan. The Proposed Ordinance would not involve the construction of residences or other physical structures, and would not otherwise induce population growth. Therefore, it would not conflict with or obstruct implementation of the Santa Barbara County Air Pollution Control District (SBCAPCD) 2010 Clean Air Plan or the Ventura County Air Pollution Control District (VCAPCD) 2007 Air Quality Management Plan¹. There would be *no impact* and further analysis of this issue in an EIR is not warranted.

¹ The proposed project includes Santa Barbara and Ventura Counties. Santa Barbara is under the jurisdiction of the Santa Barbara County Air Pollution Control District, and Ventura County is under the jurisdiction of the Ventura County Air Pollution Control District.



b, c) The Proposed Ordinance does not include any new buildings or other physical development and therefore would not entail any construction activity. As such, the Proposed Ordinance would not generate construction emissions. However, although the Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags and to promote a shift toward the use of reusable bags in the Study Area, a potential change in the number of truck trips associated with delivering carryout bags to retailers and the additional use of reusable bags could increase long-term operational emissions. As discussed in Section XVI, Transportation/Traffic, the net increase in truck traffic resulting from the change in bag use would be less than two truck trips per day. In addition, although overall carryout bag use is anticipated to decline as a result of the Proposed Ordinance, the EIR will also analyze whether the shift toward reusable bags could potentially alter processing activities in the Study Area related to bag production which may increase air emissions. Impacts related to long-term emissions are *potentially significant* and will be further analyzed in an EIR.

d) Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Sensitive receptors within the Study Area include children and the elderly.

As discussed above, implementation of the Proposed Ordinance could result in a change in the number of truck trips associated with deliveries of carryout bags to retailers in the Study Area. However, as discussed below in Section XVI, *Transportation/Traffic*, the total increase of truck trips associated with carryout bag delivery compared to existing conditions would be less than two new trips per day as a result of the Proposed Ordinance. An increase of less than two new truck trips per day would not be anticipated to result in the exposure of sensitive receptors to substantial pollutants. Therefore, the Proposed Ordinance is not likely to expose sensitive receptors to substantial pollutant concentrations. The impact is *less than significant* and will not be further discussed in the EIR.

e) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance would not include development of any physical structures or involve any construction activity. As such, the Proposed Ordinance would not generate objectionable odors affecting a substantial number of people. There would be *no impact* and further analysis of this issue in an EIR is not warranted.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV. <u>BIOLOGICAL RESOURCES</u> --				
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. Although there is low potential for adverse effects to wildlife resources or their habitat either directly or indirectly, by promoting a shift toward the use of reusable bags in the Study Area, the Proposed Ordinance could potentially affect sensitive species if reusable bags are improperly disposed of and become litter that enters the storm drain system and ultimately into



coastal and marine environments. The proposed ordinance’s impact related to sensitive species is *potentially significant* and will be further analyzed in an EIR.

b, c) The Proposed Ordinance would not include any physical development or construction activity and, therefore, would not alter or remove any existing riparian habitat or federal wetlands in the Study Area. As such, the Proposed Ordinance would not adversely affect any riparian habitat or any federally protected wetlands. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

d) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. Various trees, shrubs and bushes in the Study Area serve as roosting/nesting habitat for a variety of migratory and resident birds. However, the Proposed Ordinance would not include any physical development or construction activity and, therefore, would not alter or remove any existing vegetation in the Study Area. As such, the Proposed Ordinance would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. *No impact* would occur and further analysis of this issue in an EIR is not warranted.

e, f) The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance would not involve any physical development or construction activities that would conflict with local policies or ordinances protecting biological resources, including trees, nor would the Proposed Ordinance conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. <u>CULTURAL RESOURCES</u> --				
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. <u>CULTURAL RESOURCES</u> --				
Would the Project:				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The Proposed Ordinance would not involve construction activities or physical development that would cause a substantial adverse change in the significance of an historical resource. The Proposed Ordinance would have *no impact* in this regard, and further analysis of this issue in an EIR is not warranted.

b-d) The Proposed Ordinance would not involve any ground-disturbing activities, such as excavation or construction activities. Therefore the Proposed Ordinance would not cause a substantial adverse change in the significance of an archaeological resource, directly or indirectly destroy a unique paleontological resource, or unique geologic feature, nor would it disturb any human remains. Therefore, there would be *no impact* and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. <u>GEOLOGY AND SOILS</u> –				
Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. <u>GEOLOGY AND SOILS</u> –				
Would the Project:				
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance would not involve development or construction activity that would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides. Therefore, *no impact* would occur and further analysis of these issues in an EIR is not warranted.

b-d) The Proposed Ordinance would not involve any physical development or construction activity; therefore, it would not result in substantial soil erosion or loss of topsoil. In addition, the Proposed Ordinance would not be located on a geologic unit or soil that is unstable and could increase the potential for landslide, lateral spreading, subsidence, liquefaction, or collapse, and would not place structures or people in areas that are located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

e) The Proposed Ordinance would not involve any physical development or construction activity. As such, the Proposed Ordinance would not have soils incapable of supporting the use of septic tanks or alternative wastewater disposal systems. There would be *no impact* and further analysis of this issue in an EIR is not warranted.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VII. <u>GREENHOUSE GAS EMISSIONS</u> - Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-b) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance would not involve any physical development, construction activities, or land use changes that would contribute greenhouse gas emissions. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. Although overall carryout bag use is anticipated to decline as a result of the Proposed Ordinance, a temporary increase in single-use paper-bag use and a permanent increase in reusable bag use might lead to an increase in the frequency of truck trips needed to deliver a greater number of these bags to stores in the Study Area. As discussed in Section XVI, *Transportation/Traffic*, the net increase in truck traffic resulting from the change in bag use would be less than two truck trips per day.

The EIR will analyze whether a shift toward reusable bags in the Study Area would generate greenhouse gas emissions that may have a significant impact on the environment. In addition, the EIR will analyze whether the Proposed Ordinance would conflict with any applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. Impacts related to greenhouse gas emissions are *potentially significant* and will be further analyzed in an EIR.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS - Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent



(\$0.10) charge for each recyclable paper a bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance would not involve development or construction activities that would use hazardous materials. Although hazardous materials may be used in the process to manufacture single use plastic and paper bags as well as reusable bags, there are no plastic, paper, or large-scale reusable bag manufacturing facilities within the Study Area and any existing or potential manufacturing facilities that manufacture bags would be required to continue to adhere to the requirements of the California Health and Safety Code (Section 25531-25543.3), which establishes a program for the prevention of accidental releases of regulated substances. With adherence to Health and Safety Code Section 25531-25543.3, carryout bag manufacturing facilities would be required to prepare and update a Risk Management Plan (RMP) that is designed to increase the protection of public health, the environment, and facility employees by ensuring proper emergency response and mitigation procedures when handling regulated substances and also assists the local government agencies in their communication and coordination efforts to improve facility safety while handling chemicals and hazardous materials. In addition, the completed product for each type of bag addressed by the ordinance would not be a hazardous material. As such, the Proposed Ordinance would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Moreover, the Proposed Ordinance would not handle or emit hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

d, h) The Proposed Ordinance would not involve physical development or construction activities. Therefore, the Proposed Ordinance would not locate structures on a site that has been included on a list of hazardous material sites, nor would it expose people or structures to a significant risk of loss, injury, or death involving wildland fires. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

e, f) The Proposed Ordinance would not involve any physical development or construction activities and, therefore, would not place residents or employees within the vicinity of any airport or private air strip. As such, there would be *no impact* and further analysis in an EIR is not warranted.

g) The Proposed Ordinance would not involve any physical development or construction activities. The Proposed Ordinance does not involve any physical development or construction activities. However, the ordinance would result in less than two new truck trips per day. Nevertheless, this change in traffic associated with the Proposed Ordinance would not conflict with an adopted emergency response plan or emergency evacuation plan and would not interfere with traffic on existing streets or through existing neighborhoods. The impact would be *less than significant* and further analysis of this issue in an EIR is not warranted.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. <u>HYDROLOGY AND WATER QUALITY</u>				
– Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY

– Would the Project:

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, f) The Proposed Ordinance would not involve any physical development or construction activities, but rather is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. It is anticipated that the reduction of single-use carryout bags would incrementally reduce the amount of litter in the Study Area that enters storm drains, thereby improving water quality. However, the increased use of reusable bags could also potentially affect water quality if reusable bags are improperly disposed of and become litter that enters the storm drain system. In addition, although overall carryout bag use is anticipated to decline as a result of the Proposed Ordinance, the EIR will also analyze whether the shift toward reusable bags and paper bags could potentially affect water quality as a result of processing activities related to bag production. Consequently, impacts related to water quality standards and waste discharge requirements are considered *potentially significant* and will be further analyzed in an EIR.

b) The Proposed Ordinance would not substantially deplete groundwater supplies or significantly reduce groundwater recharge, as it would not involve any buildings or other physical development. However, as discussed above, the Proposed Ordinance would be expected to lead to an increase in the number of reusable bags consumed in the Study Area. Washing reusable bags for sanitary purposes (either in a washing machine or rinsing and wiping) by customers may incrementally increase water use in the Study Area. The impact to water supply and any impacts associated with groundwater supplies as a result of the increase in water use associated with the Proposed Ordinance are *potentially significant* and will be analyzed in an EIR.

c-d) The Proposed Ordinance would not involve any physical development or construction activities. As such, the ordinance would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The Proposed Ordinance would not alter the course of any stream or other drainage and would not increase the potential for flooding. Because the Proposed Ordinance does not involve any new buildings or other physical development, no stream or river would be altered and the rate or amount of surface runoff would not change compared to existing conditions. Therefore, there would be *no impact* and further analysis of these issues in an EIR is not warranted.



g, h) According to the Ventura County General Plan Hazards Appendix and the Santa Barbara County Comprehensive Plan Seismic Safety & Safety Element, portions of the Study Area are located within the Federal Emergency Management Agency (FEMA) 100-year flood zone. The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recycled paper and reusable bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance would not involve construction of any new buildings or other physical development and, therefore, would not increase exposure of people or structures to significant flood hazards or impede or redirect flood flows. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

i, j) According to the Ventura County General Plan Hazards Appendix and the, there is potential for flooding in the Study Area in the event of a dam failure. However, the Proposed Ordinance does not involve construction of any new buildings or other physical development and, therefore, would not subject people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. As the Proposed Ordinance does not involve physical development or construction activities, the ordinance would not result in inundation by seiche, tsunami, or mudflow. There would be *no impact* and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
X. <u>LAND USE AND PLANNING</u> -- Would the proposal:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with an applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c) The Proposed Ordinance would require adoption by the Santa Barbara and Ventura Counties and participating cities. However, it would not involve any new development or construction activities. No new through-streets are proposed and no through-streets would be abandoned. As a result, the Proposed Ordinance would not divide an established community.



The Proposed Ordinance would not conflict with any land use plan or policy of the counties or cities within the Study Area, including general plans, specific plans, or zoning ordinances; rather, the program would further adopted policies calling for protection of the environment, improved public facilities and waste reduction. Moreover, the Proposed Ordinance does not involve any physical development or construction activities that would conflict with an applicable habitat conservation plan or natural community conservation plan. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. <u>MINERAL RESOURCES</u> -- Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-b) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance does not involve any physical development or construction or excavation activities. As such, the Proposed Ordinance would have *no impact* related to the loss of availability of a known mineral resource.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XII. <u>NOISE</u> – Would the Project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XII. NOISE – Would the Project result in:				
c) A substantial permanent increase in ambient noise levels above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-d) The Proposed Ordinance would apply throughout the Study Area. However, the ordinance would not involve any physical development or construction activities. As such, the Proposed Ordinance would not create new noise sources that would expose persons to noise levels in excess of existing noise standards. The Proposed Ordinance would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels, nor would the Proposed Ordinance create a substantial increase in permanent or temporary ambient noise levels. The ordinance could incrementally alter travel patterns associated with transport of single use and reusable bags; however, this incremental change would not create any audible change in the noise environment in any neighborhoods in or around the Study Area. Therefore, impacts related to noise levels would be *less than significant* and further analysis of these issues in the EIR is not warranted.

e, f) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance does not involve any physical development or construction activities that would be located within an airport land use plan or in the vicinity of a private airstrip. The Proposed Ordinance would therefore not expose people to excessive noise levels related to airports for people living or working in the Study Area and its vicinity, and the ordinance would have *no impact* in this regard.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. POPULATION AND HOUSING — Would the Project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The ordinance would not involve any physical development, such as residential units, and would not alter any existing land uses. As such, the ordinance would not induce population growth, displace existing housing, or displace existing residents. There would be *no impact* related to population and housing and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the				



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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XIV. PUBLIC SERVICES

public services:

i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a(i, ii) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. Police and fire protection services are provided by multiple departments in the Study Area. The Proposed Ordinance would not involve any new development or land use changes, nor would the ordinance result in an increase in population or employment in the Study Area. Therefore, the ordinance would not place an additional burden on police and fire protection services in the Study Area. The Proposed Ordinance would not result in the need to construct new or altered fire protection or police facilities. There would be *no impact* and further analysis of these issues in an EIR is not warranted.

a(iii) The Proposed Ordinance would not involve any new development or land use changes within the Study Area. In addition, the Proposed Ordinance would not result in an increase in population or employment; therefore, the ordinance would not place an additional burden on existing schools in the Study Area. The Proposed Ordinance would not result in the need for new or altered public schools. There would be *no impact* and further analysis of this issue in an EIR is not warranted.

a(iv) The Proposed Ordinance would not involve the construction of residences or other facilities that would directly affect parks or increase demand for recreational services; therefore, the ordinance would not increase the demand for parks in the Study Area. The Proposed Ordinance would not result in the need for new or altered parks. There would be *no impact* and further analysis of this issue in an EIR is not warranted.

a(v) The Proposed Ordinance would not involve any new development or land use changes within the Study Area. In addition, it would not result in an increase in population or employment; therefore, the ordinance would not require the provision of new or physically altered government facilities. There would be *no impact* and further analysis of this issue in an EIR is not warranted.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV. RECREATION --				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b) The Proposed Ordinance would not involve the construction of residences. Therefore, the ordinance would not increase the demand for recreation facilities, nor would it alter existing recreation facilities or require the construction for any new facilities. There would be *no impact* and further analysis of these issues in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. TRANSPORTATION / TRAFFIC --				
Would the Project:				
a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. <u>TRANSPORTATION / TRAFFIC</u> -- Would the Project:				
including either an increase in traffic levels or a change in location that results in substantial safety risks?				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The intent of the Proposed Ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance would not involve any physical development or construction activities. However, the shift toward reusable bags could alter truck travel patterns associated with delivering bags from manufacturers to retailers.

Stores making available paper carryout bags would be allowed to sell recyclable paper carryout bags made from 100% recycled material with a 40% post-consumer recycled content to customers for \$0.10 per bag. This cost requirement would create a disincentive to customers to request paper bags when shopping at regulated stores and is intended to reduce the environmental impacts related to the use of single use carryout bags and to promote a major shift toward the use of reusable bags by consumers in the Study Area. The Proposed Ordinance may lead to a short term increase in single use paper bag use as consumers would be unable to get a free plastic bag while shopping and may not have a reusable bag, but may be willing to pay a fee to use paper bags. Based on a cost requirement of at least \$0.10 per bag, it is assumed in this analysis that the total volume of plastic bags currently used in the Study Area (approximately 658,241,406 plastic bags per year) would be replaced by approximately 30% paper bags and 65% reusable bags as a result of the Proposed Ordinance. It is assumed that 5% of the existing total of single-use plastic bags used in the Study Area would remain in use since the Proposed Ordinance does not apply to some retailers who distribute plastic bags (i.e., restaurants). Thus, for this analysis it is assumed that approximately 32,912,070 plastic bags would be used in the Study Area after the implementation of the Proposed Ordinance. Even



though the volume of a single paper carryout bag (20.48 liters) is generally equal to approximately 150% of the volume of a plastic bag (14 liters²) and thus could hold a larger volume, for this analysis it is conservatively assumed that approximately 197,472,422 paper bags would replace approximately 30% of the plastic bags currently used in the Study Area.

In order to estimate the number of reusable carryout bags that would replace 427,856,914 plastic bags (65% of the existing number of plastic bags used in the Study Area per year), it is assumed that a reusable carryout bag would be used by a customer once per week for one year (52 times)³. According to the March 2010 *MEA on Single-use and Reusable Bags*, reusable bags may be used 100 times or more, therefore the estimate of 52 uses per year for reusable bags is conservative (Green Cities California, March 2010). Based on the estimate of 52 uses, 427,856,914 single-use plastic bags that would be removed as a result of the Proposed Ordinance would be replaced by 8,228,018 reusable bags.⁴ It should be noted that approximately 8,228,018 reusable bags would mean that each person in the Study Area (1,239,626 in 2012) would purchase around seven reusable bags per year. This analysis assumes that as a result of the Proposed Ordinance the existing total volume of groceries currently carried in approximately 658 million single-use plastic carryout bags would be carried within approximately 239 million single-use plastic, reusable and single-use paper bags.

A temporary increase in single-use paper bag use and a permanent increase in reusable bag use might lead to an increase in the frequency of truck trips needed to deliver a greater number of these bags to stores in the Study Area. This is because paper and reusable bags take up more cargo space per unit than plastic bags. However, any increase in truck trips related to paper and reusable bag delivery would be partially offset by the reduction in truck trips related to single-use plastic carryout bag delivery since under the Proposed Ordinance, plastic bags would no longer be distributed at the vast majority of retail outlets and therefore truck delivery would be substantially reduced. Nevertheless, a temporary increase in single-use paper-bag use and a permanent increase in reusable bag use would result in a net increase in truck traffic. As shown in Table 3, the net increase in truck traffic resulting from the change in bag use would be less than one truck trip per day.

Truck trips would be expected to primarily utilize major regional transportation facilities (such as the U.S. 101). Delivery trucks may periodically travel on residential streets, but an increase of less than two truck trips per day would not cause a significant traffic impact at any existing intersections or street segments in the Study Area. Therefore, impacts related to the existing traffic load and capacity of the local street system would be *less than significant* and further analysis in an EIR is not warranted.

² The Ordinances to Ban Plastic Carryout Bags in Los Angeles County Final Environmental Impact Report (SCH #2009111104). Adopted by the County of Los Angeles Board of Supervisors on November 16, 2010.

³ Please note that this assumption (52 uses per year) was also utilized in the City of Santa Monica Single-Use Carryout Bag Ordinance Final Environmental Impact Report (SCH #2010041004), Adopted January 2011.

⁴ 8,228,018 reusable bags per year = 427,856,914 single-use plastic bags / 52 uses per year.



**Table 3
Estimated Truck Trips per Day
Following Implementation of the Proposed Ordinance**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load**	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	32,912,070*	2,080,000	16	0.04
Single-use Paper	197,472,422*	217,665	907	2.49
Reusable	8,228,018*	108,862	76	0.21
Total			999	2.74
Existing Truck Trips for Plastic Bags			(316)	(0.87)
Net New Truck Trips			682	1.87

*Based on worst case scenario estimate of 5% existing plastic bag use in Study Area (approximately 258,602,841 plastic bags per year) to remain, 30% conversion of the volume of existing plastic bag use in the Study Area to paper bags and 65% conversion to reusable bags (based on 52 uses per year).

**City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.

c-f) The Proposed Ordinance would not affect air traffic patterns, nor would it include any design features that could present traffic hazards. The ordinance would not conflict with adopted policies, plans, or programs regarding public transit or nonmotorized transportation, nor would it affect the multi-modal performance of the highway and/or street and/or rail and/or off road nonmotorized trail transportation facilities. Implementation of the Proposed Ordinance would not reduce, sever, or eliminate pedestrian or bicycle circulation or access, or preclude future planned and approved bicycle or pedestrian circulation, nor would it cause a degradation of the performance or availability of all transit including buses, light or heavy rail for people or goods movement. There would be *no impact* and further analysis in an EIR is not warranted.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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XVII. UTILITIES AND SERVICE SYSTEMS --

Would the Project:

- | | | | | |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS --				
Would the Project:				
the construction of which could cause significant environmental effects?				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a, b, e) The Study Area is served by multiple wastewater treatment plants. The Proposed Ordinance would prohibit specified retail establishments in the Study Area from providing single-use plastic carryout bags to customers at the point of sale and create a mandatory ten cent (\$0.10) charge for each paper bag distributed by these stores. The Proposed Ordinance would not involve any new buildings or other physical development and therefore would not directly cause an increase in the amount of wastewater generated. However, increased washing of reusable bags (for sanitary purposes) by Study Area residents may incrementally increase wastewater generation. This increase of wastewater may exceed the County's and cities' contractual entitlement for flows to the various wastewater treatment facilities. Therefore, the Proposed Ordinance could significantly affect the Study Area's wastewater conveyance systems. Impacts related to wastewater conveyance and treatment would be *potentially significant* and will be further analyzed in an EIR.

c) The Proposed Ordinance would not involve any physical development or construction activities. As such, it would not increase impervious surface area that would create or contribute runoff water exceeding the capacity of existing or planned stormwater drainage systems. Further, by eliminating the use of plastic bags in the Study Area, the Proposed



Ordinance would incrementally reduce the amount of plastic bag litter that enters the storm drain systems. Plastic bags that enter the storm drain system may affect storm water flow by clogging drains and redirecting flow. By eliminating the potential for plastic bags to affect storm water flow, the Proposed Ordinance would incrementally improve the effectiveness of the stormwater drainage systems in the Study Area. Therefore, the Proposed Ordinance would not require any new storm water drainage facilities or the expansion of existing facilities. *No impact* would occur and further analysis of this issue in an EIR is not warranted.

d) Sources of water supply within the Study Area include local groundwater supplies and surface water sources. The Proposed Ordinance would be expected to lead to an increase in the number of reusable bags used in the Study Area. Washing reusable bags for sanitary purposes (either in a washing machine or by rinsing and wiping) may incrementally increase water use in the Study Area. The impact to water supply would be *potentially significant* and the potential for the increase in water use to exceed available supplies will be analyzed in the EIR.

f, g) Several landfills are operated by the counties and municipalities that make up the Study Area. The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable paper bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The shift toward reusable bags would reduce the amount of single-use plastic carryout bags sent to local landfills. However, the Proposed Ordinance may result in a temporary increase in the number of paper bags and a permanent increase in the number of reusable bags that are currently used in the Study Area. As such, the Proposed Ordinance may incrementally increase the amount of solid waste generated related to these types of bags. Impacts to the Study Area's solid waste collection and disposal system would be *potentially significant* and this issue will be further analyzed in an EIR.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE —

- | | | | | |
|--|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Does the Project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

a) The Proposed Ordinance would regulate the use of paper and plastic single use carryout bags at specified retail establishments in the Study Area, and would create a mandatory 10 cent (\$0.10) charge for each recyclable bag distributed by these stores. The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance does not involve any physical development or construction activities. As such, the Proposed Ordinance does not have the potential to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. There would be no impact with respect to these issues and further analysis in an EIR is not warranted. However, as discussed under Section IV, *Biological Resources*, the Proposed Ordinance could potentially affect sensitive species if reusable bags are improperly disposed of and become litter that enters the storm drain system and ultimately into coastal and marine environments. The proposed ordinance’s impact related to sensitive species is *potentially significant* and will be further analyzed in an EIR.

b) All potential environmental impacts of the project have been determined in this Initial Study to have no impact or a less than significant impact, except for environmental impacts related to



air quality, biological resources, greenhouse gas emissions, hydrology and water quality, and utilities and service systems. Cumulative impacts related to air quality, biological resources, greenhouse gas emissions, hydrology and water quality, and utilities and service systems could be *potentially significant* and will be analyzed in an EIR.

c) The Proposed Ordinance is intended to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags in the Study Area. The Proposed Ordinance does not involve any physical development or construction activities. As such, impacts related to aesthetics, agriculture and forest resources, cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, and transportation and traffic were determined to have no impacts related to the Proposed Ordinance or were determined to be less than significant and would therefore not cause substantial adverse effects on human beings, either directly or indirectly. As previously mentioned, impacts related to air quality, biological resources, greenhouse gas emission, hydrology and water quality, and utilities and service systems could be potentially significant. Therefore, effects on human beings, either directly or indirectly could also be *potentially significant* and will be analyzed further in an EIR.



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- California Department of Finance. May 2012. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2010-2012, with 2010 Benchmark."
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- City of Santa Monica. January 2011. *Santa Monica Single-use Carryout Bag Ordinance*. Final Environmental Impact Report (SCH# 2010041004).
- County of Los Angeles. Ordinances to Ban Plastic Carryout Bags in Los Angeles County Final Environmental Impact Report (SCH#2009111104). Certified by the Los Angeles County Board of Supervisors November 16, 2010.
- Green Cities California. March 2010. *Master Environmental Assessment on Single-use and Reusable Bags*. Prepared by ICF International.
- Santa Barbara County. Comprehensive Plan. Seismic Safety & Safety Element. Adopted 1979, Amended August 2010.
- Ventura County. General Plan Hazards Appendix. June 2011.



NOP Comment Letters

23 December 2012

Beach Erosion Authority for Clean Oceans and Nourishment
c/o City of Ventura Engineering Division
501 Poli Street, PO Box 99
Ventura, CA 93001

Subj: Comments on Scope and content of Draft Environmental Impact Report (EIR)

Ref: (a) Notice of Preparation of a Draft Environmental Impact Report BEACON Single Use Carryout Bag Ordinance dated 30 November 2012
(b) California State Laws AB 2449 Recycling: plastic carry out bags (2005-2006)
(c) California State Law SB 1219 Recycling: plastic bags. (2011-2012)

Encl: (1) "Negative Health and Environmental Impacts of Reusable Shopping Bags", by Anthony van Leeuwen, dated 12/12/2012
(2) "Why Not to Ban Plastic Carry Out Bags", by Anthony van Leeuwen, dated 12/23/2012
(3) "Plastic Carry-Out Bag Ban Not Needed", by Anthony van Leeuwen, dated 12/12/2012
(4) "Plastic Carry-Out Bag Ban - More Plastic Headed to Landfill", by Anthony van Leeuwen dated 12/13/2012

1. In accordance with reference (a) the following information is submitted as public input regarding the scope and content of the proposed Draft EIR:
 - a. Reusable Bag Life Cycle Analysis (LCA). All current life cycle analysis studies conducted comparing the environmental impacts of Plastic, Paper, and Reusable Bags are incomplete because they fail to account for the environmental impact associated with washing or sanitizing the reusable bag and the recurring consumption of water, energy, and generation of greenhouse gases. When these impacts are taken into consideration, the reusable bag no longer has the least impact to the environment on a per use basis over the expected lifetime of the reusable bag. See enclosure (1) page 9 for more information. **The EIR to be prepared by BEACON should include a complete Life Cycle Analysis (LCA) of reusable shopping bags including the impact to the environment by the cumulative consumption of water, energy, and generation of greenhouse gases for washing and sanitizing the bags over the lifetime of the reusable shopping bag.**
 - b. Increased Consumption of Water and Energy. The requirement by the consumer to wash and sanitize reusable shopping bags on a recurring basis means that the consumer's utility bills will increase. The amount of the increase depends upon the type of appliances in the household and how often the consumer washes their reusable bags. While some reusable bags must be hand washed and air dried, consumers can be expected to gravitate towards the more convenient machine washable and machine dryable bags in the long run. Enclosure (1) Table 1 shows estimates of water and electricity usage. Enclosure (1) Table 2 shows the projected utility cost per household under several different options. Estimates were extrapolated assuming 100% participation by all households in the City of Ventura and Ventura County. The increase in utility costs for a household is somewhere between \$9 and \$76 per year depending

upon the type of appliances and the frequency at which reusable bags are washed. Similarly, the cost for Ventura County residents could be as much as somewhere between \$2 million and \$18 million. The public has right to know the financial impact to a household and to the community that a proposed ordinance will incur. **The EIR to be prepared by BEACON should address all costs including increased utility costs to consumers and the community as a result of switching from plastic to reusable bags.**

- c. Increased Consumption of Water. Parts of the USA, including Southern California, are continually plagued by periodic drought conditions during which time laws and regulations concerning water conservation are enforced. For more information see Enclosure (1). The Oxnard plains are further plagued with sea-water intrusion in the underground aquifers. For example, the city of Ventura, during a normal year, obtains 20% of its water from the Ventura River, 45% from Groundwater Wells, and 35% from Lake Casitas. Approximately half of the water consumed is pumped from underground aquifers contributing to sea-water intrusion under the Oxnard plains. The United Water Conservation District uses both rainfall storm run-off and purchased water to replenish the aquifers. Rainfall in the Oxnard Plains is often not enough to replenish the water pumped by area wells. Residents of Ventura County are encouraged to conserve water. While the increase in water consumption due to washing of reusable bags can be absorbed by the reserve capacity of existing water supplies that reserve capacity can be better used for new residential and commercial developments than for washing reusable bags. In addition, the increased consumption of water is contrary to water conservation measures. **The EIR to be prepared by BEACON should address increases in water consumption due to washing of reusable bags, water conservation efforts, capacity, reserve capacity, and projected future growth needs for development projects over the projected lifetime of a plastic carry out bag ban.**
- d. Increased Consumption of Electricity. Parts of the USA, including Southern California are plagued with hot weather during the summer months. During periods of hot weather the power grid is straining to produce sufficient electrical power. During these times consumers are asked to reduce their electrical loads by turning off appliances and turning air conditioning thermostats to 78 degrees, etc. This means that electricity is a limited resource and that an inadequate supply exists during certain times and seasons. Consumers have been required to conserve electricity and purchase energy efficient appliances in order to reduce overall consumption. The requirement that reusable bags to be washed and sanitized on regular basis increases consumption of both water and electricity by the consumer and is contrary to energy conservation measures (see Enclosure (1)). **The EIR to be prepared by BEACON should address the increase in electrical consumption as a result of washing reusable bags, energy conservation requirements and efforts, system capacity, and reserve capacity of electrical supplies.**
- e. Plastic Bag Ban is a Duplication of Effort. One of the primary reasons cited for banning plastic carry out bags is harm to marine wildlife. In Enclosure (2) and (3) we discuss that harm to marine wild life comes from both plastic bags and plastic debris that originate from land based sources and are conveyed to the ocean via storm drains and rivers. The Total Maximum Daily Load (TMDL) program, under the federal Clean Water Act, is in the process of installing trash excluders on storm drains in Ventura County. Once ongoing projects are completed, the trash excluders will capture all plastic bags and other plastic debris and prevent that debris from finding its way to the ocean. Plastic bags, plastic debris and other trash are removed from trash excluders and disposed of by city and county on regular scheduled basis. Installation of trash excluders on storm drains is a

more effective and comprehensive solution in preventing plastic bags and other plastic debris from flowing to the ocean than simply banning a single item i.e. the plastic carry out bag. **The EIR to be prepared by BEACON should address installation of trash excluders on storm drains and the effect that will have on preventing plastic bags and plastic debris from flowing to the ocean thereby preventing harm to marine wildlife. In addition, the EIR should discuss how (or how not) that a ban on plastic carry out bags is duplication of effort to essentially achieve the same results as the installation of trash excluders.**

- f. Source of Roadside Plastic Bag Litter. The “California Department of Transportation Litter Abatement Plan” states that the most common source of litter on the highway results from trash and debris blowing from improperly covered or uncovered loads. Similarly, a national study states that trash and recycling collection vehicles have been found to be a primary source of roadside litter. Even the city of Pasadena in their study in preparation for banning plastic bags acknowledged that plastic bags were escaping from trash trucks en route to a local landfill. Best Management Practices require that trash and recycling trucks be modified to prevent escape of windblown litter. Costs to modify trucks can be amortized and passed on to rate payers. Modifying trucks to prevent windblown litter from escaping will help keep our roadways clean of unsightly litter. See Enclosure (2) and (3) for more information on this subject. **The EIR to be prepared by BEACON should address what remediation steps have been taken to eliminate airborne litter from trash and recycling trucks and other haulers.**
- g. Recycling Facilities For Plastic Bags And Plastic Wrap. The State of California in ref (b) required that grocery stores and other retail establishments, that issue plastic carry out bags at the checkout counter, are required to establish an in store recycling program and have a recycle bin available for customers to deposit plastic carry out bags. See enclosures (2) and (4) for more information. Although ref (b) expires 1 January 2013 it was extended to 1 January 2020 by ref (c). The in store recycling program not only accepts plastic carry out bags, but also other plastic bags and shrink wrap. *These include produce bags, dry-cleaning bags, bread bags, newspaper bags and shrink wraps from paper towels, bathroom tissue, napkins, and diapers.* The state of California reported that in 2009 approximately 11 tons of other plastic bags and plastic wraps were recycled for every ton of plastic carry out bags through the in store recycling program. It should be noted that this material cannot be put into the curbside recycling bins in most cities in Ventura County. Plastic Bags and Wraps are not economical to recycle by Gold Coast Recycling and Transfer Station plus the material gets stuck in automated sorting machinery. Hence, the only facility residents have to recycle this material is via the grocery store recycling bin. Once a plastic carry out bag ban is instituted, grocery stores will no longer be required by law under ref (b) or ref (c) to maintain an in store recycling program or a recycling bin. In San Francisco, it was noted that in store recycling bins were removed once a plastic carry out bag ban was instituted. In the event that a plastic carry out bag ban is imposed in Ventura County or one of the incorporated cities, grocery and retail stores will more than likely remove the in store recycling bins due to the cost involved and the price competition for customers with other grocery and retail stores including the big box stores. Hence, the consumer will not be able to recycle other plastic bags and wraps and this material will end up in the landfill. **The EIR prepared by BEACON should address the issue of recycling plastic bags and plastic wrap and keep these materials out of the landfill in accordance with County goals to reduce material going to the landfill.**

2. The following issues are presented for consideration by BEACON and involve modifications to the project, proposed model ordinances, and/or deal with issues that might be deemed outside the scope of the proposed EIR that need to be addressed:
- a. An Alternative Model Ordinance. Since reference (b) expires 1 Jan 2013 and reference (c) removes the prohibition for charging a fee for plastic bags, BEACON should consider modifying the project to provide an alternative model ordinance to the one currently provided. Instead of outright ban on plastic carry out bags, allow for charging a fee for both plastic and paper bags. The fee will still encourage the use of reusable bags while preserving the consumers right to choose. Customers who use reusable bags will not subsidize customers that use plastic or paper bags. In addition, since plastic carry out bags will not be banned, grocery and retail stores will still be required to retain recycling bins for plastic carry out bags and other plastic bags and wraps (See paragraph 1.g above).
 - b. The Elderly, Disabled, and Ergonomic Issues. One advantage often touted is that the reusable bag can hold more than the plastic bag. While that is true, often forgotten is the fact that if they hold more they weigh more! The reusable shopping bag presents ergonomic safety issues related to the fact that the weight of individual bags increased from an average of 10 lbs. for a plastic bag or a small reusable bag to 28 lbs. and 38 lbs. for the respective medium and larger versions of the reusable bag. The increase in weight is responsible for an increase in musculoskeletal disorders in retail store workers and could also be a concern for customers when lifting heavy bags including potential liability issues. In addition, heavier reusable bags also pose a significant problem to the elderly and disabled or people who have back problems or have had back surgery and are frequently restricted from lifting more than 10 lbs. See Enclosure (1) for more information. **BEACON should consider that proposed reusable bags in the model ordinance take into account the ergonomic issues encountered by various classes of people including the elderly and disabled.**
 - c. Public Health Hazards. The proposed model ordinance attempts to shift consumers from using sanitary plastic and paper bags to using dirty reusable bags. Enclosure (1) identifies a number of health hazards presented to consumers: (1) the buildup of bacteria, yeast, mold, coliforms and E-Coli that can potentially cause foodborne illness or death; and (2) the transmission of contagious viruses including the common cold virus, croup, Giardia, influenza, meningitis, rotavirus diarrhea, norovirus, strep, and many other diseases. In addition, there are hazards associated with cross contamination of food and non-food items. People with compromised immune systems are at greater risk from bacteria and viruses in reusable bags than people with normal immune systems. In addition, people who are homeless and cannot wash and sanitize reusable bags are also at risk! These health hazards can be overcome by regular washing or sanitization of reusable bags. Enclosure (1) also identifies why incidents of illness attributed to Reusable bags are under reported. **Public health officials should review Enclosure (1) and the literature to develop guidelines for properly and safely**

using reusable bags. Public health officials should make recommendations as to how often reusable bags should be washed taking into account people with both normal immune systems and those whose immune systems are compromised.

- d. Public Awareness and Recycling of Plastic Bags and Wraps. A successful recycling program depends upon awareness and education. The In Store Recycling Program created by ref (b) and extended by ref (c) is known by many people for recycling of plastic carry out bags, but many people are not aware that other plastic bags and plastic wraps can be recycled in these same containers as well. Hence, a lot of plastic is going to the landfill that could be easily be diverted if the public was better informed about the In Store Recycling Program. See enclosure 2 for more information. An effort to reach out and educate the public about this program needs to be undertaken. **BEACON should address the issue of who is responsible to educate the public about the In Store Recycling Program; the city, the county or individual grocery and retail stores.**
3. This memorandum and enclosures are submitted in accordance with reference (a) and should become part of the official record regarding the Preparation of this EIR and development of model ordinances. For more information, please feel free to contact Mr. Anthony van Leeuwen at 805-647-4738 or by email at vanleeuwenaw@roadrunner.com.

Respectfully,

Anthony van Leeuwen

NEGATIVE HEALTH AND ENVIRONMENTAL IMPACTS OF REUSABLE SHOPPING BAGS

BY

Anthony van Leeuwen
12 December 2012

INTRODUCTION

The reusable shopping bag has been touted as an environmentally friendly alternative to plastic and paper disposable carry out bags. But is it? Proponents always mention the advantages of the reusable bag but fail to mention the disadvantages. For example, if reusable shopping bags are not washed on a regular basis, there will be a buildup of bacteria, yeast, mold, and coliforms which if they come in contact with food items could be a potential health hazard. In addition, the reusable shopping bag can also act as a carrier to transmit contagious viruses that could make other people ill. Washing shopping bags will maintain them in a sanitary condition; however, that means the use of water, electricity, natural gas, soap and bleach and generation of greenhouse gases on a recurring and continual basis. This makes the reusable shopping bag the least environmentally friendly bag available. Also, using water and energy to maintain a bag in a sanitary condition when off-the-shelf sanitary plastic and paper bags exist, is a waste of resources, resources that consumers have been instructed to conserve, and resources that consumers will have to pay for!

HEALTH HAZARDS

SUMMERBELL STUDY

Two different studies¹ have been conducted by microbiologists to determine if any health hazards exist with the use of reusable bags to carry groceries and other food items. The first study, also known as the Summerbell Study², was conducted by Dr. Richard Summerbell in Toronto, Canada and is available [here](#). The study tested a number of “used” reusable shopping bags which revealed the following:

- 64% of bags tested had some level of bacteria
- 30% of bags tested had elevated bacterial counts
- 24% of bags tested showed presence of mold
- 20% of bags tested indicated the presence of yeast
- 12% of bags tested had an unacceptable coliform count

The study concluded that “reusable grocery bags can become an active microbial habitat and a breeding ground for bacteria, yeast, mold, and coliforms.” The study also noted that the presence of yeast and mold may be of concern for people with compromised immune systems or allergies. In addition the study concluded that the use of reusable bags as a multi-purpose tote is a cause for concern particularly if used to transport gym clothes or dirty diapers. The study also recommended that reusable bags be periodically replaced to prevent bacteria buildup.

LOMA LINDA STUDY

The second study³ titled “Assessment of the Potential for Cross Contamination of Food Products by Reusable Shopping bags” was conducted by the Department of Soil, Water and Environmental Science at the University of Arizona in Tucson; in conjunction with the School of Public Health, Loma Linda University in Loma Linda, California and is available [here](#). The cross contamination problem can best be described in the following quotation from this study:

“Most foodborne illnesses are believed to originate in food prepared or consumed in the home.⁴ Cross contamination of foods during handling is one of the factors leading to this statistic. Cross contamination occurs when disease causing microorganisms are transferred from one food to another. For example raw meat products are often contaminated with foodborne bacteria such as Salmonella and Campylobacter. While cooking these foods usually destroy these bacteria they may be transferred to other foods, which may be consumed uncooked, or contaminate the hands of consumers and be directly transferred to the mouth resulting in infection. Transfer may occur by surfaces such as cutting boards, kitchen counter tops and by the hands. “

This study included a larger sampling of reusable bags than the Summerbell study in Canada. The study included interviews of bags users to determine a profile of bag usage. The following are some of the statistics from the study:

- 49% used the bag once per week; 22%, twice per week; 18%, three times per week; 11% more than three times per week
- 70% used the bag solely for groceries; 30%, for other uses
- 75% did not use separate bags for meats and vegetables; 25%, did
- 55% transported bags in the automobile trunk; 45% in the back seat
- 55% stored bags in the home; 45%, in the automobile
- 97% did not wash bags; 3% did⁵

The fact that 97% did not wash their bags; that 45% stored bags in the car; that 75% did not use separate bags for meats and vegetables; and that 30% used bags for other uses, are all factors that lead to high bacteria counts and the potential for cross-contamination. The bacteria counts that were identified in this study included the following:

- Most used bags showed some level of bacteria
- 51% of bags had Coliform bacteria
- 12% of bags had Escherichia Coli (E. Coli)

The bags containing Coliform bacteria indicate the bags were contaminated by raw meats or other uncooked food products and the presence of E. Coli indicates fecal contamination. The presence of

these bacteria demonstrates that bags **do** become contaminated and that food borne pathogens **do** exist on the bags.

The study also evaluated the potential for bacterial growth when reusable bags were stored in the trunk of car for two hours resulting in a 10-fold increase in bacteria.

The study concludes that “A potential significant risk of bacterial cross contamination exists from using reusable bags to carry groceries. “ The study further identified that hand or machine washing reduced the quantity of bacteria in reusable bags by more than 99.9%. **The study recommended that reusable bags be washed on a regular basis and that the public be educated on the proper use and care of reusable bags.**

ABC NEWS INVESTIGATION

While some people question the studies, a [video](#) produced by ABC News Call 7 Investigators collected bags from shoppers and tested the bags for bacteria. The lab results were taken to Dr. Michelle Barron an infectious disease expert at the University of Colorado Hospital. Three bags had relatively low bacteria counts presenting little risk of illness; two, moderate bacteria counts presenting moderate risk of illness; and two, extremely high bacteria counts presenting high risk of illness. Some of the bags also showed high levels of yeast and mold. The investigator also dusted a grocery bag with a substance that glows in the dark to demonstrate how harmful germs can travel, from the bag, to the groceries and hands, to countertop, to the cupboard and refrigerator. Dr. Barron also suggested the bags be washed or sanitized with bleach wipes after each use. She also stated "We're trying to be environmental. I fully support that. But not at the cost of your health."⁶

HEALTH CANADA ADVISORY

The Department of Health in Canada issued an Advisory and Warning⁷ titled “Health Canada Reminds Canadians to Avoid Cross-Contamination When Using Reusable Grocery Bags and Bins”, available [here](#). The Advisory reminded Canadian citizens and residents to wash their reusable bags and bins to prevent food-related illnesses and provided some guidelines in segregating foods and using your reusable bags in a safe manner. What is important here is that the Canadian Department of Health validated the concerns expressed in the Summerbell study.

BACTERIA LEVELS

The Summerbell and Loma Linda studies both documented that bacteria, yeast, mold and coliforms are present in reusable shopping bags. The City of San Jose in their Environmental Impact Report (EIR)⁸ minimized the concern for bacteria levels in reusable shopping bags by citing another study⁹ showing that people are exposed to much higher bacteria and coliform levels on surfaces in the home such, as a table top, counter top, and cutting board. However, they miss the point entirely! The issue is not exposure to bacteria; the issue is bacterial contamination of food items that are ingested uncooked and could result in a food borne illness. A better example would have been to compare bacteria and coliform levels on dishes and cookware and cutting boards that have been washed in the dishwasher

which kills 99.9% of bacteria.¹⁰ In that case, the bacteria levels in the reusable bag are thousands of times greater.

Australian Microbiologist Craig Andrew-Kabilafkas states: “With so many toxin producing germs lurking in the kitchen, vigilance is paramount. The best way to safeguard your household from unnecessary bouts of illness is to ensure eating utensils and food preparation tools are kept as bacteria free as possible by washing them at a very high temperature. Only a dishwasher can safely wash dishes at temperatures around or above 68°C which is needed to effectively kill 99% of bacteria.”¹¹

What needs to be kept in mind is that there are various strains of bacteria, some of which are found in your own household and are safe, but other strains can cause severe food poisoning and even death.¹²

The Centers for Disease Control (CDC) estimates that each year roughly 1 out of 6 Americans (or 48 million people) get sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.¹³

PLASTIC BAG BAN LEADS TO DEATHS AND EMERGENCY ROOM VISITS

San Francisco County in California was the first major jurisdiction to enact a ban on plastic bags in 2007. In a report titled “Grocery Bag Bans and Foodborne Illness” the authors discovered that death from foodborne illness increased by 46% or 5.5 deaths after the plastic bag ban for the county was implemented. In addition, the report cites that Emergency Room (ER) visits increased by 34% or 40 visits where E. Coli is the principal diagnosis. Using various statistical methods the authors show that deaths increased between 5.4 to 15.8 and ER visits increased from 40 to 70. These results understate the true total effect because many individuals likely suffer food borne illnesses without going to the hospital or dying. The authors of the report state that similar results are seen in other areas where plastic bags are banned.¹⁴

LIFE-LONG CONSEQUENCES OF FOODBORNE PATHOGENS

The Center for Foodborne Illness Research and Prevention published an article entitled “The Long-Term Health Outcomes of Selected Foodborne Pathogens” documented **potential life-long complications** from foodborne pathogens:

“Foodborne disease is a serious public health issue that, according to the Centers for Disease Control and Prevention (CDC) causes tens of millions of acute illnesses, hundreds of thousands of hospitalizations, and thousands of deaths each year in the United States. While the severity of acute foodborne disease varies greatly, depending on the pathogen and the vulnerability of the person infected, the impact of foodborne illness on children, as well as for the elderly and immune-suppressed (e.g., pregnant women, people undergoing chemotherapy, organ-transplant recipients, HIV/AIDS patients), is more likely to be serious and/or long-lasting.”

“Diarrhea and vomiting are common symptoms, and in most cases, last for only a few days. **However, most foodborne pathogens can cause, in a small percentage of cases, serious acute and/or life-long complications, including: kidney failure; paralysis; seizures; hearing/visual impairments and mental retardation.**”¹⁵

VIRUS HEALTH HAZARDS

LESSONS FROM THE OREGON NOROVIRUS INCIDENT

In 2010, six members of an Oregon soccer team became ill with acute gastroenteritis during a weekend soccer tournament, news article¹⁶ available [here](#). A concerned mother contacted Public Health authorities and Oregon Public Health investigators were able to confirm that the norovirus that made the girls ill was transmitted via a reusable shopping bag¹⁷. There are two things we learn from this incident:

- Public Health Officials traced the source of the virus outbreak to the reusable bag.
- That the reusable bag can transmit contagious viruses.

The significance of the first point is that without public health involvement, the source of the illness or method of transmission would **not** have been identified. Similarly, in the event a family does not wash their reusable bags and become ill with a food related illness, they would place the blame on bad food or the flu. The reusable bag would never be identified as the culprit; hence, incidents of illness related to reusable bag contamination will be **under reported**.

The other significant point we learn from the Norovirus outbreak is that the reusable bag can act as a medium to transmit the virus to others. Researchers determined that members of an Oregon soccer team became ill after touching a contaminated reusable shopping bag. The researchers determined that airborne contamination of fomites (contaminated objects) can lead to subsequent outbreaks.¹⁸

DISEASE TRANSMISSION VIA REUSABLE BAGS

Like the Norovirus, the influenza virus can also be spread by fomites. The infected person who has touched their nose or eyes (conjunctiva) with their hands will transfer the virus to their hands and subsequently when touching an object transfer the virus to the object (or fomite). If the object is a reusable shopping bag then the shopping bag will be able to transfer the influenza virus to others. The influenza virus has been known to persist on paper currency for several weeks.¹⁹

In the event of an influenza outbreak, the reusable shopping bag will serve as a carrier for transmission of the virus to others. *It may be necessary, to ban the reusable bag during an influenza outbreak, or require people to wash their bags before coming to the store, or require clerks who handle the bags to wear gloves.*

Other diseases that are commonly spread by means of fomites (contaminated objects) include the common cold, cold sores, conjunctivitis, coxsackievirus (hand-foot-mouth disease), croup, E. coli infection, Giardia infection, influenza, lice, meningitis, rotavirus diarrhea, Respiratory syncytial virus (RSV), and strep.²⁰

With respect to the norovirus outbreak, Dr. Charles Gerba, a professor in the Departments of Soil, Water and Environmental Science at the University of Arizona who conducts research about the transmission of pathogens through the environment, issued the following statement:²¹

“The latest outbreak of norovirus reinforces the research we have conducted about the propensity of reusable grocery bags to act as hosts for dangerous foodborne bacteria and viruses. In reality, **reusable bags are likely at fault much more often than we realize: cases often go unreported and uninvestigated.**

“The cause of roughly 70 percent of foodborne illness cases, the norovirus spreads very easily and Symptom's include projectile vomiting and severe diarrhea. It can have such sweeping consequences as school and emergency room closures. **This incident should serve as a warning bell: permitting shoppers to bring unwashed reusable bags into grocery and retail stores not only poses a health risk to baggers but also to the next shoppers in the checkout line.**”

The Norovirus causes about 21 million illnesses, 70,000 hospitalizations, and 800 deaths a year in the United States.²² Norovirus is also the most common cause of foodborne-disease outbreaks in the United States. Norovirus can spread quickly in closed places like daycare centers, nursing homes, schools, and cruise ships. Usually, it's transmitted by direct human contact and contaminated surfaces. Leafy greens such as lettuce, fresh fruits, and shellfish are commonly involved in foodborne outbreaks.²³

OTHER FOOD SAFETY ISSUES

Currently, detergents and cleaners and other hazardous items such as pesticides are bagged separately from other food items for safety reasons. Boxed laundry soap or detergent often leak granules of soap or detergent from the box. Similarly, liquid detergents and materials occasionally leak from a loose cap or directly from a break in the bottle. Soap and detergent and other cleaners as well as pesticides also smell that may affect food items if not bagged separately.

In the event of a pesticide or other chemical spill in a reusable bag, it may not be possible to reuse that bag for food items even if it is washed. This is because some pesticides or hazardous chemicals could be absorbed into fibers and into plastics used to construct the reusable bag. The bag may have to be disposed of for safety reasons.

To prevent cross contamination you either wash bags between uses or segregate your purchases into specific bags. Unfortunately, there is no universal method of marking bags for specific uses, and store personnel will not know or be able to readily determine into which bags to place your food items unless that is communicated to them each time you are the store. Since store personnel are usually very busy, the likelihood of following any kind of bag segregation method is low. Store personnel must then remember what you told them or they will do it wrong and potentially cross contaminate food products with bacteria or soap or detergent or pesticide spill from your last use.

ERGONOMIC SAFETY ISSUES

According to Reusable Bag Guidelines²⁴ there is concern that the reusable bag also presents ergonomic safety issues related to the fact that the weight of individual bags increased from an average of 10 lbs. for a plastic bag or a small reusable bag to 28 lbs. and 38 lbs. for the respective medium and larger versions of the reusable bag. The increase in weight is responsible for an increase in musculoskeletal disorders in retail store workers and could also be a concern for customers when lifting heavy bags

including potential liability issues. In addition, for people who have back problems or have had back surgery and are restricted from lifting more than 10 lbs. heavier reusable bags also pose a problem.

AT RISK POPULATION GROUPS

To minimize health risks, periodic washing of reusable bags and segregation of food products into separate bags is recommended. Per the Loma Linda University study, because 97% of people do not wash their reusable bags and 75% of people do not segregate food products it becomes a legitimate concern and reason for educating the public.

Most people will have no problems maintaining their reusable shopping bags in a sanitary condition; however, there are several at risk population groups including immunocompromised individuals, the homeless, the elderly, and the disabled. Each of these groups presents a unique set of characteristics that that will put them at risk from health hazards associated with reusable shopping bags. The main concern is the ability to maintain reusable shopping bags in a sanitary condition and the ability to segregate food products to prevent cross contamination.

IMMUNOCOMPROMISED²⁵ INDIVIDUALS

Individuals who are Immunocompromised are not capable of battling infections because of a weakened immune system. This includes people who have HIV or AIDS, leukemia, lymphoma, undergoing chemotherapy or radiation therapy for cancer, are pregnant or who take immunosuppressive post-transplant medications. According to the article “Sensitive populations: who is at the greatest risk?” 20% of the population belongs to this group who are at greater risk to food and waterborne illnesses than the population at large:

In assessing the potential impact of food and waterborne disease, it is important to recognize that certain individuals may be at greater risk of serious illness than the general population. Individuals who are at increased risk of developing more severe outcomes from microorganisms are the very young, the elderly, pregnant individuals, and the immunocompromised (organ transplants, cancer patients, AIDS patients). This group represents almost 20% of the current population in the United States ... The elderly and the immunocompromised are an ever increasing segment of the population whose numbers are expected to increase in the years ahead. This article presents an assessment of the increased risk for segments of the population from enteric pathogens which may be either water or food borne.²⁶

Immunocompromised²⁷ Individuals would be best served by using sanitary plastic and/or paper bags vice a reusable bag or alternatively washing their reusable bags between uses.

THE HOMELESS

A significant number of the homeless live in the street, in their vehicles, or in make shift housing comprised of tents, crates, and cardboard boxes in encampments located in river bottoms, under freeway overpasses, and empty lots. Living conditions in these encampments can be dangerous to one's health. Garbage attracts rats, mice, and various other rodents. In these encampments food cannot be stored properly, dishes cannot be washed properly thereby facilitating the spread of food-borne diseases. In most cases, there are no public toilet facilities nearby and the homeless defecate and

urinate in outdoor locations.²⁸ Poor hygiene contributes to a variety of health problems including heart disease, cancer, liver disease, kidney disease, skin infection, HIV/AIDS, pneumonia, tuberculosis, sexually transmitted diseases, and meningitis. Alcohol and drug addiction are also major problems.²⁹

Further compounding the environment of homeless encampments are diseases that are transmitted by rats and mice or other rodents that are attracted to the garbage. Diseases include Eosinophilic Meningitis, Rat-Bite fever, Leptospirosis, Hantavirus Pulmonary Syndrome (HPS), Murine Typhus, Salmonella Enterica Serovar Typhimurium, and Bubonic Plague.³⁰

In addition, riverine environments are also a source of Cholera. Transmission is primarily by the fecal contamination of food and water caused by poor sanitation. This bacterium can, however, live naturally in any environment.³¹

If a plastic bag ban is in place, the homeless will gravitate to using reusable bags, because they are more durable and can hold more stuff. Paper bags will not survive long in the riverine environment. The homeless simply do not have the facilities to wash their reusable bags and will be unable to maintain their bags in sanitary condition, putting themselves at further risk for food-borne illness. Their bags when stored in their unsanitary environments would attract rodents looking for food, and potentially contaminating the bags with dangerous viruses, such as the Hantavirus.³² Then when they take their shopping bags from the unsanitary environment of the homeless encampment to the grocery store, their unsanitary reusable shopping bags constitute a health hazard for store clerks and other shoppers. The same is true for shopping carts used by the homeless, when returned to the store they constitute a health hazard for shoppers.³³

THE ELDERLY AND DISABLED

Another At Risk Population group is the elderly and the disabled. While many elderly and disabled are mentally alert and fully capable of taking care of themselves, others have disabilities and impairments³⁴ that make household chores difficult if not impossible to perform. They are simply not able to keep their reusable bags in a sanitary condition or even to keep food products segregated when shopping. Many of the elderly live on fixed incomes and may be extremely hesitant to use water and soap required to keep bags in a sanitary condition. Therefore the elderly and disabled are at greater risk from food borne illness than the population at large. The elderly are also at serious risk for infections such as pneumonia, influenza, tuberculosis³⁵, salmonellosis, and hepatitis some of which may result in death.³⁶ In addition, transmission of the norovirus, the influenza virus, or other diseases transmitted via a reusable bag is a legitimate health concern. Also the elderly are at risk for injury when attempting to lift heavy reusable bags filled with groceries/purchases.

HOW TO USE AND CARE FOR REUSABLE BAGS

Caring for reusable bags involves both washing or sanitizing of bags and also using separate bags for different types of groceries. A number of fact sheets exist that explain how to care for reusable bags. A fact sheet called "Practice Safe Sacks" provides guidelines for using reusable bags safely and can found [here](#). Another fact sheet³⁷ is available [here](#) with tips for cleaning bags and also using them.

WASHING REUSABLE BAGS

Many people dismiss the health hazards associated with the reusable shopping bag. They say when it gets dirty just throw it in the wash. That's pretty good advice; except, most people are not able to see bacteria or viruses. Hence, as a precaution regular washing should become the established practice.

Many people also dismiss the health hazards encountered by store employees saying that they could offer a paper bag in the event a customer's reusable bag is dirty. But again a bag could look clean and be laden with dangerous bacteria and contagious viruses.

The foregoing all point to the one undisputable fact that the reusable bag is a health hazard if not periodically washed to maintain them in a sanitary condition. The Loma Linda University study recommended that the bags be washed periodically or between uses if groceries are not segregated. While this seems excessive, it might not be if one or more family members have a weakened immune system, taking certain medications, or has some other medical condition or allergy. Each family will have to make their own decisions about how often to wash their bags. **Washing bags to maintain them in sanitary condition means the increased and recurring consumption of water, electricity, natural gas, soap and bleach.**

INCOMPLETE LIFE CYCLE ASSESSMENTS

Life Cycle Assessments (LCA) reports, referenced in Environmental Impact Reports(EIRs), attempt to identify the impact to the environment during the manufacturing and disposal/recycling process of the different types of paper, plastic, and reusable bags. The impact to the environment is analyzed with respect to water use, energy consumption, generation of greenhouse gases, chemicals used, etc.

Life Cycle Assessment (LCA) reports looked at include the "Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper" by Boustead Consulting & Associates³⁸; "Life Cycle Assessment of Supermarket Carrier Bags"³⁹ by the UK Environment Agency; and "Life Cycle Assessment of Reusable and Single-use Plastic Bags in California" by the California State University Chico Research Foundation⁴⁰; and, the "Master Environmental Assessment on Single-Use and Reusable Bags" by Green Cities.⁴¹ All of the above mentioned LCA reports are **incomplete** with respect to the reusable shopping bag in that they do **NOT** identify the impact to the environment by the recurring consumption of water, electricity, natural gas, soap and bleach and the resulting sewer discharge required for maintaining reusable shopping bags in a sanitary condition. **Hence, all LCA reports are INCOMPLETE!!**

The LCA reports identify that the plastic carry out bag has the lowest impact to the environment during the manufacturing and disposal process and then recommends the reusable bag as the bag with the lowest impact to the environment if used multiple times and on a per use basis. **However, the analysis is flawed because the LCA reports are incomplete and do not adequately deal with the consumption of water, electricity, natural gas, soap and bleach in order to maintain the reusable bag in a sanitary condition.**

Even though many consumers ([only about 15% wash their bags](#)) are currently not washing their bags like they should, there is still a requirement to maintain bags in a sanitary condition. This requirement should be modeled and characterized in order to determine the impacts to the environment once the public is educated or in the event a “scare” results in compliance with recommended washing protocols. A scientific study to characterize these impacts is needed. Then the LCA reports should be updated to accurately identify the impact to the environment.

When you consider that sanitary plastic and paper bags are readily available, using water and energy resources to maintain the reusable shopping bag in a sanitary condition is a waste of those resources. Especially in light of the fact that water and electricity must be conserved. The recurring consumption of water and energy resources makes the reusable bag the least friendly to the environment of all the alternatives. The plastic carry out bag has lowest impact to the environment.

INCREASED WATER USE

Parts of the USA, including Southern California, are continually plagued by periodic drought conditions during which time laws and regulations concerning water conservation are enforced.⁴² The Oxnard plains are further plagued with sea-water intrusion in the underground aquifers. The city of Ventura, during a normal year, obtains 20% of its water from the Ventura River, 45% from Groundwater Wells, and 35% from Lake Casitas.⁴³ Approximately half of the water consumed is pumped from underground [aquifers](#) contributing to sea-water intrusion under the Oxnard plains. United Water Conservation District uses both rainfall storm run-off and purchased water to replenish the aquifers. Rainfall in the Oxnard Plains is often not enough to replenish the water pumped by area wells.

UTILITY COSTS

There are two types of reusable shopping bags, those that can be hand washed only and those that can be machined washed. Hand washable bags require less water and energy to wash and must be air dried and is therefore friendlier to the environment. However, hand washing bags is time consuming making it less likely those bags will be washed. Since it is much more convenient to machine wash and dry bags, over time consumers will opt for the higher cost cotton or fabric bags which can be machine washed and dried.

Utility costs for machine washing and drying will vary with the kind of appliances in the household. For example, a top-loading washing machine consumes up to 40 gallons per load, and a front-loader between 10-24 gallons per load. A gas dryer will consume less electricity than an electric dryer. A gas water heater is cheaper to operate than an electric water heater.

Table 1 shows the consumption of water and electricity for a typical household using a top loading washing machine and electric dryer. It was estimated that 10 reusable cotton washable bags would constitute a single load and annual consumption of electricity and water is shown if bags are washed once per month and/or once per week. The use of electricity or natural gas to heat water in a water heater was not considered. The table then extrapolates consumption of water and electricity to all households in the City of Ventura and Ventura County. Actual use of course will differ and depends upon the distribution of the type of washing machine, dryer, water heater, and hand washable verses machine washable bags in the city and county.

If you choose to machine wash and dry your reusable bags once per month the cost of your utilities would increase by about \$14 per year per household. If you wash them weekly, the increase would be about \$62 per year per household. An internet calculator⁴⁴ located [here](#) was used to calculate the annual cost. The cost varies with the type of washing machine, dryer, and water heater as well as utility rates.

	Per Load (Top Loader)	Yearly Cost (1 X per Month)	Yearly Cost (1 X per Week)
Washer			
Water	40 gallons/load		
Electricity	0.25 kWh		
Dryer			
Electricity	4.5 kWh		
Total / Household		\$14.31	\$62.00
Water	40 gallons/load	480 gallons	2080 gallons
Electricity	4.75 kWh	57 kWh	247 kWh
Total / Ventura		\$612,854.37	\$2,655,274.00
Water	42,827 Households in City of Ventura	20,556,960 gallons	89,080,160 gallons
Electricity		2,441,139 kWh	10,578,269 kWh
Total / Ventura County		\$3,480,678.54	\$15,080,508.00
Water	243,234 Households in Ventura County	116,752,320 gallons	505,926,720 gallons
Electricity		13,864,338 kWh	60,078,798 kWh
Notes: (1) Figures assume all households use machine washable reusable bags.			
(2) Does not include the electricity or natural gas required for heating water.			
(3) Dollar figures represent the estimated increased utility costs.			

TABLE 1. WATER AND ELECTRICAL CONSUMPTION FOR WASHING REUSABLE BAGS

Table 2 shows the Yearly Costs from low to high depending upon the type of appliances: front loader and top loader washing machine, gas or electric dryer, and gas or electric water heater. We calculated the annual utility cost for washing reusable bags on a weekly basis using three options for appliance type denoted by: Low, Mid, and High.

Using the internet calculator, the “Low” utility cost is for a front loading washing machine, gas dryer, and gas water heater which runs about \$37 per year. The “Mid” utility cost is for a top loading washer, electric dryer, and gas water heater which runs about \$62 per year. The “High” utility cost is for a top loading washer, electric dryer, and electric water heater which run about \$76. The annual utility cost for washing reusable bags on a monthly basis was computed from the Low, Mid, and High figures by dividing by 52 weeks and multiplying by 12 months. The increased utility costs for a single household are then extrapolated to the entire City of Ventura and the County of Ventura assuming a 100% participation rate in machine washing and drying of reusable bags. The purpose of this exercise is to identify that there are significant costs imparted to the public in the event a plastic bag ban is initiated and consumers must use reusable bags and wash them on a regular basis.

Table 2 shows that annual utility costs for washing bags upon a monthly basis will vary from \$8.54 to \$17.54 and on a weekly basis between \$37.00 and \$76.00 depending upon the type of washing machine, dryer, and water heater.

	Low/High	Yearly Cost (1 X per Month)	Yearly Cost (1 X per Week)
Household	Low	\$8.54	\$37.00
	Mid	\$14.31	\$62.00
	High	\$17.54	\$76.00
Total / Ventura 42,827 Households in City of Ventura	Low	\$365,742.58	\$1,584,599.00
	Mid	\$612,854.37	\$2,655,274.00
	High	\$751,185.58	\$3,254,852.00
Total / Ventura County 243,234 Households in Ventura County	Low	\$2,077,218.36	\$8,999,658.00
	Mid	\$3,480,678.54	\$15,080,508.00
	High	\$4,266,324.36	\$18,485,784.00
Notes: (1) Low assumes front loading washer, gas dryer and water heater. (2) Mid assumes top loading washer, electric dryer, and gas water heater. (3) High assumes top loading washer, electric dryer and water heater. (4) Dollar figures represent the increased utility costs.			

Table 2. Yearly Costs depending upon type of appliances

The cheaper bags available at the grocery stores are made from various plastics and may not really be machine washable or dryable. Cotton or Hemp bags that are durable and machine washable will cost the consumer somewhere between \$4 and \$23 each. I expect consumers will gravitate to machine washable bags for both durability and convenience. Which means more water and energy use.

For a family that has 10 machine washable reusable cotton bags (10 x \$4 = \$40 plus 7.25% sales tax is \$42.90) and wash them once per month for annual cost ("Mid" option) of about \$14.31 the total **first year cost is \$57.21**. In the event a family member has a compromised immune system or other medical condition and decides to wash the bags between uses, the cost would increase to about **\$104.90** per household for the first year. Most of the bags have to be replaced every other year, so consumers will get hit with the recurring cost of buying new bags.

REUSABLE SHOPPING BAG SECURITY RELATED ISSUES

The reusable shopping bag presents several security issues:

1. Carrying a bundle of reusable bags into a retail establishment could be used to hide a weapon. This may be a concern for the Circle K or 7-Eleven type of convenience stores that are robbed frequently.
2. Carrying a bundle of reusable bags could increase shoplifting as reported in Ireland when the reusable bag was first introduced⁴⁵ and corroborated in Reusable Bag Guidelines.⁴⁶
3. Shopping in a Mall where the customer goes from store to store carrying a reusable bag brings up some interesting security and shoplifting scenarios (not described here to avoid giving people ideas).

REUSABLE BAGS MADE OVERSEAS

While the plastic carry out bag is made in the United States, by an industry that employs more than 30,000 people nationwide, the reusable bag is largely made overseas,⁴⁷ thereby outsourcing American jobs. Reusable Bags made in China have been recalled due to high level of lead and other metals. In 2010/2011 Sears, CVS, Walgreens, Rite-Aid, Safeway were among the retail chains that have had to recall reusable bags.⁴⁸

SUMMARY

The Reusable Shopping Bag is NOT an environmentally friendly alternative to the plastic carry out bag. The bag presents both health hazards to consumers and requires the use of water and energy resources on a recurring and continual basis to maintain the bags in a sanitary condition. **Using water and electricity for this purpose is a waste of resources especially when plastic and paper sanitary bags are readily available off-the-shelf.**

The reusable bag presents two health hazards to consumers: (1) the buildup of bacteria, yeast, mold, coliforms and E-Coli that can potentially cause foodborne illness or death; (2) the transmission of contagious viruses including the common cold virus, croup, Giardia, influenza, meningitis, rotavirus diarrhea, norovirus, strep, and many other diseases. Both of these health hazards can be overcome by regular washing or sanitization of reusable bags. Unfortunately only about 15% of people wash their bags. **Therefore, an ordinance to require consumers to use reusable shopping bags is NOT good public policy.**

Because of the negative health impacts of the reusable bag and the recurring consumption of water and energy resources, **this report concludes that the plastic carry out bag as currently used in grocery and other retail stores is the most efficient, safe, cost effective, and environmentally friendly product available and should remain in place.**

Additional efforts should be made to increase recycling of the plastic carry out bag and educating the public as to proper disposal and recycling methods.

In addition, the City of Ventura should complete current work (i.e. Ventura River trash Total Maximum Daily Loads project) on trash excluders on storm drains that empty into the Ventura River and should budget to add additional trash excluders on storm drains that empty into the Santa Clara river so that all plastic debris including plastic bags will be prevented from entering the river and ultimately the ocean.

It is recommended that the proposed ordinance to ban plastic carry out bags be dropped due to health hazards identified herein and the recurring use of scarce water and energy resources and generation of greenhouse gases.

¹ Both studies have been funded by the chemical and plastics industries. Both studies were performed by well qualified microbiologists and by reputable organizations and institutions.

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⁴⁸ Google Search of reusable bag recalls.

WHY NOT TO BAN PLASTIC CARRY OUT BAGS

BY

Anthony van Leeuwen
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INTRODUCTION

Banning plastic carry out bags is a powerful symbolic political act that creates an image that the city, county, or state is "Green" and environmentally friendly. But that image is **FALSE** because plastic bag bans do more to harm the environment than any marginal environmental benefits produced. Proponents often ignore the science and overlook more substantive solutions in dealing with the problem of plastic bags rather than making an honest effort to look at and weigh the issues involved.¹

Plastic bag bans have been imposed in a number of different localities based upon misinformation and faulty reasoning. In this paper we will explore the common misconceptions and faulty reasoning often cited by proponents of plastic bag bans and cited in Environmental Impact Reports (EIRs).

We also examine current efforts to recycle plastic carry out bags and the impact upon recycling programs in the event a ban takes effect. We make an alternative suggestion to improve recycling efforts from a passive to an active program.

We also end this paper with recommendations to alleviate a number of problems with plastic carry out bags, solutions that are long term and more substantive than just banning a single item.

PLASTIC BAG FALSELY GIVEN BAD RAP

The plastic carry out bag has been given a bad rap because of misinformation. With the internet the propagation of bad information or myths are almost impossible to stop. For example, the plastic carry out bag is widely believed to have caused the death of 100,000 marine mammals and a million seabirds as a result of ingesting plastic bags. However, the allegation is untrue and was based on a Canadian study that stated the deaths were a result from discarded fishing nets and fishing tackle and not plastic bags or plastic debris.²

In an article published in The Times of London on March 8, 2008 entitled "Series of blunders turned the plastic bag into global villain". The Times found that the allegation that plastic bags kill 100,000 animals and a million seabirds is false. The report stated:

"The central claim of campaigners is that the bags kill more than 100,000 marine mammals and one million seabirds every year. However, this figure is based on a misinterpretation of a 1987 Canadian study in Newfoundland, which found that, between 1981 and 1984, more than 100,000 marine mammals, including birds, were killed by discarded nets. The Canadian study did not mention plastic bags."

"Fifteen years later in 2002, when the Australian Government commissioned a report into the effects of plastic bags, its authors misquoted the Newfoundland study, mistakenly attributing the deaths to "plastic bags".

"The figure was latched on to by conservationists as proof that the bags were killers. For four years the "typo" remained uncorrected. It was only in 2006 that the authors altered the report by replacing plastic bags with "plastic debris". But they admitted: "The actual numbers of animals killed annually by plastic bag litter is nearly impossible to determine."

"In a postscript to the correction they admitted that the original Canadian study had referred to fishing tackle, not plastic debris, as the threat to the marine environment."

"Regardless, the erroneous claim has become the keystone of a widening campaign to demonize plastic bags."

"David Santillo, a marine biologist at Greenpeace, told The Times that bad science was undermining the [British] Government's case for banning the bags. "It's very unlikely that many animals are killed by plastic bags," he said. "The evidence shows just the opposite. We are not going to solve the problem of waste by focusing on plastic bags."

The United Nations has also identified discarded fishing nets³ and fishing gear as a major contributor to marine litter even to the point of documenting this problem in a separate publication.⁴ This document shows that discarded fishing nets and fishing gear are responsible for ghost fishing and entanglement of marine fauna and harming fragile organisms like sponges and corals.

The Environmental Protection Agency in a document titled "Marine Debris in the North Pacific" published in November 2011 also identified that "derelict fishing gear, including monofilament line, trawl nets, and gill nets" as "one of the greatest threats to marine life and sea birds." The document further identifies that marine debris entanglements have been documented for 135 species of invertebrates, fish, seabirds, sea turtles, seals, sea lions, dolphins, and whales. These species experience both injury and death.⁵

The Hawaiian monk seal is endemic to the Hawaiian Islands and inhabit the waters surrounding atolls, islands, reefs, and submerged banks are often entangled in derelict fishing gear resulting in injuries and even death.⁶

Sea Turtles found in the Pacific Ocean have also been known to get entangled in derelict fishing gear resulting in deaths, gangrenous flippers, and need for human intervention to free animals.⁷

Recently in July 2012 a National Oceanic & Atmospheric Administration (NOAA) ship and crew conducted a marine debris cleanup at the Papahānaumokuākea Marine National Monument and World Heritage Site. A total of 50 metric tons of marine debris was removed of which about half

was derelict or discarded fishing nets and fishing gear and the other half was plastic debris.⁸ Some of the pictures on their website show turtles caught in fishing nets.

While plastic bags could entangle some wildlife, the real problem with entanglement is discarded fishing nets and gear and not plastic bags.

INGESTION OF PLASTIC BAGS AND PLASTIC DEBRIS

Ingestion of plastic debris by seabirds, fish, sea turtles, and other marine mammals has been well documented over the years. In addition predatory mammals such as fur seals may consume plastic debris indirectly through consumption of fish or other prey.

Ingestion of plastic debris results in internal and external wounds impairs feeding capacity due to buildup or blockage of the digestive system, decreased mobility, reduced body weight, reduced fat deposits, and reduced reproductive capacity.⁹



FIGURE 1 BIRD CARCASS SHOWING PLASTIC OBJECTS

For example, in Figure 1, you will see a photo of a bird carcass that has swallowed plastic objects.¹⁰

Notice that this bird swallowed a lot of bottle caps and shards of plastic and other plastic debris including rocks but no plastic bags are visible. It should be obvious from this picture that the problem with plastics extends beyond plastic bags and includes all sorts of plastic debris that floats in the ocean or exists as litter on land.

Sea turtles are said to readily ingest plastic bags and other plastic debris that appear similar to gelatinous prey. Whales and other marine mammals have also been known to ingest plastic bags.

Ingestion of plastic debris is generally thought to occur because the marine debris is mistaken for prey. Plastic debris is also known to be passed to the chicks in regurgitated food from their parents.¹¹

But perhaps the fact that that many birds swallow rocks to aid digestion (see rocks in Figure 1) may explain why they swallow plastic objects.

"Humans and other mammals have a mouth with teeth to grind up food. Birds, on the other hand, have a gizzard. It is a muscular organ that contracts to grind up food. Birds eat sand and other grit to help the gizzard grind up food."¹²

Then you have a video of a sea gull swallowing a [plastic bag](#)¹³ that moments earlier had held fast food, and after the food was eaten by the sea gull the bag was eaten and swallowed. It is well known that plastic bags and film that wrap food items will attract animals that because of the smell will eat the food waste and sometimes including the plastic film wrapper.¹⁴

Sea gulls are known scavengers. According to Ventura school teachers, sea gulls know when it is nutrition break and when lunch time occurs, so they can pounce on the trash once kids go back inside. Custodians have to immediately remove trash from trash cans to prevent feeding frenzies by sea gulls. At one lucky Ventura school, a nearby flock of crows keeps the sea gulls at bay.

The examples and the discussion above demonstrate that the problem of harm to wildlife extends beyond plastic bags to plastic debris of all sorts. **Banning plastic carry out bags will not prevent further harm to birds and animals. Only a comprehensive solution to keep plastic debris and litter out of the ocean and out of the environment can prevent harm to wildlife.** Although harm to animal life due to the unintended consequences of plastic litter is tragic, harm to wildlife occurs in many areas that have nothing to do with plastic litter.

For example, the U.S. Fish and Wildlife Service currently issues permits to kill bald eagles, the national bird of the United States! Current law allows permitting for "programmatically" killing of bald eagles that is incidental to an otherwise lawful activity, such as mortalities caused by collisions with rotating wind turbines. Without a permit, the killing of a bald eagle is a federal crime.¹⁵ Another example is the killing of golden eagles at California's Altamont Pass:

"Last June, the Los Angeles Times reported that about 70 golden eagles are being killed per year by the wind turbines at Altamont Pass, about 20 miles east of Oakland, Calif. A 2008 study funded by the Alameda County Community Development Agency estimated that about 2,400 raptors, including burrowing owls, American kestrels, and red-tailed hawks—as well as about 7,500 other birds, nearly all of which are protected under the Migratory Bird Treaty Act—are being killed every year by the turbines at Altamont."¹⁶

For example, in Ventura County during the last fiscal year (2010-2011) a total of 2812 dead animals were impounded by the animal shelter.¹⁷ Most of these are a result of tragically being hit by a moving vehicle yet we don't ban automobiles and trucks. The U.S. Fish and Wildlife Service reports that millions of birds are killed annually by a variety of means, e.g. by flying into windows, struck by wind turbine blades, cars, airplanes, etc.¹⁸ Yet we do not ban any of these.

Fumigation and Pest control companies kill millions of termites, ants, other insects and rodents each year.

Therefore harm to wildlife is not a valid reason to ban the plastic carry out bag.

THE PACIFIC GARBAGE PATCH MYTH

The Pacific Garbage Patch is often stated to be twice the size of Texas and it is neither a patch nor a huge mass of plastic debris floating in the ocean. Angel White, an assistant professor of oceanography at Oregon State University states that the patch is more of an ocean of plastic soup consisting of small bits of plastic floating just beneath the surface.¹⁹ **In other words, the garbage patch consists of small bits of plastic that float beneath the surface and does not consist of millions of plastic carry out bags, as proponents of plastic bag bans would have you believe.**

Quoting from an article entitled "Oceanic Plastic Trash Troubling Enough without Exaggeration" published in 2011:²⁰

"Angel White, an assistant professor of oceanography at Oregon State, says claims that the patch has been growing tenfold each decade since the 1950s and that the oceans are filled with more plastic than plankton are "grossly exaggerated."

"There is no doubt that the amount of plastic in the world's oceans is troubling, but this kind of exaggeration undermines the credibility of scientists," White said Tuesday.

"If you look at the actual area of the plastic itself, rather than the entire North Pacific Gyre in which it cycles, the "cohesive" plastic patch is actually less than one percent of the geographic size of Texas, White says."

"The amount of plastic out there isn't trivial," White said. "But using the highest concentrations ever reported by scientists produces a patch that is a small fraction of the state of Texas, not twice the size."

"One recent claim that the Great Pacific Garbage Patch is as deep as the Golden Gate Bridge is tall is completely unfounded, White said."

"If there is a takeaway message, it's that we should consider it good news that the garbage patch doesn't seem to be as bad as advertised," White said, "but since it would be prohibitively costly to remove the plastic, we need to focus our efforts on preventing more trash from fouling our oceans in the first place."

Most of us can agree with Angel White that our focus needs to be on preventing more trash from fouling our oceans, rivers, roadways, wilderness areas and our communities and preserving our natural resources for future generations. **We do this not by banning a single product but by effective and comprehensive litter control and removal programs as we shall see below.**

PLASTIC BAGS ARE MADE FROM OIL MYTH

Domestically produced plastic bags are **not** made out of oil. About 72.5% of plastic bags used are made in the United States. Plastic bags are made out of polyethylene. Ethylene is made from ethane which is a waste by-product from refining natural gas²¹ and oil²².

Ethane must be removed from the natural gas in order to lower the BTU value of the natural gas to an acceptable level before it is delivered to homes and businesses for fuel. Ethane burns too hot if allowed to remain in natural gas and if not used to make plastic (ethylene) it will have to be burned off, resulting in greenhouse gas emissions.²³ By converting ethane into plastic greenhouse gas emissions are reduced.

“Using the ethane to make plastic does not in any way reduce the amount of fuel available for transportation or power generation or increase our energy imports.”²⁴

PLASTIC CARRY OUT BAG DEMONIZED BY BAN PROPONENTS

Proponents of banning the plastic carry out bag have demonized it by calling it a “single-use” plastic bag as part of a propaganda campaign. The real “single-use” bag is the plastic trash bag. Once the trash bag is used for its primary purpose to hold trash, it is never reused for any other purpose. The plastic carry out bag, on the other hand, once used for its primary purpose to carry purchases home, has a large number of secondary uses. Hence, this bag is really a multi-use bag. The reusable bag is also a multiuse bag but more durable. To call the plastic carry out bag a “single-use bag” is intellectually dishonest.

Table 1. Graphical Representation of Bag Types

Bag Type	Primary Use	Secondary Use	Bag Type
Black Trash Bag	Trash	None	Single-Use Bag
Kitchen Trash Bag	Trash	None	Single-Use Bag
Plastic Carry Out Bag	Carry Purchases Home	Waste bin liners Dog or cat litter Reuse for shopping Lunch bags Storage of household items General carry bags (i.e. gym or sports gear, picnic supplies, hold toys, wet clothes) Other uses	Multi-Use Bag

THE PLASTIC CARRY OUT BAG AS A NUISANCE

Litter is a nuisance. It doesn't matter what type of item it is, it is a nuisance. There is no magic bullet and no litter prevention or education program that will eliminate litter. It takes work to clean up litter. The plastic carry out bag has been much maligned because of its light weight and its ability to be carried by the wind until it catches on a fence, plant, shrub, bush, tree, rock outcropping, etc. These characteristics are often cited as a negative attribute and a reason to ban the bag; however, these same characteristics can also be considered in a positive light. Of all the types of plastic litter that floats in water and could find its way to the ocean the plastic carry out bag has lowest probability of reaching the ocean and the greatest opportunity of being removed from the environment through litter cleanup efforts.

LITTER

THE PLASTIC CARRY OUT BAG AS LITTER

The [California 2008 Statewide Waste Characterization Study](#)²⁵ identified that [Plastic Grocery and Other Merchandise Bags](#) make up only 0.3% of the total waste stream. Of which only 0.13% are grocery store bags. A [California 2006 Action Plan](#)²⁶ identified that bags comprise 3.8% of beach litter. Similarly a study to "Reduce and Prevent Ocean Litter" identified that plastic bags of all types make up about 8% of all litter²⁷. Of all marine debris, 80% comes from land-based sources and is conveyed to the oceans via urban runoff through storm drains according to the [Plastic Debris Rivers to Sea](#) website²⁸.

A document called "Municipal Best Management Practices for Controlling Trash and Debris in Storm Water and Urban Runoff" identifies the **Total Maximum Daily Loads** program to reduce the amount of litter by 10% per year for 10 years.²⁹ The document further describes that [Full Capture Devices](#) commonly called "trash screens" or "trash excluders" or "rubbish traps" that must be installed on storm drains to capture litter larger than 5 mm. **These devices are being installed in Ventura County storm drains, and will prevent plastic bags, other plastic debris, and litter from being released into the riverbed and out into the ocean.**

PLASTIC CARRY OUT BAGS IN STORM DRAIN TRAPS

Another reason often cited for banning the plastic carry out bag is that storm drain rubbish traps contain a large proportion of plastic bags and must be cleaned out on a regular basis. This is good news! Storm drain traps are designed to keep plastic carry out bags and other plastic debris and other litter from flowing into the river and out into the ocean. **Storm drain rubbish traps or trash excluders are part of a comprehensive solution to keep plastic bags and plastic debris out of the river and ocean. The fact that storm drain rubbish traps contain a large proportion of plastic bags and other plastic debris and that storm drain traps must be cleaned out on a regular basis is not a valid reason to ban the plastic carry out bag.**

PLASTIC CARRY OUT BAGS DO NOT CAUSE FLOODING

Proponents of the Plastic Carry Out Bag Ban often cite that plastic bags trapped in storm drains can cause major flooding. Most often cited is the severe flooding in Bangladesh that put most of the country underwater. A careful examination of the issue will show that other factors are responsible.

Bangladesh is small country with 75% of the country less than 30 feet above sea level and 80% of the country is a giant flood plain or delta. Bangladesh is called a land of rivers as it has about 700 rivers including tributaries.³⁰ In addition, Bangladesh has five (5) major river systems flowing through the country³¹ that are considered among the world's largest.³² The catchment basin for the Bengali rivers is located in neighboring countries and is half the size of the Mississippi River catch basin with four times the annual rainfall. During the annual monsoon season from June to September the country is at risk of flooding because the volume of water transported by the river system increases by a factor of 20 to 140,000 cubic meters per second³³ [4,944,053 cubic feet per second or 113.5 acre feet per second]. During the normal monsoon season only about 18% of the country is flooded bringing with it fresh deposits of rich silt to replenish the fertile but overworked soil.³⁴ The volume of silt carried by the rivers into the Bay of Bengal each year is approximately 2.4 billion tons and builds new land along the sea front.³⁵ Thus, this great river system is not only the country's principal resource and it is also its greatest hazard.

The population of Bangladesh has been estimated to be between 158 and 170 million people. The nation is considered the world's 8th most populous nation³⁶ and 11th in population density.³⁷ While Bangladesh boast of being the world's fourth largest clothing exporter it also is one world's largest producers of rice, potatoes, mangos, pineapple, onions, bananas, jute and tea.³⁸ Most of Bangladesh's population continues to live on subsistence farming in rural villages³⁹ with health and education levels remaining relatively low.⁴⁰

About three decades ago, polyethylene shopping bags were introduced in Bangladesh and rapidly replaced the traditional cloth jute bag. Environmental groups estimated that 9 million plastic bags were dumped daily in the city with only about 10% being dumped into rubbish bins. Over time these castaway plastic bags ended up clogging up drains and sewers.⁴¹

In 1989 a catastrophic flood occurred that inundated two-thirds of the country. Again in 1998 a catastrophic flood occurred that inundated about three-quarters of the country. A combination of heavy rainfall within and outside the country and synchronization of peak flows of the major rivers contributed to the flooding. Both floods caused severe damage and loss of life. Environmentalists and urban planners blamed plastic bags for exacerbating the flooding in 1989 and 1998. The flooding was blamed upon plastic carry out bags that had blocked drains and sewers.⁴²

In 2002 plastic carry out bags were banned. But cities still flooded year after year with water covering roadways and coming into houses.⁴³ Despite an awareness program warning of a steep fine and six months of imprisonment, after about a year the plastic bags began to flood the market again due to a lack of enforcement.⁴⁴

In many areas of Bangladesh people live in slum like conditions. Trash is deposited in makeshift dumps, along the road and in drainage ditches. Drainage ditches and canals are filled with trash. Less than 50% of all waste in urban areas is collected and disposed of in landfills.⁴⁵

While plastic bags may have been a contributing factor to exacerbate flooding the following are some observations:

1. Less than 50% of urban waste is collected and disposed of.
2. Trash is dumped in open areas, streets, and makeshift dumps.
3. Low-lying areas, drains and canals are clogged with waste including plastic bags.
4. Storm sewer systems are substandard and are not maintained.
5. Flooding is an annual problem and is not caused by plastic bags.

Comparing the flooding problems in Bangladesh or other Asian countries as a result of monsoon rains and a substandard and unmaintained infrastructure is simply not applicable to the situation in this country.

In both Ventura and Santa Barbara Counties a substantial investment in infrastructure over many years has been made. Flood Control facilities are up to standard. 100% of trash is collected and disposed in well regulated landfills. Storm drains and/or flood control facilities are maintained on a regular schedule and trash is removed and disposed of. While in theory, a trash excluder or rubbish trap on a storm drain could become clogged by mostly plastic bags and result in flooding; such occurrences, if they occur are very infrequent and rare. It should be noted that Southern California is known for sunshine and that our rainfall totals in most years are below normal. Hence, flooding as a direct result of plastic bags is not a major concern and not a reason why plastic carry out bags should be banned.

PLASTIC CARRY OUT BAGS FLY OUT OF TRUCKS

Plastic bags as litter are infrequently seen in residential neighborhoods, but mostly along major roadways and freeways where trucks travel. The "California Department of Transportation Litter Abatement Plan" states:

*"The most common means of litter on the highway results from trash and debris blowing from improperly covered or uncovered truckloads."*⁴⁶

Similarly, the document "Litter in America, 2009 National Litter Research Findings and Recommendations" states:

*"Trash and recycling collection vehicles have been found to be a source of litter. When improperly secured during collection and delivery to disposal facilities, these vehicles can contribute to the litter problem, particularly of smaller items. Developing a program in partnership with hauling stakeholders can help to reduce roadside litter."*⁴⁷

The City of Los Angeles in their report to the Board of Supervisors titled "An Overview of Carryout Bags in Los Angeles County" stated:

*"Communities within close proximity to landfills and other solid waste processing facilities are especially impacted as plastic carryout bags escape from trash trucks while traveling or emptying their loads. Although trucks and facilities are required to provide cover and fences, carryout bags manage to escape despite Best Management Practices (BMPs) including using roving patrols to pickup littered bags. ..."*⁴⁸

Similarly, the city of Pasadena in their study in preparation for a ban on plastic carry out bags makes the following anecdotal statement:

“The Arroyo Seco stream is especially vulnerable to plastic bags escaping from trash trucks traveling along the freeways bordering and crossing the Arroyo Seco en route to the Scholl Canyon Landfill.”⁴⁹

Unfortunately, neither Los Angeles County nor the City of Pasadena identified what if any mitigation measures were taken to work with the trash haulers to modify the trucks to ensure no litter can become airborne and escape. **Doing so would have solved the problem with both plastic bags and other litter and negated the need for a ban on plastic carry out bags!**

The point is that Ventura County and the incorporated cities need to work with haulers to ensure that all loads are properly covered, including the trash and recycle trucks. If trucks need to be modified so be it. **Plastic carry out bags escaping from trucks is not a valid reason to ban the plastic carry out bag. Best Management Practices require that trucks be modified. Costs to modify trucks can be amortized and passed on to rate payers.**

PLASTIC BAGS FLY OUT OF TRASH RECEPTACLES

Uncovered trash receptacles in public areas are also a source of wind-blown plastic bags. The established solution is to ensure that public trash cans have covers and that trash is collected and disposed on a regular schedule. In addition, educate the public to tie the bag in a knot to prevent it from becoming windblown litter when disposing of an empty carry out bag.

LITTER REMOVAL COSTS

City, county, and state government spend millions of dollars every year to clean up litter. Since plastic carry out bags represent such a small percentage of the total litter stream, banning the plastic carry out bag will not result in an appreciable reduction in litter and therefore litter cleanup budgets cannot be reduced; hence, there will be No monetary savings. **Therefore, the argument that litter removal costs money is not a valid reason to ban the plastic carry out bag. The public pays taxes to have litter removed and disposed of.**

PLASTIC BAGS IN LANDFILLS

PLASTIC BAGS DO NOT DECOMPOSE IN LANDFILLS

Another reason often cited is that plastic carry out bags take hundreds of years or even thousands of years to decompose:

“For sanitary reasons, modern landfills are lined on the bottom with clay and plastic to keep waste from escaping into the soil and are covered daily with a layer of earth to reduce odor. The landfill, then, acts like a trash tomb—the garbage within receives little air, water, or sunlight. This means that even readily degradable waste objects, including paper and food scraps, are more likely to mummify than decompose.”⁵⁰

A study of landfills sponsored by the University of Arizona found that the tightly compacted contents of landfills create low-oxygen environments that inhibit decomposition. The details of the study were published in the book, *Rubbish: The Archaeology of Garbage* (2001), which explains that:⁵¹

- "the dynamics of a landfill are very nearly the opposite of what most people think."
- landfills "are not vast composters; rather, they are vast mummifiers."
- "almost all the organic material" from the 1950s in a Phoenix landfill "remained readily identifiable: Pages from coloring books were still clearly that, onion parings were onion parings, carrot tops were carrot tops."
- "much of the organic material in an ancient Roman landfill that was twenty centuries old had not fully decomposed."

Because plastic bags do not decompose it means that they do not produce greenhouse gases during the decomposition process like paper bags will. **Hence, the fact that plastic carry out bags do not decompose in a landfill is not a valid reason to ban the plastic carry out bag.**

PLASTIC BAGS TAKE SPACE IN LANDFILLS

Another reason often cited is that plastic carry out bags take space in landfills. However, the proportion of plastic bags compared to other debris is so small that it is negligible. Nevertheless, plastic carry out bags not used to hold trash do not belong in a landfill and should be recycled instead.

Plastic Carry Out bags that are reused as bin liners for small trash cans produce a greater benefit to the environment because they avoid the production of bin liners they replace.⁵² In addition, the HDPE plastic carry out bag is thinner than the plastic bin liners and consist of fewer grams of plastic that end up in the landfill.

If plastic bags are banned and a shift to Paper bags occurs, paper bags when landfilled take up more space than plastic bags. Also, because the weight of paper bags is more than plastic bags, the cost of landfill fees will be higher.

The fact that plastic bags take space in landfills is so small that it is not a valid reason to ban plastic carry out bags.

RECYCLE AND KEEP PLASTIC BAGS OUT OF THE LANDFILL

Current state law (AB 2449 and SB 1219) require that retail stores have a recycling container in or outside each store allowing consumers to recycle plastic carry out bags, produce bags, and other plastic film and wraps if they issue plastic bags at checkout. See the section that follows titled "California Plastic Bag Recycling Program" for more information about the in store recycling program. Grocery stores and other retail stores also recycle cardboard boxes and have done so for many years. Cardboard is baled in a baling machine and plastic carry out bags are bagged in large plastic bags and could be baled as well. After the truck delivers pallets of groceries to the store, the empty truck is loaded with the cardboard and plastic bags to be transported back the retail chain's distribution center for subsequent recycling.

So what are recycled plastic bags and recycled wraps and film used for? The following quote from the wiseGEEK website:⁵³

“The majority of recycled plastic bags are turned into [composite lumber](#). Composite lumber is generally comprised of two equal substances: sawdust and plastic bags.”

“The lumber made from these two recycled substances is used for a variety of items. Wooden structures like door frames, window frames, and outdoor decks are just a few of the construction projects that use lumber made from recycled plastic bags. Recycled plastic bags are also used to make post-consumer [resin](#). This resin is utilized in the production of new plastic bags, crates, pipes, pallets, and containers.”

“Recycling plastic bags helps the environment in several ways. Since plastic bags are not biodegradable, they slowly deteriorate into small toxic bits, contaminating water and soil. Ensuring that all plastic bags are recycled helps to alleviate this problem.”

Recycling plastic carry out bags, produce bags, and other plastic film and wraps is the best way to keep plastic out of the environment and out of the landfill.

NOT ALL PLASTIC CARRY OUT BAGS ARE EQUAL

The grocery store bag is made from High Density Poly Ethylene (HDPE) with resin number 2. The resin number is the number inside the triangle. Standard HDPE grocery store bags weigh about 5.5 grams or 0.01213 lbs. Bags from retail stores such as Target Inc. are made from Low Density Poly Ethylene (LDPE) with resin number 4. Using a small digital postal scale the weight of bags from different retail stores was recorded using the grams setting. Due to limitations of my digital scale, multiple bags were weighed to get a more accurate per bag weight. The weight in pounds is calculated using an online conversion calculator. The Standard HDPE Bag is also listed. The LDPE bag from Target weighed 9.3 grams or 0.02050 lbs.

Table 2. Weight And Resin Variations In Plastic Carry Out Bags

Retail Store	Resin Type	Weight (grams)	Calculated Weight (pounds)
Albertson's	HDPE	6*	0.01323
Circle K	HDPE	5.0	0.00882
CVS	HDPE	4*	0.00882
JoAnns	HDPE	6.5	0.01433
Ralph's Market	HDPE	5.7	0.01257
Smart & Final	HDPE	5.86	0.01292
Standard HDPE Bag	HDPE	5.5	0.01213
Target	LDPE	9.3	0.02050
Vons Market	HDPE	4.57	0.01008
Wal-Mart	HDPE	6.5	0.01323

* Denotes weight based upon single bag

The purpose of Table 2 is to demonstrate that not all carry out bags are made from the same plastic resin or material and that weights vary depending upon store. The reason this is important is that two different types of plastic resins are used in most common plastic carry out bags. In addition, the weight of plastic bags will vary from store to store depending on bag size and resin type.

19 BILLION PLASTIC CARRY OUT BAGS PER YEAR MYTH

Proponents of banning the plastic carry out bag have repeatedly stated that California reportedly uses 19 billion plastic carry out bags per year and that the United States reportedly uses 102 billion plastic carry out bags per year. That means California uses 16% of the nation’s plastic carry out bags.

In 2011 the population of California was estimated at 37,691,912 people and the United States at 311,591,917 people. That means California has 12 % of the population of the United States while at the same time using 16% of the nation’s plastic carry out bags! This should make you suspicious!

In Table 3 and table 4 the quantity of plastic carry out bags per capita and per household are calculated for both California and the USA. In Table 3 we also calculate the number of bags that a typical family of four would use per year and per week. In Table 4 we calculate the number of bags used by a household per year and per week. A California household consists of 2.89 persons and a USA household 2.59 persons. Note that there is a 35% discrepancy in the quantity of bags used per capita and 42% discrepancy on a per household basis between both the California and USA bag quantities.

Table 3. Plastic Carry out Bags Per Capita

Jurisdiction	Bags Per Year	Population (2011)	Bags Per Capita	Bags per Family of Four	
				Per Year	Per Week
California	19,000,000,000	37,691,912	504	1512	39
USA	102,000,000,000	311,591,917	327	1308	25

Table 4. Plastic Carry Out Bags Per Household

Jurisdiction	Bags Per Year	Households (2010)	Bags Per Household	Bags per Household	
				Per Year	Per Week
California	19,000,000,000	12,392,852	1533	1533	29
USA	102,000,000,000	114,235,996	892	892	17

The discrepancy between the California and USA numbers is large enough to call both numbers into question. The question is where do these numbers come from?

The California number of plastic carry out bags per year is calculated from the **estimated weight** of “plastic carry out bags and other merchandise bags” that are disposed of by Californians and reported in the California 2008 Statewide Waste Characterization Study.⁵⁴ Similarly, the USA number of plastic carry out bags per year is calculated from the **estimated weight** of Plastic Packaging Bags and Sacks reported in the Environmental Protection Agency report titled “Municipal Solid Waste Generation, Recycling, and Disposal in the United States.”⁵⁵ Note that both

figures are calculated from estimates of weight of materials disposed in California and the nation. This by itself should lead you to question the numbers since these numbers do not reflect actual weighed quantities but estimates derived from sampling of the waste stream.

The number of bags used per year is calculated from the **estimated weight** divided by the weight of a grocery store HDPE plastic carry out bag weighing 5.5 grams or 0.01213 pounds. Since grocery store HDPE plastic carry out bags may not weigh the same as other plastic merchandise bags the result of the calculations are questionable. The only thing we can say about this method is that it represents a consistent methodology. So let's calculate updated quantities of carry out bags based upon more recent estimated weights using the same methodology.

In Table 5 we calculate the quantity of plastic carry out bags from the estimated weights. The California 2008 Statewide Waste Characterization Study identified the breakdown of the Overall estimated weight into Residential and Commercial categories. Hence we calculated the quantity of plastic carry out bags for the overall, residential and commercial categories. In addition, the study identified that 44% of the estimated weight were bags from grocery stores, so we added a grocery store category and calculated the estimated weight from the Overall weight.

Table 5. Plastic Carry Out Bag Calculations

Jurisdiction	Category	Estimated Weight (tons)	Weight Per Bag	Quantity	Population (2011)	Bags Per Capita
California ⁵⁶	Overall	123,405	0.01213 lbs.	20,347,073,372	37,691,912	540
	Residential	77,736	0.01213 lbs.	12,817,147,568	37,691,912	340
	Commercial	45,669	0.01213 lbs.	7,529,925,804		
	Grocery Store	54,298	0.01213 lbs.	8,952,679,307	37,691,912	238
USA ⁵⁷	Overall	770,000	0.01213 lbs.	126,958,000,000	311,591,917	407

In Table 5 we made no effort to adjust the numbers for recycling or to adjust the population for jurisdictions that have instituted plastic bag bans. To do that would increase the discrepancy between state and national numbers.

In Table 5 we observe that California's commercial sector uses 37% of all bags and the residential sector uses 63%. In other words, the commercial sector uses 2 plastic carry out bags for every 3 plastic carry out bags used by the residential sector. While the commercial sector purchases a lot of material for self-use and or resale to the public it is highly doubtful that they would dispose of 2 plastic carry out bags for every 3 plastic carry out bags used in the residential sector. Bottom line is that the weight estimates are questionable and more than likely overstated.

In Table 5, the Grocery Store category shows 238 bags per capita per year. A family of four would use 952 plastic grocery store bags per year or 18 per week on average. A family of three would use 714 bags per year or 14 bags per week. This seems to be about what I see in my own family.

As can be seen in Table 5, a 25% discrepancy between state and national numbers still exists.

If we calculate the quantity of plastic carry out bags from the purchased quantity in tons reported by merchants who were subject to AB 2446 we see a different picture.

Table 6. Quantity Of Bags Purchased⁵⁸

Year	Bags Purchased (tons)	Weight Per Bag	Bags Purchase
2007 (1 Jul to 31 Dec)	24,600	0.01213 lbs.	4,056,059,357
2008	54,000	0.01213 lbs.	8,903,544,930
2009	53,000	0.01213 lbs.	8,738,664,468
2010	39,570	0.01213 lbs.	6,524,319,868
2011	31,258	0.01213 lbs.	5,153,833,471

What Table 6 clearly demonstrates is that the 19 or 20 billion number of plastic carry out bags used by Californians could not be correct. Also, the quantity of the plastic carry out bags shown in Table 5 used by commercial sector is questionable since it is about the same as the bags purchased? The number of bags purchased corresponds more closely to the Grocery Store category in table 5.

What this means is that state and national estimates for quantity of plastic carry out bags used as calculated are essentially meaningless because: (1) Estimated weight of plastic carry out bags in the waste stream is based upon sampling; (2) Calculations using the bag weight of the HDPE grocery store bag is good only for the 44% of grocery bags and not for the 56% of the “other merchandise bags” category. While the methodology is consistent; results are questionable.

As can be seen from the preceding analysis, plastic carry out bag use of either 19 or 20 billion bags are more than likely overstated due to faulty methodology and analysis by state and federal officials.

LOW RECYCLE RATE FOR PLASTIC BAGS

Another reason often cited for banning the plastic carry out bag is the low recycling rate. The truth is that no one knows the true recycling rate for plastic carry out bags!

The California recycling rate for plastic carry out bags is 3% for 2009. California calculates the recycling rate based upon the tons of plastic carry out bags recovered per year and the number of tons purchased per year.⁵⁹ However that number is misleading, because large grocery chains buy tons of plastic bags that sit in the warehouse and doled out to stores as needed. In other words, the recovery rate is not correctly calculated against the actual quantity of bags distributed at the checkout counter.⁶⁰

The Environmental Protection Agency (EPA) in their report titled “Municipal Solid Waste Generation, Recycling, and Disposal in the United States” includes a category of waste called “Bags, sacks, & wraps” which includes two subcategory of HDPE and LDPE/LLDPE. In 2010, the HDPE bags were recycled at a rate of 4.3% and LDPE/LLDPE plastics at 17.6%. The LDPE/LLDPE plastic includes LDPE bags such as the LDPE plastic carry out bags used by Target⁶¹ and also includes other plastic items such as bread bags, dry cleaning bags, toilet paper wrap, etc. So the exact recovery rate for plastic carry out bags cannot be estimated.

Despite the fact that good recycling rate numbers are not available, the recovery rate is believed to be low. The most common number you bantered about is 5% all the way up to 15% depending upon data source. While recycling rates in California are said to be low, recycling of plastic carry out bags in Canada⁶² is very popular achieving the following rates:

- Province of British Columbia - 32%
- Province of Alberta – 32%
- Province of Ontario – 36%
- Province of Nova Scotia – 50%
- Province of Prince Edward Island – 57%

While the Canadian recycling rates are impressive, how they are calculated was not investigated. **In any case, there are NO comprehensive studies to indicate why the recycling rate is so low and what people do with the bags they obtain and bring home.**

Because of their inherent usefulness in carrying and containing stuff, plastic carryout bags are reused for many different secondary purposes. Some common secondary uses include:⁶³

- Waste bags or waste bin liners
- Dog or cat litter
- Reuse for shopping
- Lunch bags
- Storage of household items
- General carry bags (i.e. gym or sports gear, picnic supplies, hold toys, wet clothes)
- Other uses

90% of people will reuse carry out bags for other purposes. Doing a simple Google search on “uses for plastic carry out bags” will generate hundreds of listing of articles and videos where people identify how they use plastic carry out bags. Many people also consume thousands of plastic carry out bags in variety of craft projects to make totes, mats for the homeless, place mats, and even items for sale, etc.

Most people have a stash of plastic bags in their homes and follow the 3 R’s (Reduce, Reuse, and Recycle) and reuse the bags in variety of ways and/or recycle them.

Soda cans and plastic bottles enjoy a very high recycling or recovery rate. This is because there is no secondary reuse for these items with a few isolated exceptions. However, plastic carry out bags have a large number of secondary uses which result in lower recycling rates. **Hence, plastic carry out bags should have a lower recycling rate!**

It also estimated that 60%⁶⁴ to 76%⁶⁵ of carry out bags taken home are reused. It is estimated that 40.3% of plastic carry out bags are used as waste bin liners⁶⁶ and ultimately are disposed of in the trash. It is believed that the remaining 19.7% to 35.7% that are reused will eventually be disposed of and landfilled. **In the absence of additional detailed studies this would suggest that the maximum recycling recovery rate should be between 24% and 60%.**

CALIFORNIA PLASTIC BAG RECYCLING PROGRAM

Current state law (AB 2449) requires that retail stores that distribute plastic carry out bags have a recycling container in or outside each store allowing customers to recycle plastic carry out bags and that the store have reusable bags to sell to customers. In addition AB 2449 prevents local governments from imposing a tax or fee on each bag distributed. AB 2449 expires 1 January 2013 but was extended by SB 1219 to 1 January 2020 and removes the prohibition by local governments from imposing a tax or fee for each plastic bag distributed. Stores that do not issue plastic carry out bags may participate in the recycling program on a voluntary basis.

In extending AB 2449 via SB 1219 legislators noted that the program enjoyed “modest success” in recovery of plastic carry out bags but pointed out that the recovery of plastic shrink wrap and film increased “more dramatically” and avoided sending this material to the landfill.

Table 7. Plastic Carry Out Bag And Film Recycling

Year	Carry Out Bags Purchased (tons)	Carry Out Bags Recycled (tons)	Other Plastic Bags and Plastic Film (tons)	Carry Out Bag Recycle Rate
2007 (1 Jul to 31 Dec)	24,600	470	6,351	1.9%
2008	54,000	1,094	15,328	2.0%
2009	53,000	1,520	17,589	2.9%
2010	39,570	213.9	849.4	0.5%
2011	31,258	219.6	796.9	0.7%

NOTE: Data for 2010 and 2011 is preliminary and obtained via Email from CalRecycle

While retail stores have to provide the recycle bins, recycling on the part of the customer is largely voluntary. There is little active involvement on the part of grocery stores to increase the recovery rate of plastic bags they distribute.

The main problem for consumers with this approach is the inconvenience. Most people simply forget to take bags to be recycled when they visit the grocery store. Certainly, when they do remember, making a special trip to store to deposit the bags in the recycling container is simply not worth the cost of gas.

OTHER PLASTIC PRODUCTS THAT CAN BE RECYCLED WITH CARRY OUT BAGS

Most consumers are conscientious about recycling but are not very knowledgeable about the “At-Store Carry-Out Bag Recycling Program”. As a result, they do not know that *“retailers accept plastic bags and plastic shrink wrap for recycling. These include dry-cleaning bags, bread bags and shrink wraps from paper towels, bathroom tissue, napkins, diapers and newspaper bags.”*⁶⁷

Therefore these consumers deposit plastic carry out bags along with other types of plastic bags and film into the curbside recycle bin. Unfortunately this material cannot be recycled in curbside recycle bin and will end up in the landfill just as if you had placed it in the trash bin. City of Ventura

officials, to their credit state, that the cost of separating the plastic carry out bags from other recycled material versus the value of the recycled material makes it uneconomical to recycle plastic carry out bags. In addition, they state that the plastic carry out bags get stuck in the sorting equipment. Pictures on the [website](#) for Gold Coast Recycling and Transfer Station show a truck load of what look like plastic bags and plastic film (material that has been picked through) ready to dump in the Tolland landfill.⁶⁸

WEAKNESS OF CALIFORNIA'S AB 2449/SB 1219

The inherent weakness of AB 2449/SB 1219 is that only stores that distribute plastic carry out bags are required to establish an in-store recycling programs; other stores may do so on a voluntary basis. That means Big Box Stores that do not distribute plastic carry out bags do not have to establish recycling programs. These stores can sell and make a profit from products containing plastic shrink wrap and plastic film, and the cost of recycling that material is then borne by retailers who do distribute plastic carry out bags (i.e. grocery stores). Hence, there is little incentive for grocery stores and other retail establishments to continue with the recycling program once plastic carry out bags are banned! **This means that there will be no recycling capability for plastic bags, plastic film and shrink wraps.**

CONSEQUENCES OF A PLASTIC CARRY OUT BAG BAN

In 2009, according the CalRecycle report titled "2009 Statewide Recycling Rate for Plastic Carryout Bags" the amount of "other" plastic consisting of plastic film, shrink wraps, produce bags, bread bags, dry cleaning bags, etc., is about 10 times the weight of plastic carry out bags recycled.⁶⁹ See also Table 7 above.

In the event a ban on plastic carry out bags is implemented in Ventura and Ventura County, retail stores will more and likely terminate the recycling programs established under AB 2449/ SB 1219.

In San Francisco the plastic carry out bag ban has led grocery stores to shut down their plastic bag recycling programs.⁷⁰

As consumers no longer have the option to recycle plastic bags and plastic film at the retail store and using the curbside recycling bin is not an option, then all of this material will end up at the landfill rather than be recycled. Eventually, as more communities ban plastic carry out bags, the amount of plastic bags and film dries up in the recycling chain and the plastic recycling industry will disappear.

A ban on plastic carry out bags if implemented, will have a chilling effect on retailer recycling programs established by AB 2449 and SB 1219 and consumers will lose access to facilities for recycling plastic bags and plastic shrink wraps and film and this will result in more plastic going to the landfill instead of being recycled.

Not only do plastic bag bans result in lower employment at plastic bag factories but also will hurt employment in the recycling industry.

PLASTIC BAG BANS MAY NOT WORK

Even though plastic carry out bag bans and taxes may have had good intentions, unintended consequences of the bans and taxes are discussed as follows:

SAN FRANCISCO BAG BAN

In San Francisco, plastic bags as a proportion of the total litter stream increased from 6.0% in 2007 when the ban was initiated to 6.4% in 2008 as documented in the "The City of San Francisco Streets Litter Re-Audit 2008".⁷¹

"San Francisco's ban on plastic grocery bags caused shoppers to switch to paper bags, which require 70 percent more energy to manufacture, produce 50 percent more greenhouse gas emissions and create five times more waste than plastic bags."⁷²

Little use of reusable bags was observed. Plastic was replaced by paper and the return of double bagging was observed which may actually increase environmental impacts.⁷³ In 2012, the ban was extended to all retailers and modified to include a charge for paper bags.

In San Francisco the plastic carry out bag ban has led grocery stores to shut down their plastic bag recycling programs.⁷⁴ [NOTE: curbside recycling bins do not accept plastic produce bags, dry cleaning bags, bread bags, product shrink wrap, and plastic film. Therefore this material will go to the landfill!]

AUSTRALIA BAG BAN

Similarly in Australia plastic bags which comprised 4% of litter in 2010 went up to 12% in 2011. Although the quantity of the thin HDPE carry out bags was reduced heavier plastic bags intended for reuse were discarded instead.⁷⁵

IRELANDS PLASTIC BAG TAX

The Republic of Ireland instituted a plastic bag tax of € 0.17 in 2002 at checkout. The tax had to be raised to € 0.22 later. Monies raised were used to combat litter. Within weeks plastic carry out bag usage dropped 94%.⁷⁶ The reason Ireland instituted the bag tax was to reduce usage because of overestimated concern that plastic bags comprised 5% of the litter stream and that visual pollution was hurting tourism.⁷⁷ The actual litter rate for plastic shopping bags was 0.75% based upon Ireland's 2002 Litter Audit.⁷⁸ In a 2011 report the category for Shopping Bags was 0.24% a decrease of one-half of one percent.⁷⁹

Consumers replaced those bags by buying plastic trash bags for trash can liners, lunch carriers, pooper scoopers, baby diaper disposal and many other things. The plastic trash bags contained 76% more plastic resin than the plastic carry out bags which they replaced. As a result, an increase in the amount of plastic that went into landfills. Since Ireland imports all plastic bags, the number of tons of plastic bag imports increased by 20.1% over the total imports in 2002 when the bag tax was implemented. This is shown in Figure 2.

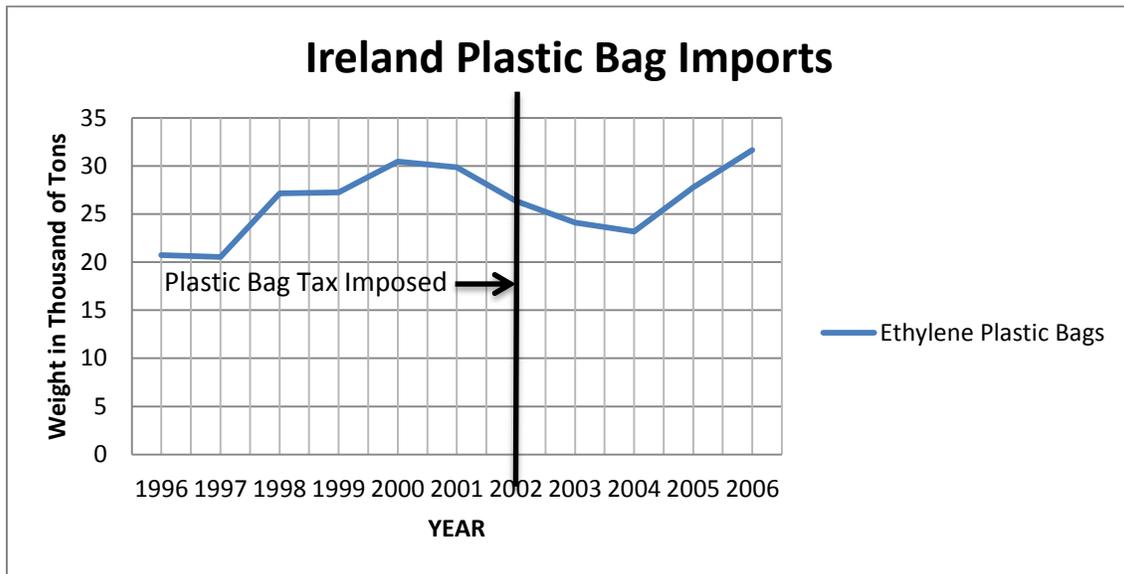


Figure 2. Republic Of Ireland Plastic Bag Imports⁸⁰

In other words, Ireland was successful in removing plastic carry out bags from stores, but those bags would have been reused and were replaced by plastic trash bags. Plastic trash bags sales increased by 77%. Since the new trash bags had 3 times the amount of plastic resin more plastic went to the landfill. The decrease in the amount of shopping bag litter was less than 0.5% and barely visible. In other words, the pain was greater than the gain and essentially failed.

REUSABLE SHOPPING BAGS NOT THE ANSWER

The proposed ordinance to ban plastic carry out bags and to charge a fee for a paper carry out bag in order to coerce consumers to switch to reusable bags is simply not a very good idea! Although the reusable bag is touted as friendly to the environment; the truth is just the opposite. The Life Cycle Assessment (LCA) for the reusable carry out bag is incomplete.⁸¹ The LCA fails to address the use of water, energy, and generation of greenhouse gases as a result of the consumer washing the reusable bag on a recurring basis in order to maintain them in a sanitary condition.

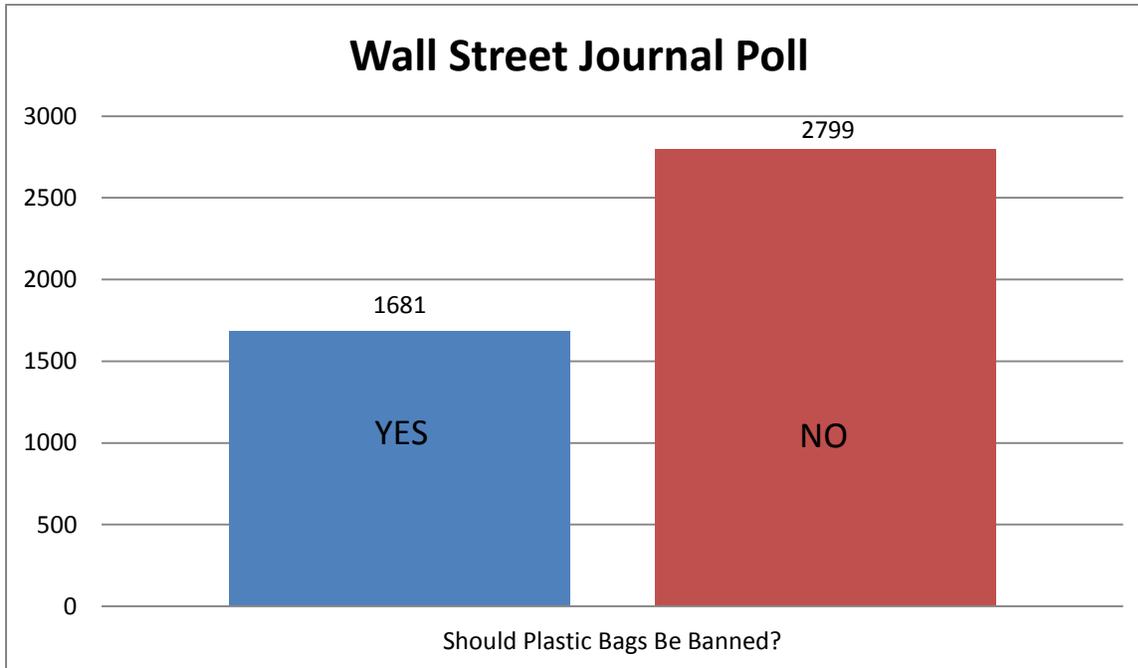
The reusable bag presents health issues related to cross contamination of food items, and the reusable bag can serve as a carrier for contagious viruses. To mitigate these health issues, the bag must be washed on a regular basis. Some people dismiss these concerns and say common sense tells you to wash the bag when it is visibly dirty. However, bacteria and viruses cannot be seen with the naked eye. Therefore, adopting a regular schedule to wash the bags as a precaution is warranted. Hand washing or machine washing the reusable bag with soap and bleach will kill 99.9% of all bacteria and viruses.

Simply put, sanitary plastic and paper bags are available off-the-shelf! Using water and energy resources to wash reusable bags in order to sanitize them on a recurring basis is a waste of water and energy that all households will have to pay for.

There is a study by the Property and Environment Research Center (PERC) that reported deaths and emergency room visits increased by 50-100% after San Francisco implemented their plastic bag ban.⁸² **One has to ask what human life and suffering is worth compared to a few plastic bags?**

PLASTIC BAGS BANS NOT SUPPORTED BY THE PUBLIC

In a Wall Street Journal⁸³ article presenting both sides of the plastic carry out bag ban, a question of the day: “Should plastic grocery bags be banned?” clearly demonstrates a lack of public support.



POTENTIAL SOLUTIONS TO THE PLASTIC BAG PROBLEM

As we can see from the problems described in this paper, the problem with harm to wildlife extends beyond the problem of plastic bags to plastic litter of all types. Banning a single product, no matter how much of a nuisance it is will not solve the problem. So how do we solve the problem? What steps should we take? Here are some recommendations:

1. Install trash excluders or trash capture devices on all storm drains. This will prevent plastic bags and other plastic litter from entering the river bed and out to the ocean. Remember that 80% of plastic debris in the ocean comes from land based sources via the storm drain.
2. Work with trash haulers, other trucking companies and gardeners (pickup truck) to ensure that loads are properly secured and litter cannot fly out of the truck when traveling down the highway and freeway. If trucks need to be modified, so be it.
3. Ensure that all public trash receptacles are promptly emptied and have covers to prevent wind-blown debris.

4. Educate the public that when disposing of an empty plastic carry out bag, tie it in a knot to prevent it from becoming wind-blown litter.
5. Improve Street Sweeping efforts by enforcing No Parking one day per week for street sweepers to clean streets.
6. Pass an ordinance that requires retail stores who are subject to AB 2449/SB1219 and who already have a recycling program in place to require that they achieve a recovery rate based upon annual targets (40% first year, 60 % second year, and 75% third and following years) of the amount of plastic bags they distribute by weight. This would put the onus on the store to collect bags and get them recycled by offering a variety of incentives:
 - a. They could offer people a dollar off if you bring the plastic bags back.
 - b. They could offer a free donut or cup of coffee for people who bring in say 30 plastics bags for recycling. (This to encourage people to pick up bags alongside the road.)
 - c. They could support bag collection fund raisers by donating to different community organizations such as the boy scouts (or girl scouts, lions club, Rescue Mission, church youth groups, etc.) based upon the weight of bags collected from door-to-door or other collections efforts.
 - d. If the store cannot meet the weight, they would pick up plastic bags from Gold Coast Recycling and Transfer station to make up the difference.

NOTE: How many of the down and out would not scour the countryside to pick up plastic bags to get a free donut?

NOTE: Obviously the costs associated would be borne by the customers of the store either through costs included in grocery prices or by a charge per plastic or paper bag.

NOTE: If successful, this will put Ventura on the map, increase sales in Ventura stores by about 10%, provide community groups fundraising opportunities, provides incentives for people to pick up plastic bags along the roadside, once people realize bags can be donated for charitable causes they will save empty bags, vice trash them and keep them out of landfills and curbside recycling containers.

7. Work with Harrison & Sons and Gold Coast Recycling and Transfer station to put into place a method to collect plastic carry out bags and make them available to the grocery stores for pickup in their trucks for recycling. Note: This will require them to hire a few more people and more than likely require a rate increase. The goal here is to keep plastic bags out of the landfill.

The above solutions would not cost the city a cent, other than some staff time to coordinate activities among participants.

SUMMARY

Banning plastic carry out bags is a powerful symbolic act that creates a **false** image that the city, county, or state is “Green” and environmentally friendly. Plastic bag bans do more to harm the environment than any marginal environmental benefits produced. Proponents often ignore the science and overlook more substantive solutions in dealing with the problem of plastic bags rather than making an honest effort to look at and weigh each of the issues involved.⁸⁴

The plastic bag has been falsely given a bad rap for entangling and killing marine life, when the real culprit is discarded fishing nets and gear. Also ingestion of plastic bags and plastic debris is a real problem for marine life that requires comprehensive solutions to prevent plastic bags **and other plastic debris** from flowing to the ocean. Banning a single item like plastic carry out bags will not prevent harm to marine life caused by plastic. Since 80% of plastic debris originates from land and is conveyed to the ocean via storm drains, it is imperative that **trash excluders be installed** on all storm drains and in storm drain catch basins. This is currently required by the Clean Water Act to reduce trash that is conveyed to the ocean.

In addition, the State of California in their documentation has identified that uncovered or improperly covered truck loads are responsible for a majority of litter along the state's highways and roads. In particular, trash and recycle trucks. These vehicles need to be modified to ensure the entire load is covered when driving down the highway. In addition, the county and city should ensure that all public trash receptacles are covered to prevent litter from becoming airborne.

Because plastic carry out bags are such a small part of the total litter stream, litter removal budgets cannot be reduced, therefore there will be no cost savings. In other words, cost to remove litter is not a valid reason to ban plastic carry out bags.

Banning plastic carry out bags will cause a shift to paper bags. Which are less environmentally friendly than plastic bags and will require more space in landfills, and because they weigh more will increase landfill costs?

We also identify that not all plastic carry out bags weigh the same and are not made from the same plastic resin type. We explore the myth that Californians use 19 billion plastic carry out bags and show how that number was calculated from estimates of the weight of plastic carry out bags disposed by consumers. We looked at how national number and California numbers demonstrate how misleading the numbers really are. We then do the calculation ourselves from the latest estimates of bags disposed at the state and national levels. Again the discrepancy is so large as to call into question the validity of the numbers.

We then demonstrate that recycle rates for plastic bags cannot be accurately calculated at both the state and national levels. We also show that Canada claims recycling rates of plastic carry out bags as high as 57%. We identify that 90% of people will reuse plastic carry out bags for various secondary purposes. We identify that 40.3% of plastic carry out bags taken home are used to bag waste that goes to the landfill. When people have to replace these bags by standard plastic trash bags with a higher plastic content, more plastic goes to the landfill.

We also identify the weaknesses of California's AB 2449/SB 1219 and that in the event of a ban on plastic carry out bags, the in store recycling program will die and remove the ability for consumers to recycle produce bags, bread bags, and other plastic wrap and film since these products are not accepted by curbside recycling bins.

In addition, we comment on the failures of the San Francisco bag ban, the Australia bag ban, and Irelands Plastic bag tax.

We also identify that reusable bags are not the answer due to health issues that require bags be washed on a regular basis. Having consumers wash bags and consume water and energy when sanitary plastic or paper bags are available off-the-shelf is a waste of water and energy resources.

In the last segment of the paper we talk about some creative and practical solutions are available that can solve a lot of the problems with plastic carry out bags short of banning the bag.

The public supports an aggressive recycling program and desires to see more and more material being recycled. The status quo is simply unacceptable and so is a bag ban.

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Plastic Carry-Out Bag Ban Not Needed

By

Anthony van Leeuwen

12/12/2012

The most frequent arguments made in favor of a ban on plastic carry out bags is harm caused to Marine life and roadside litter. However, that is not the whole story.

The United Nations and the U.S. Environmental Protection Agency have identified that “derelict fishing gear, including monofilament line, trawl nets, and gill nets” as “one of the greatest threats to marine life and sea birds.” Discarded fishing nets and fishing gear is responsible for “ghost” fishing and entangling marine mammals such as sea turtles.

Recently in July 2012, a cleanup of marine debris at the Papahānaumokuākea Marine National Monument and World Heritage Site resulted in the removal of a total of 50 metric tons of marine debris of which half was derelict fishing nets and fishing gear and the other half was plastic debris.

Plastic debris (bottle caps, plastic cigarette lighters, shards of plastic, plastic bags, etc.) are frequently ingested by Marine mammals. Photos of bird carcasses shows that birds do swallow plastic objects.

Banning a single item such as plastic bags will not prevent harm to marine wildlife, and only a comprehensive solution to prevent plastic debris from entering waterways and the ocean will help to solve the problem.

The California 2008 Statewide Waste Characterization Study identified that Plastic Grocery and Other Merchandise Bags make up only 0.3% of the total waste stream. Of which only 0.13% are grocery store bags. A California 2006 Action Plan identified that bags comprise 3.8% of beach litter. Similarly a study to “Reduce and Prevent Ocean Litter” identified that plastic bags of all types make up about 8% of all litter.

Of all marine debris, 80% comes from land-based sources and is conveyed to the oceans via urban runoff through storm drains according to the Plastic Debris Rivers to Sea website.

A document called “Municipal Best Management Practices for Controlling Trash and Debris in Storm Water and Urban Runoff” identifies the **Total Maximum Daily Loads** program to reduce the amount of litter by 10% per year for 10 years. The document further describes that “trash excluders” or “rubbish traps” must be installed on storm drains to capture litter. These devices are being installed in Ventura County storm drains, and will prevent plastic bags, other plastic debris, and litter from being released into the riverbed and out into the ocean.

The fact that storm drains are outfitted with trash excluders which will capture plastic bags and plastic debris and prevent that from flowing into the riverbed and ocean, means that a substantial portion of the problem with plastic bags has been solved.

The "California Department of Transportation Litter Abatement Plan" states that the most common means of litter on the highway results from trash and debris blowing from improperly covered or uncovered loads. Similarly, a national study states *Trash and recycling collection vehicles have been found to be a source of litter. Even the city of Pasadena in their study in preparation for banning plastic bags acknowledged that plastic bags were escaping from trash trucks en route to a local landfill.*

Best Management Practices require that trash and recycling trucks be modified to prevent escape of windblown litter. Costs to modify trucks can be amortized and passed on to rate payers. Modifying trucks to prevent windblown litter from escaping will help keep our roadways clean of unsightly litter.

Installing trash excluders on storm drains and modifying trash and recycling trucks will have a significant impact on preventing harm to wildlife and litter attributed to plastic bags negating a need for a plastic bag ban.

Plastic Carry-Out Bag Ban - More Plastic Headed To Landfill

By

Anthony van Leeuwen

12/13/2012

One of the unintended consequences of banning plastic carry out bags is that more plastic will be headed to the landfill the exact opposite of what proponents of the plastic carry out bag ban want.

California state law (AB 2449) requires retail stores that issue plastic carry out bags at the checkout counter must have a recycling container in or outside each store. This recycling container not only accepts plastic carry out bags, but also other plastic bags and shrink wrap. These include produce bags, dry-cleaning bags, bread bags, newspaper bags and shrink wraps from paper towels, bathroom tissue, napkins, and diapers.

In extending the expiring AB 2449 by SB 1219, California legislators noted that the program enjoyed “modest success” in recovery of plastic carry out bags but they pointed out that the recovery of plastic shrink wrap and film increased “more dramatically” and avoided sending this material to the landfill.

For example, in 2009 retail stores purchased 53,000 tons of plastic carry out bags and 1,520 tons were recycled for a recovery rate of 2.9%. In addition, 17,589 tons of other plastic bags and film was recycled through this program. That means there were 11 tons of other plastic bags and film recycled for every ton of plastic carry out bags.

It should be noted that plastic bags and plastic film that are recycled through the In-store recycling programs are not accepted for recycling in the curbside recycling bins or by the Gold Coast Recycling and Transfer Station. The reason cited is that the cost of separating the plastic bags and wraps from other recycled material makes it uneconomical. In addition, plastic bags and film get stuck in the sorting equipment. [**Note:** The City of Santa Barbara allows residents to put clean plastic bags and film in the blue curbside recycle barrel; whereas, Ventura County cities cannot.]

One inherent weakness of AB 2449/SB 1219 is that only stores that issue plastic carry out are required to establish and maintain an in-store recycling program; other stores may do so on a voluntary basis.

That means Big Box Stores that do not issue plastic carry out bags do not have to establish an in-store recycling program. These stores can make a profit from the sale of products containing plastic shrink wrap and film, and the cost of recycling that material is then borne by retailers who do issue plastic carry out bags (i.e. grocery stores).

Hence, there is little incentive for retail stores to continue with the In-store recycling program once plastic carry out bags are banned and the stores are no longer subject to AB 2449/SB 1219. In San Francisco the plastic carry out bag ban has led grocery stores to shut down their plastic bag recycling programs.

In the event a ban on plastic carry out bags is implemented in Ventura County or one of the incorporated cities, retail stores will more than likely terminate their in-store recycling programs. As a

result, consumers will lose access to facilities for recycling plastic bags and plastic shrink wrap. Since this material is NOT accepted in the curbside recycling bin, consumers will have no other option than to dispose of this material in the trash bin resulting in more plastic going to the landfill instead of being recycled.

Ventura County and incorporated cities would do well to build upon the existing infrastructure of in-store recycling programs by NOT banning plastic carry out bags. Many consumers are unaware that other plastic bags and plastic shrink wrap can also be recycled through the in-store recycling programs. A better job of educating the public will help to improve not only the recovery rate of plastic carry out bags but other plastics bags and wraps as well - keeping more plastic out of the landfill.

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-6251
 Fax (916) 657-5390
 Web Site www.nahc.ca.gov
 ds_nahc@pacbell.net



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December 4, 2012

Mr. Gerald Comati, P.E., Program Manager

BEACON

206 East Victoria Street
 Santa Barbara, CA 93101

RECEIVED

DEC 11 2012

STATE CLEARING HOUSE

Re: SCH#2012111093; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the "BEACON (Beach Erosion Authority for Clean Oceans and Nourishment) Single Use Carryout Bag Ordinance Project;" located in the communities of Santa Barbara and Ventura counties, California

Dear Mr. Comati:

The California Native American Heritage Commission (NAHC) is the State of California 'trustee agency' for the preservation and protection of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties or resources of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendment s effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC advises the Lead Agency to request a Sacred Lands File search of the NAHC if one has not been done for the 'area of potential effect' or APE previously. The NAHC is aware of numerous sacred sites located in these communities; the best approach and appropriate resolution for the lead agency is effective consultation with the tribes.

The NAHC "Sacred Sites," as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties, including archaeological studies. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

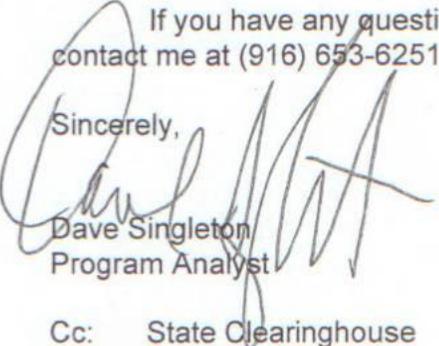
Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List



January 4, 2013

Beach Erosion Authority for Clean Oceans and Nourishment (BEACON)
501 Poli Street
Ventura, CA 93001
Contact: Gerald Comati, P.E., Program Manager. Staff@BEACON.ca.gov
Sent via email and mail

RE: Comments on BEACON Bag Ban Project Description and Draft Ordinance Language

Dear Mr. Comati,

On behalf of the undersigned and our thousands of members, we thank you for giving us the opportunity to provide written comments on the BEACON Bag Ban Project Description for the proposed ordinance addressing single-use carryout bags.

Hundreds of millions of single-use plastic carryout bags are used in Santa Barbara and Ventura Counties every year.¹ Despite both voluntary and statewide efforts to implement recycling programs, the statewide recycling rate for plastic bags remains around five percent;² the majority of single-use plastic bags – even if reused once or twice by consumers – end up in our landfills or as part of the litter stream, polluting our inland and coastal communities and wasting taxpayer dollars on cleanup costs.³

¹ Combined population of 1,258,649 (U.S. Census July 2011) multiplied by the national average of 360 plastic carryout bags per person per year.

² County of Los Angeles. Dept. of Public Works. *Los Angeles County Plastic Bag Study: Staff Report to the Los Angeles County Board of Supervisors*. Aug. 2007: 2. Print; *See also 2009 Statewide Recycling Rate for Plastic Carryout Bags: At-Store Recycling Program* (Apr. 6, 2011) Cal. Dept. of Resources Recycling & Recovery <<http://www.calrecycle.ca.gov/Plastics/AtStore/AnnualRate/2009Rate.htm>> [as of Dec. 6, 2012] [reporting that the statewide recycling rate for plastic bags was only about 3 percent in 2009]

³ For example, California spends approximately \$25 million annually to landfill discarded plastic bag waste. *See* "Shopping? Take Reusable Bags!" CalRecycle. 23 Nov. 2011. Web. 16 Oct. 2012. <<http://www.calrecycle.ca.gov/publiced/holidays/ReusableBags.htm>>. These cleanup costs do not reflect the energy costs associated with producing single-use bags, or the negative socio-economic, public health and environmental costs associated with single-use bag litter. *See also* City of Los Angeles. Office of the City Administrative Officer. *Report Back on Proposed Ban of Single Use Bags in the City*. Mar. 23, 2012: 7. Print.

For these reasons, we fully support the steps that BEACON and member agencies have taken to draft a model ordinance for the region banning plastic single-use bags and completing the CEQA review process. A ban on plastic bags coupled with a fee on single-use paper bags will be a major step in reducing the economic waste and environmental impacts that single-use bags create.

We do not believe that the proposed ordinance will result in negative environmental impacts. Rather, similar ordinances have changed consumer behavior and have resulted in an increased use of reusable bags, a more sustainable alternative to single-use bags. Accordingly, an Environmental Impact Report (“EIR”) may not be necessary for the proposed ordinance.⁴ We recognize BEACON’s desire to assess new information and address issues that have been the subject of past bag ban legal challenges. With these points in mind, we request that the following comments be carefully considered in preparing the forthcoming draft EIR.

Also of note, we appreciate the extensive opportunity for public comment on the Project Description. We encourage the City to fully consider all submitted documents in the attached Appendix, and to continue holding stakeholder meetings and soliciting public input as it moves forward with development of the California Environmental Quality Act (“CEQA”) documents and language for the proposed ordinance.

I. Effectiveness of Bag Bans

The proposed charge on single-use paper bags and a ban on plastic bags are intended to reduce the use of these bags and encourage consumers to use a reusable bag (or no bag).⁵ However, many of the environmental concerns expressed in the Project Description appear to stem from the assumption that the proposed ordinance may lead to a shift from plastic to paper single-use bags.⁶ We do not believe that the proposed ordinance will lead to an increase in the use of paper bags, and the experiences in Los Angeles County supports the effectiveness of point of sale charges in preventing this increase from occurring. Specifically, Los Angeles County recently announced that its ordinance, which became fully effective in 2012 and imposes a charge on paper bags, has resulted in a 94% reduction in overall single-use bag usage (both plastic and paper).⁷ Charges on single-use bags in Ireland (PlasTax on plastic single-use bags) and Washington, D.C., (5-cent charge on both plastic and paper single-use bags) have also dramatically reduced single-use bag consumption in those locations.⁸ This type of data and the

⁴ A number of California cities and counties found that the proposed bag ordinances would not have a significant effect on the environment and issued negative declarations or mitigated negative declarations. *See, e.g.*, the City of Dana Point, the City of Malibu, the County of Santa Clara, the County of Santa Cruz (mitigated negative declaration), and the City of Laguna Beach.

⁵ City of Los Angeles. Dept. of Public Works, Bureau of Sanitation. *Initial Study: Single-Use Plastic Carryout Bag Ordinance*. Sept. 2012:1. Print.

⁶ For example, with respect to potential impacts on forest resources the Initial Study notes that the “implementation of the proposed ordinance may result in the increase in the use of paper bags . . . While such potential increase in use of paper bags, if it occurs, is anticipated to be both temporary and modest, the potential effects on the loss of forest land or conversion of forest land will be further evaluated in the EIR.” *Id.* at 8.

⁷ “About the Bag.” County of Los Angeles. n.d. Web. 16 Oct. 2012. <<http://dpw.lacounty.gov/epd/aboutthebag/index.cfm>>.

⁸ The 5-cent fee on single-use bags was implemented in Washington, D.C. in January 2010. The District of Columbia Office of Tax and Revenue estimated that establishments covered by the fee issued approximately 3 million bags in January 2010 (post-fee), an 86 percent decrease from the 22.5 million bags issued per month in 2009. *See* <<http://www.washingtonpost.com/wp-dyn/content/article/2010/03/29/AR2010032903336.html>>. More recently, officials in Washington, D.C. note that a drop in fee

effectiveness of bag ordinances in addressing single-use bag waste should be considered as BEACON moves forward with its CEQA analysis.

Eleven months after the City of San Jose enacted its ban, its 2012 litter surveys indicate that plastic bag litter has been reduced by “approximately 89 percent in the storm drain system, 60 percent in the creeks and rivers, and 59 percent in City streets and neighborhoods, when compared to pre-ordinance data.”⁹

II. Reusable Bags and Potential Environmental Impacts

Reusable bags are durable products designed to be used hundreds of times. Assuming these bags are reused at least a few times, the environmental impacts are significantly lower on a per-use basis than other single-use bags (paper, plastic or biodegradable).¹⁰ Furthermore, the fact that reusable bags are durable and can be used multiple times means that the number of reusable bags in the waste stream is much lower than the number of single-use bags, which are used only once or twice; a smaller number of reusable bags in the waste stream, and the fact that reusable bags are usually heavier and less likely to be caught in the wind than single-use bags, means that reusable bags are less likely to be littered.¹¹ Single-use bag litter, particularly plastic bag litter, has been found, among other things, to have an adverse effect on marine wildlife and to compromise the storm water runoff systems.¹²

As previously discussed, the proposed ordinance is expected to deter consumers from using single-use bags and increase use of reusable bags. Thus, the environmental benefits of implementing the ordinance will be positive, and we urge BEACON to consider the following points when drafting the EIR.

Water Quality/Hydrology Impacts

The Initial Study questions whether littered paper and reusable bags will enter storm drains and sewers and hence have a significant impact on water quality. We believe this concern is unwarranted for two reasons. First, requirements to comply with trash total maximum daily loads (“TMDL”) in Ventura will hinder paper and reusable bags from entering storm drains there. Under these TMDL requirements, some member agencies must increasingly regulate trash.

revenue is an indication that paper and plastic bag usage continues to be down. See, “Officials rejoice over low 5-cent bag fee revenue.” WTOP 4 Oct. 2012. Web. 16 Oct. 2012 <<http://www.wtop.com/?nid=893&sid=3062667>>. Similarly, after imposing a levy on plastic carry-out bags, usage in Ireland dropped by over 90%. See “Plastic Bags.” Ireland Department of the Environment, Heritage & Local Government. n.d. Web. 16 Oct. 2012. <<http://www.environ.ie/en/Environment/Waste/PlasticBags/>>.

⁹ City of San Jose Staff Report. December 2012.

www3.sanjoseca.gov/clerk/CommitteeAgenda/TE/20121203/TE20121203_d5.pdf

¹⁰ Green Cities California. *Master Environmental Impact Assessment on Single-Use and Reusable Bags*. Mar. 2010: 2. Print.

¹¹ County of Los Angeles. Department of Public Works. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County: Final Environmental Impact Report* (2010): 3.2-18. Print.

¹² See generally, *id.* at 2-12.

Second, plastic bags – not reusable bags – are more likely to end up as litter and have an impact on water quality, due to their lightweight nature and the fact that they last indefinitely. In fact, plastic single-use bags are ubiquitous and are one of the top items that environmental organizations find during beach and inland cleanups. For example, the 2007 International Coastal Cleanup (ICC) report produced by the Ocean Conservancy found that bags were the fourth most common debris item collected worldwide during the coastal cleanup event behind cigarettes, food wrappers/containers, and caps/lids,¹³ and over 7 million plastic bags were collected during ICC events over the last 25 years.¹⁴ This number is staggering, especially if you consider that the ICC events only happen once a year. Reusable bags are a durable product. They are designed to be used hundreds of times over their lifetime and many are recyclable or made from recycled materials. Furthermore, due to their heavier weight reusable bags, unlike other single-use bags, are less likely to be blown from a landfill or trash receptacles and thus less likely to become litter.¹⁵

In sum, we believe that water quality and water resources will see a positive benefit due to the proposed ordinance.

Impacts on Biological Resources

We strongly agree with the Initial Study's finding that the proposed ordinance will reduce litter associated with plastic bags, thereby resulting in an overall beneficial effect on biological resources.¹⁶ In fact, a single-use bag reduction policy will ultimately benefit the flora and fauna in the region and beyond. Designed only for single-use, plastic single-use bags have a high propensity to become litter and then marine debris by traveling through urban storm drain systems. Plastic debris, including plastic bags, may choke and starve wildlife, distribute non-native and potentially harmful organisms, absorb toxic chemicals and degrade to micro-plastics that may be subsequently ingested.¹⁷ Reusable bags are a durable product and do not often result in added litter that could significantly impact these sensitive biological resources.¹⁸ Thus, the forthcoming draft EIR should continue to recognize the overall beneficial affect that reducing plastic litter will have on biological resources.

Impacts to Air Quality, Traffic Conditions and Greenhouse Gas Emissions

Based on the assumption that more paper bags will be manufactured, transported and distributed, a Rincon representative at the scoping meeting stated that the ordinance may increase traffic conditions and impact local air quality with a small number of extra trucks bringing paper bags

¹³ "International Coastal Cleanup Report 2007." Ocean Conservancy, 2008:7. Web. 16 Oct. 2012.

<http://www.oceanconservancy.org/site/DocServer/ICC_AR07.pdf?docID=3741>.

¹⁴ "Tracking Trash: 25 Years of Action for the Ocean." Ocean Conservancy, 2011: 4. Web. 16 Oct. 2012.

<http://act.oceanconservancy.org/pdf/Marine_Debris_2011_Report_OC.pdf>.

¹⁵ Green Cities California, *Master Environmental Impact Assessment on Single-Use and Reusable Bags*, 23 (Mar. 2010). Print.

¹⁶ City of Los Angeles. Department of Public Works, Bureau of Sanitation. *Initial Study: Single-Use Plastic Carryout Bag Ordinance*. Sept. 2012: 13. Print.

¹⁷ Barnes D. K. A., Galgani F., Thompson R. C., Barlaz M. "Accumulation and fragmentation of plastic debris in global environments." *Phil. Trans. R. Soc. B* 364 (2009): 1985–1998. Print.

¹⁸ County of Los Angeles. Dept. of Public Works. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County: Final Environmental Impact Report*. Oct. 2010: 3.2-18. Print.

which are heavier and take more space to store. However, if you take into consideration reports coming back from jurisdictions that have enacted bag ordinances such as LA County, both plastic AND paper bag consumption have declined within one year.¹⁹

For this reason, we believe that there will be no significant traffic, air quality or greenhouse gas emission impacts caused by implementation the proposed ordinance.

Impacts to Utilities

At the Oxnard scoping meeting there was a discussion about the impacts from additional wash loads for reusable bags. While it is important to wash reusable bags periodically, there should be no significant impact. Any potential impact would be *de minimus*. As we know from experience, it typically works out fine to add the bags to existing wash loads as needed.

The EIR should also address the correlation between plastic bags, natural gas and fracking. Most single-use carryout bags are made from natural gas, a non-renewable resource.²⁰ An increasing amount of natural gas is being obtained from hydraulic fracturing, or ‘fracking’, and fracking is an emerging important environmental issue currently being discussed throughout Ventura County and the State of California.

III. Additional Considerations

Documents Considered during the CEQA Analysis

Moving forward with the CEQA analysis, BEACON should review and consider the studies, reports, articles, videos and other documents referenced in the attached Appendix. The information and data presented in these documents will be relevant to the BEACON’s review of potential environmental impacts associated with single-use and reusable bags. These documents may also assist in further developing the public education component of the ordinance.

Environmental Impacts of Paper Bags

Although paper bags pose less risk to the aquatic environment because of their biodegradability and are less likely to become litter because of their weight and recyclability, the manufacturing of virgin paper emits greenhouse gases and uses toxic substances in pulping process, which include caustic sodas, sodium hydroxide, sodium sulfide, and chlorine compounds.²¹ The proposed ordinance will require retailers to sell recyclable paper bags made of a minimum of 40% postconsumer recycled content. These bags will contain less virgin fiber, thus consuming less material and would have fewer environmental impacts than conventional paper bags. Along with data demonstrating the effectiveness of point of sale charges, this added environmental

¹⁹ LA County Dept. of Public Works. County Staff Update, Nov. 2012.

<http://dpw.lacounty.gov/epd/aboutthebag/PDF/Bag%20Ban%20Status%20Nov%202012.pdf>

²⁰ Lajeunesse, *Plastic Bags: Plastic Bags are Not Created Equal Because They Are Meant for Different Purposes* (2004) 82 *Chemical & Engineering News* 51, available at <<http://pubs.acs.org/cen/whatstuff/stuff/8238plasticbags.html>>.

²¹ Green Cities California, *Master Environmental Impact Assessment on Single-Use and Reusable Bags*. Mar. 2010: 18. Print.

benefit of the proposed ordinance should also be considered when evaluating potential environmental impacts.

Alternatives to the Proposed Ordinance

While a number of alternatives were brought up and discussed at the Oxnard scoping meeting, it may be in BEACON's best interest to propose a single recommended ordinance for member agencies to consider adopting. Having member agencies consider different ordinance options may turn into a patchwork of ordinances that could erode support from other groups.

Summary

As previously stated, we do not believe that the proposed ordinance will result in negative environmental impacts and an EIR may not be needed. However, as BEACON continues to develop an EIR, it is critical that the comments above and the information in the attached Appendix are considered in the analysis. We appreciate the commitment to reduce the economic waste and environmental impacts associated with single-use bag litter by drafting the proposed ordinance, and we urge BEACON to move forward as quickly as possible in completing the CEQA review process. A single-use bag ordinance in the City is long overdue.

Sincerely,

Bill Hickman, Rise Above Plastics Coordinator
Surfrider Foundation

Kirsten James, Water Quality Director
Heal the Bay

Leslie Mintz Tamminen, Ocean Program Director
Seventh Generation Advisors

Appendix

Forthcoming Documents

California. State Water Resources Control Board. Statewide Policy for Trash Control in Waters of the State. *Forthcoming*.

Environmental Impact Reports, TMDLs and Related Policies, Reports, and Legal Documents

California Plastic Bag Amicus Brief. December 2012.

<https://dl.dropbox.com/u/2494842/LA%20Plastic%20Bag%20Amicus%20Brief%20%2812.13.12%29.pdf>

California. State Water Resources Control Board. Los Angeles Regional Water Quality Control Board. "Marine Debris TMDL for Santa Monica Bay Nearshore and Offshore." Print.

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8 Feb. 2007. Web. 16 Oct. 2012 <<http://www.opc.ca.gov/2007/02/resolution-of-the-california-ocean-protection-council-on-reducing-and-preventing-marine-debris/>>.

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Schmeer v. County of Los Angeles (B240592, app. pending). Respondent's brief. *Forthcoming* post on LA Law Library. Web. <<http://www.lalawlibrary.org/research/briefs/B240592>>/. (Also on file with 7th Generation.)

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Government Bag Ban Websites and Resources

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“Checkout Bag Ordinance.” Home page. City of San Francisco. Web. 16 Oct. 2012

<<http://sfenvironment.org/article/prevent-waste/checkout-bag-ordinance>>.

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"Ethics Filings: Coalition to Stop the Seattle Bag Tax." Ethics and Election Commission. City of Seattle, n.d.

Web. 16 Oct. 2012 <<http://www2.seattle.gov/ethics/eldata/filings/popfiling.asp?prguid={C877AEFE-CE2E-4345-9CF5-843FA5493793}>>.

From: SRS0=EvMa=KX=gmail.com=kathibking@bounce.secureserver.net
[<mailto:SRS0=EvMa=KX=gmail.com=kathibking@bounce.secureserver.net>] **On Behalf Of** Kathi King
Sent: Saturday, December 29, 2012 1:26 PM
To: comati@Beacon.ca.gov
Cc: Penny Owens
Subject: EIR Comments

Hi Gerald-

I hope you're enjoying the holiday break.

Below are my comments to the Single Use Bag Project Description.

They are from:

Kathi King

26 W. Anapamu St.

Santa Barbara, CA 93101

Community Environmental Council

805-689-2075

kking@cecmail.org or kathibking@gmail.com

2.3.1: Suggest changing 'waterproof' to 'water resistant' when describing plastic bags.

I think the figure for California bag use is between 12 and 16 billion. 20 billion seems really high.

Regarding biodegradable bags: It should be noted that they only biodegrade when sent to commercial composting facilities.

2.3.2: AB 2449 was superseded by SB1219 and does not preempt localities from charging for plastic bags.

2.4: The definition of plastic bags should include 'natural gas' in the description of what they are derived from.

2.6: Remove the word plastic in the objective about reducing bags in trash loads since it should apply to all single use bags.

Thanks again for all your efforts, Gerald. Looking forward to seeing this through.

Best,

Kathi

county of ventura

December 31, 2012

B.E.A.C.O.N

Attn.: Gerald Comati, P.E. Program Manager
206 East Victoria Street
Santa Barbara, CA 93101

E-mail: comati@beacon.ca.gov

Subject: Comments on the Notice of Preparation of a Draft EIR for the Single Use
Carryout Bag Ordinance

Dear Mr. Comati:

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Laura Hocking at (805) 654-2443.

Sincerely,



Tricia Maier, Manager
Planning Programs Section

Attachments

County RMA Reference Number 12-034





Ventura County
Watershed Protection District
Water & Environmental Resources Division
Surface Water Quality Section
MEMORANDUM

DATE: December 21, 2012

TO: Laura Hocking, RMA - Planning Division

FROM: Ewelina Mutkowska, Engineering Manager

SUBJECT: RMA12-034, BEACON Single Use Carryout Bag Ordinance

PROJECT DESCRIPTION:

The Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) intends to prepare an Environmental Impact Report (EIR) for a proposed ordinance regulating single use carryout bags throughout the incorporated and unincorporated areas in Santa Barbara and Ventura counties. In accordance with Section 15082 of the State CEQA Guidelines, BEACON issued a Notice of Preparation (NOP) to provide Responsible Agencies and other interested parties with information describing the proposal and its potential environmental effects. The environmental factors that BEACON has determined would potentially be affected by the project include: Air Quality; Biological Resources; Greenhouse Gas Emissions; Hydrology/Water Quality; and Utilities and Services Systems.

The intent of the ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags. The Proposed Ordinance is anticipated to provide a disincentive to customers to request paper bags when shopping at regulated stores and promote a shift to the use of reusable bags by retail customers, while reducing the number of single use plastic and paper bags within the participating municipalities. The ordinance would (1) prohibit the free distribution of single use carryout paper and plastic bags and (2) require retail establishments to charge customers for recycled paper bags and at the point of sale. Regulated retail establishments would be allowed to sell reusable bags or distribute them free of charge. The Proposed Ordinance establishes a minimum charge for single use recyclable paper bags of ten cents (\$0.10). Plastic carryout bags are defined in the Proposed Ordinance as any bag made predominately of plastic derived from either petroleum or biologically-based sources, such as corn or other plant sources, which is provided to a customer at the point of sale. Regulated bags would not include reusable bags, produce bags, or product bags (as defined).

The Proposed Ordinance would not apply to restaurants and other food service providers, allowing them to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider's premises. Retail establishments would be required to keep complete and accurate records and report annually to the governing jurisdiction.

SCOPE AND CONTENT OF THE ENVIRONMENTAL ANALYSIS

The Draft EIR should include a “No Project” alternative, which should evaluate the potential impacts of the “No Project” alternative. The scope of the Hydrology and Water Quality, Biological Resources and Utilities and Services Systems impact assessments of the “No Project” Alternative should include consideration of requirements of the following applicable policies and regulations:

1. Ventura River Trash Total Maximum Daily Load (TMDL), Los Angeles, Regional Water Quality Control Board (LA-RWQCB Resolution No. R4-2007-007)
2. Revolon Slough/Beardsley Wash Trash TMDL (LA-RWQCB Resolution No. R4-2007-008)
3. Malibu Creek Watershed Trash TMDL (LA-RWQCB Resolution No. R4-2008-007)
4. Santa Monica Bay Nearshore and Offshore Debris TMDL (LA-RWQCB Resolution No. R10-010)
5. Waste Discharge Requirements for Storm Water and Non-stormwater Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein (Ventura MS4 Permit), LA-RWCQB Order R4-2010-0108, NPDES Permit No. CAS004002

According to the Ventura River Trash TMDL and Revolon Slough/Beardsley Wash Trash TMDL annual reports, trash monitoring data indicate the main types of trash in these impaired waterbodies consist of Plastic and Styrofoam materials. In accordance with Rapid Trash Assessment Protocol (RTAP), the assessment category of Plastic and Styrofoam materials include items such as Styrofoam food containers, plastic bags and plastic cup lids. While the RTAP does not include data collection and assessment of only single use plastic bags, plastic bags are a component of the most commonly occurring type of trash encountered during the trash collection and assessment events.

The trash TMDLs listed above, and the Ventura MS4 Permit, require implementation of Best Management Practices (BMPs) to achieve the Waste Load Allocation (WLA) of zero trash in the impaired waterbodies. The No Project alternative would not assist in achieving the required WLA of zero trash, as plastic bags contribute to the largest category of trash found in Trash impaired receiving waters within Ventura County.

The Santa Monica Bay Nearshore and Offshore Debris TMDL approval resolution includes findings that marine debris impacted at least 267 species worldwide, primarily through ingestion and entanglement. Entanglement of marine life can cause strangulation or suffocation. Birds, fish and mammals often mistake plastic for food and may cause malnutrition or internal injuries if ingested. The Santa Monica Bay Nearshore and Offshore Debris TMDL identifies local ordinances to ban plastic bags as an effective BMP to reduce trash and marine debris, and the adoption of such an ordinance is a step to gain a three-year extension of the final compliance date. Upper portions of the Malibu Creek Watershed within the County of Ventura have the potential to contribute trash to the Santa Monica Bay.

Technical review was completed by Jason Burke, Water Quality Planner @ (805) 477-7139.



Appendix B
Draft Ordinance

*Proposed Model City Ordinance
Single Use Bag Ordinance
May 22, 2012
Ordinance Committee Draft*

DRAFT

Ordinance No.

**AN ORDINANCE OF THE COUNCIL OF THE
CITY OF SANTA BARBARA AMENDING THE
MUNICIPAL CODE BY ADDING CHAPTER 9.150
PERTAINING TO SINGLE-USE CARRY OUT BAGS
AT CERTAIN RETAIL FOOD AND GROCERY
STORE ESTABLISHMENTS IN THE CITY.**

THE COUNCIL OF THE CITY OF SANTA BARBARA DOES ORDAIN AS FOLLOWS:

SECTION ONE: Title 9 of the Santa Barbara Municipal Code is amended by adding a new chapter, Chapter 9.150 ("Single-Use Carry Out Bags"), which reads as follows:

Section 9.150.010 Definitions.

The following definitions apply to this Chapter:

- A. Customer.** Any person purchasing goods from a store.
- B. Operator.** The person in control of, or having the responsibility for, the operation of a store, which may include, but is not limited to, the owner of the store.
- C. Person.** Any natural person, firm, corporation, partnership, or other organization or group however organized.
- D. Plastic carryout bag.** Any bag made predominantly of plastic derived from either petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale. "Plastic carryout bag" includes compostable and biodegradable bags but does not include reusable bags, produce bags, or product bags.
- E. Postconsumer recycled material.** A material that would otherwise be destined for solid waste disposal, having completed its intended end use and product life cycle. "Postconsumer recycled material" does not include materials and by-products

generated from, and commonly reused within, an original manufacturing and fabrication process.

F. Produce bag or product bag. Any bag without handles used exclusively to carry produce, meats, or other food items from a display case within a store to the point of sale inside a store or to prevent such food items from coming into direct contact with other purchased items.

G. Recyclable. Material that can be sorted, cleansed, and reconstituted using available recycling collection programs for the purpose of using the altered form in the manufacture of a new product. "Recycling" does not include burning, incinerating, converting, or otherwise thermally destroying solid waste.

H. Recyclable paper carryout bag. A paper bag (of any size) that meets all of the following requirements: 1. contains no old growth fiber; 2. is one hundred percent (100%) recyclable overall and contains a minimum of forty percent (40%) post-consumer recycled material; 3. is capable of composting, consistent with the timeline and specifications of the American Society of Testing and Materials (ASTM) Standard D6400; 4. is accepted for recycling in curbside programs in the City; 5. has printed on the bag the name of the manufacturer, the location (country) where the bag was manufactured, and the percentage of postconsumer recycled material used; and 6. displays the word "Recyclable" in a highly visible manner on the outside of the bag.

I. Reusable bag. A bag with handles that is specifically designed and manufactured for multiple reuse and meets all of the following requirements: 1. has a minimum lifetime of 125 uses, which for purposes of this subsection, means the capability of carrying a minimum of 22 pounds 125 times over a distance of at least 175 feet; 2. has a minimum volume of 15 liters; 3. is machine washable or is made from a material that can be cleaned or disinfected; 4. does not contain lead, cadmium, or any other heavy metal in toxic amounts; 5. has printed on the bag, or on a tag that is permanently affixed to the bag, the name of the manufacturer, the location (country) where the bag was manufactured, a statement that the bag does not contain lead, cadmium, or any other heavy metal in toxic amounts, and the percentage of postconsumer recycled material used, if any; and 6. if made of plastic, is a minimum of at least 2.25 mils thick.

J. Store. Any of the following retail establishments located and operating within the City:

1. A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the Revenue and Taxation Code) which sells a line of dry grocery or canned goods, or non-food items and some perishable food items for sale or a store that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or

2. A drug store, pharmacy, supermarket, grocery store, convenience food store, food mart, or other similar retail store or entity engaged in the retail sale of a limited line of grocery items or goods which typically includes, but is not limited to, milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 liquor license issued by the state Department of Alcoholic Beverage Control.

Section 9.150.020 Plastic carryout bags prohibited.

A. No store shall provide to any customer with a plastic carryout bag.

B. The prohibition on providing plastic carryout bags applies only to bags provided by a store for the purpose of carrying away goods from the point of sale within the store and does not apply to produce bags or product bags supplied by a store.

Section 9.150.030 Permitted bags.

All stores shall provide or make available to a customer only recyclable paper carryout bags or reusable bags for the purpose of carrying away goods or other materials from the point of sale, subject to the terms of this Chapter. Nothing in this Chapter prohibits customers from using bags of any type which the customer may bring to the store themselves or from carrying away goods that are not placed in a bag, in lieu of using bags provided by the store.

Section 9.150.040 Regulation of recyclable paper carryout bags.

A. Any store that provides a recyclable paper carryout bag to a customer must charge the customer ten cents (\$0.10) for each bag provided, except as otherwise allowed by this Chapter.

B. No store shall rebate or otherwise reimburse a customer any portion of the ten cent (\$0.10) charge required in subparagraph A, except as otherwise allowed by this Chapter.

C. All stores must indicate on the customer receipt the number of recyclable paper carryout bags provided and the total amount charged the customer for such bags.

D. All charges collected by a store under this Chapter may be retained by the store and used for one or more of the following purposes: 1. the costs associated with complying with the requirements of this Chapter; 2. the actual costs of providing recyclable paper carryout bags; 3. the costs of providing low or no cost reusable bags to customers of the store who are exempted by section 9.150.060; or 4. the costs associated with a store's educational materials or education campaign encouraging the use of reusable bags, if any.

E. All stores shall report to the City Finance Director, on an annual (calendar year) basis, the total number of recyclable paper carryout bags provided, the total amount of monies collected for providing recyclable paper carryout bags, and a summary of any efforts a store has undertaken to promote the use of reusable bags by customers in the prior year. Such reporting must be done on a form prescribed by the City Finance Director, and must be signed by a responsible agent or officer of the store in order to confirm that the information provided on the form is accurate and complete. Such reports shall be filed no later than ninety (90) days after the end of each year following the year in which this chapter becomes effective.

Section 9.150.050 Use of reusable bags.

A. All stores must provide reusable bags to customers, either for sale or at no charge.

B. Stores are strongly encouraged to educate their staff to promote the use of reusable bags and to post signs and other informational materials encouraging customers to use reusable bags.

Section 9.150.060 Exempt customers.

All stores must provide at the point of sale, free of charge, either reusable bags or recyclable paper carryout bags or both, at the store's option, to any customer participating either in the California Special Supplemental Food Program for Women, Infants, and Children pursuant to Article 2 (commencing with Section 123275) of Chapter 1 of Part 2 of Division 106 of the Health and Safety Code or in the Supplemental Food Program pursuant to Chapter 10 (commencing with Section 15500) of Part 3 of Division 9 of the state Welfare and Institutions Code.

Section 9.150.070 Enforcement and violations - penalties.

A. Administrative Enforcement. The City Finance Director (or his designee) shall have the primary responsibility for enforcement of this Chapter. The Director is authorized to promulgate Departmental regulations to assist stores in understanding and in complying with this Chapter and to take any and all other actions reasonable and necessary to enforce and interpret this Chapter.

B. Regulations on Free Reusable Bags. If determined to be appropriate and necessary, the City Finance Director may adopt regulations restricting or limiting the ability of those stores defined in subparagraphs J(1) and J(2) of section 9.150.010 to offer customers free reusable bags as a promotional item.

Section 9.150.080 Operative date.

For those stores defined in subparagraph (J)1) of section 9.150.010, this Chapter shall become operative One Hundred Eighty (180) days after the effective date of the City ordinance adopting this Chapter. For stores defined in subparagraph J(2) of Section 9.150.010, this Chapter shall become operative one year after the effective date of the City ordinance adopting this Chapter.

SECTION TWO: Within two years of the adoption date of this ordinance, the staff of the City Finance Department shall submit a written agenda report to the City Council describing, among other things, whether it appears to the Finance Department that this ordinance has reduced the number of plastic and paper bags used within the City by those stores regulated by this ordinance.



Appendix C

Proposed Ordinance Bag Use by Municipality

Existing and Proposed Bag Use

Area	Population	Number of Plastic Bags Used per Person	Existing Total Plastic Bags Used Annually	Proposed Plastic Bags (5% Remain)	Proposed Paper Bags (30% Switch to Paper)	Proposed Reusable Bags (65% Switch to Reusable)
Santa Barbara County						
Unincorporated Santa Barbara County	134,890	531	71,626,590	3,581,330	21,487,977	895,332
Buellton	4,858	531	2,579,598	128,980	773,879	32,245
Goleta	29,930	531	15,892,830	794,642	4,767,849	198,660
Guadalupe	7,097	531	3,768,507	188,425	1,130,552	47,106
Lompoc	42,854	531	22,755,474	1,137,774	6,826,642	284,443
Santa Barbara	89,082	531	47,302,542	2,365,127	14,190,763	591,282
Santa Maria	100,199	531	53,205,669	2,660,283	15,961,701	665,071
Solvang	5,281	531	2,804,211	140,211	841,263	35,053
Ventura County						
Unincorporated Ventura County	96,589	531	51,288,759	2,564,438	15,386,628	641,109
Camarillo	66,407	531	35,262,117	1,763,106	10,578,635	440,776
Fillmore	15,145	531	8,041,995	402,100	2,412,599	100,525
Moor Park	34,826	531	18,492,606	924,630	5,547,782	231,158
Oxnard	200,390	531	106,407,090	5,320,355	31,922,127	1,330,089
Port Hueneme	21,682	531	11,513,142	575,657	3,453,943	143,914
Santa Paula	107,166	531	56,905,146	2,845,257	17,071,544	711,314
Simi Valley	29,882	531	15,867,342	793,367	4,760,203	198,342
Thousand Oaks	125,317	531	66,543,327	3,327,166	19,962,998	831,792
Ventura	128,031	531	67,984,461	3,399,223	20,395,338	849,806
Total	1,239,626	Total	658,241,406	32,912,070	197,472,422	8,228,018
Compared to Existing Conditions				-625,329,336	N/A	N/A

Total Proposed Carryout bags (plastic, paper and reusable)	238,612,510
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Appendix D



*Air Quality URBEMIS Results, Air Quality and Greenhouse Gas
Estimates by Municipality for the Proposed Ordinance*

AIR QUALITY

Existing Air Pollution Emissions

Area	Existing: Total Plastic Bags Used Annually	Existing Ozone: Emissions per year (kg)	Existing AA: Emissions per year (kg)
Santa Barbara County			
Unincorporated Santa Barbara County	71,626,590	1,647	77,643
Buellton	2,579,598	59	2,796
Goleta	15,892,830	366	17,228
Guadalupe	3,768,507	87	4,085
Lompoc	22,755,474	523	24,667
Santa Barbara	47,302,542	1,088	51,276
Santa Maria	53,205,669	1,224	57,675
Solvang	2,804,211	64	3,040
Ventura County			
Unincorporated Ventura County	51,288,759	1,180	55,597
Camarillo	35,262,117	811	38,224
Fillmore	8,041,995	185	8,718
Moor Park	18,492,606	425	20,046
Oxnard	106,407,090	2,447	115,345
Port Hueneme	11,513,142	265	12,480
Santa Paula	56,905,146	1,309	61,685
Simi Valley	15,867,342	365	17,200
Thousand Oaks	66,543,327	1,530	72,133
Ventura	67,984,461	1,564	73,695
Total	658,241,406	15,140	713,534

Proposed Air Pollution Emissions by Bag Type

Bag Type	Proposed # of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Proposed: Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	Proposed: AA Emissions per year (kg)
Single-use Plastic	32,912,070	1	0.023	757	1	1.084	35,677
Single-use Paper	197,472,422	1.3	0.03	5924	1.9	2.06	406,793
Reusable	8,228,018	1.4	0.032	263	3	3.252	26,758
Total				6,944	Total		469,227
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				-8,195	Net Change (Total minus Existing)		-244,306
% Change				-54%	% Change		-34%

Proposed Air Pollution Emissions by Jurisdiction

Area	Total Plastic Bags Used Annually	Proposed Plastic Bags (5% Remain)	Proposed Paper Bags (30% Switch to Paper)	Proposed Reusable Bags (65% Switch to Reusable)	Proposed: Ozone Emissions per year (kg)	Proposed: AA Emissions per year (kg)
Santa Barbara County						
Unincorporated Santa Barbara County	71,626,590	3,581,330	21,487,977	895,332	756	51,059
Buellton	2,579,598	128,980	773,879	32,245	27	1,839
Goleta	15,892,830	794,642	4,767,849	198,660	168	11,329
Guadalupe	3,768,507	188,425	1,130,552	47,106	40	2,686
Lompoc	22,755,474	1,137,774	6,826,642	284,443	240	16,221
Santa Barbara	47,302,542	2,365,127	14,190,763	591,282	499	33,720
Santa Maria	53,205,669	2,660,283	15,961,701	665,071	561	37,928
Solvang	2,804,211	140,211	841,263	35,053	30	1,999
Ventura County						
Unincorporated Ventura County	51,288,759	2,564,438	15,386,628	641,109	541	36,561
Camarillo	35,262,117	1,763,106	10,578,635	440,776	372	25,137
Fillmore	8,041,995	402,100	2,412,599	100,525	85	5,733
Moor Park	18,492,606	924,630	5,547,782	231,158	195	13,182
Oxnard	106,407,090	5,320,355	31,922,127	1,330,089	1,123	75,852
Port Hueneme	11,513,142	575,657	3,453,943	143,914	121	8,207
Santa Paula	56,905,146	2,845,257	17,071,544	711,314	600	40,565
Simi Valley	15,867,342	793,367	4,760,203	198,342	167	11,311
Thousand Oaks	66,543,327	3,327,166	19,962,998	831,792	702	47,435
Ventura	67,984,461	3,399,223	20,395,338	849,806	717	48,463
Total	658,241,406	32,912,070	197,472,422	8,228,018	6,944	469,227

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: BEACON Bag Ordinance

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.08	0.41	0.85	0.00	0.04	0.01	57.77

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.08	0.41	0.85	0.00	0.04	0.01	57.77

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name:

Project Name: BEACON Bag Ordinance

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag Ordinance	0.08	0.41	0.85	0.00	0.04	0.01	57.77
TOTALS (lbs/day, unmitigated)	0.08	0.41	0.85	0.00	0.04	0.01	57.77

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Temperature (F): 75 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag Ordinance		1.87	1000 sq ft	1.00	1.87	18.89
					1.87	18.89

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.4	99.4	0.2
Light Truck < 3750 lbs	0.0	1.2	95.8	3.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	73.3	26.7
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	33.3	66.7
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	52.6	47.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	91.7	8.3

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	9.9	5.6	6.1	5.7	4.1	5.7
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag Ordinance				2.0	1.0	97.0

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Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

GREENHOUSE GAS EMISSIONS

Existing GHG Emissions

Area	Population	Existing Total Plastic Bags Used Annually	Existing CO2e emissions per year (metric tons)	Existing CO2e per person per year (metric tons)
Santa Barbara County				
Unincorporated Santa Barbara County	134,890	71,626,590	1,910	0.0142
Buellton	4,858	2,579,598	69	0.0142
Goleta	29,930	15,892,830	424	0.0142
Guadalupe	7,097	3,768,507	100	0.0142
Lompoc	42,854	22,755,474	607	0.0142
Santa Barbara	89,082	47,302,542	1,261	0.0142
Santa Maria	100,199	53,205,669	1,419	0.0142
Solvang	5,281	2,804,211	75	0.0142
Ventura County				
Unincorporated Ventura County	96,589	51,288,759	1,368	0.0142
Camarillo	66,407	35,262,117	940	0.0142
Fillmore	15,145	8,041,995	214	0.0142
Moor Park	34,826	18,492,606	493	0.0142
Oxnard	200,390	106,407,090	2,838	0.0142
Port Hueneme	21,682	11,513,142	307	0.0142
Santa Paula	107,166	56,905,146	1,517	0.0142
Simi Valley	29,882	15,867,342	423	0.0142
Thousand Oaks	125,317	66,543,327	1,774	0.0142
Ventura	128,031	67,984,461	1,813	0.0142
Total	1,239,626	658,241,406	17,553	0.0142

Proposed GHG Emissions by Bag Type

Use and Disposal					
Bag Type	Proposed # of Bags Used per Year	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO2E)	CO₂E per year (metric tons)	CO₂E per Person (metric tons)
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags**	878	0.0007
Single-use Paper	197,472,422	2.97	0.1188 per 1,000 bags	23,460	0.0189
Reusable	8,228,018	2.6	0.104 per 1,000 bags***	856	0.0007
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				<i>25,193</i>	<i>0.0203</i>
Washing					
Bag Type	# of Loads per Year	Electricity Use Per Load (kw)	Total Electricity Use Per Year (kW)	CO₂E per year (metric tons)	CO₂E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,579	3,279	0.0026
<i>Subtotal (Washing)</i>				<i>3,279</i>	<i>0.0026</i>
Total GHG Emissions from Proposed Ordinance				28,472	0.0230
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				10,919	0.0088

Proposed GHG Emissions by Jurisdiction

Area	Population	Existing Total Plastic Bags Used Annually	Proposed Plastic Bags (5% Remain)	Proposed Paper Bags (30% Switch to Paper)	Proposed Reusable Bags (65% Switch to Reusable)	CO2e Emissions per year (metric tons)	CO2e per person per year (metric tons)
Santa Barbara County							
Unincorporated Santa Barbara County	134,890	71,626,590	3,581,330	21,487,977	895,332	3,098	0.0230
Buellton	4,858	2,579,598	128,980	773,879	32,245	112	0.0230
Goleta	29,930	15,892,830	794,642	4,767,849	198,660	687	0.0230
Guadalupe	7,097	3,768,507	188,425	1,130,552	47,106	163	0.0230
Lompoc	42,854	22,755,474	1,137,774	6,826,642	284,443	984	0.0230
Santa Barbara	89,082	47,302,542	2,365,127	14,190,763	591,282	2,046	0.0230
Santa Maria	100,199	53,205,669	2,660,283	15,961,701	665,071	2,301	0.0230
Solvang	5,281	2,804,211	140,211	841,263	35,053	121	0.0230
Ventura County							
Unincorporated Ventura County	96,589	51,288,759	2,564,438	15,386,628	641,109	2,218	0.0230
Camarillo	66,407	35,262,117	1,763,106	10,578,635	440,776	1,525	0.0230
Fillmore	15,145	8,041,995	402,100	2,412,599	100,525	348	0.0230
Moor Park	34,826	18,492,606	924,630	5,547,782	231,158	800	0.0230
Oxnard	200,390	106,407,090	5,320,355	31,922,127	1,330,089	4,603	0.0230
Port Hueneme	21,682	11,513,142	575,657	3,453,943	143,914	498	0.0230
Santa Paula	107,166	56,905,146	2,845,257	17,071,544	711,314	2,461	0.0230
Simi Valley	29,882	15,867,342	793,367	4,760,203	198,342	686	0.0230
Thousand Oaks	125,317	66,543,327	3,327,166	19,962,998	831,792	2,878	0.0230
Ventura	128,031	67,984,461	3,399,223	20,395,338	849,806	2,941	0.0230
Total	1,239,626	658,241,406	32,912,070	197,472,422	8,228,018	28,472	0.0230

Greenhouse Gas Emission Worksheet

Operational Emissions

Washing/Drying Reusable Bags

Electricity Generation	(kWh)	Project units	Project Usage
Dryers***	4 per load per year	2,598,321.000	9,938,578
Total			9,938,578

Total Project Annual KWh: **9,938,578** kWh/year
 Project Annual MWh: **9,939** MWh/year

Emission Factors:****

CO2	724.12 lbs/MWh/year
CH4	0.0302 lbs/MWh/year
N2O	0.0081 lbs/MWh/year

Total Annual Operational Emissions (metric tons) =
(Electricity Use (kWh) x EF)/2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)*****

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Operational Emissions:

	Total Emissions	Total CO2e Units
CO2 emissions, electricity:	3,598.3615 tons	3,264 metric tons CO2e
CO2 emissions*****:	0.00 tons	0 metric tons CO2e
CH4 emissions:	0.1361 metric tons	3 metric tons CO2e
N2O emissions:	0.0365 metric tons	11 metric tons CO2e
Project Total		3,279 metric tons CO2e

References

* CAPCOA CEQA and Climate Change White Paper, January 2008

** Generation Factor Source: Energy Information Administration, 2008. 2003 CBECs Detailed Tables

*** US Department of Energy: Energy Efficiency and Renewable Energy, 2010. for this land use).

**** Table C.2: Carbon Dioxide, Methane and Nitrous Oxide Electricity Emission Factors by eGRID Subregion in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

***** SAR, 1996 conversion factors as reported in Table C.1 of CCAR, January 2009

***** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.



Appendix E

Utilities Calculations for the Proposed Ordinance

BEACON-Carryout Bag Waste Reduction Ordinance Program EIR

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in participating jurisdictions per year	658,241,406
Number of plastic bags used in participating jurisdictions per day	1,803,401

Ordinance - Assume 95% switch to paper/reusable	Per Day	Per Year
Number of Plastic bags still in (5% of existing)	90,170	32,912,070
Number of paper bags per day with 30% conversion	541,020	197,472,422
Number of reusable bags per day with 65% conversion	22,543	8,228,018

Water Use - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	52.6	52.6	173	2.634615385
Liters water per bag per day	0.08	0.08	0.39	0.01
Liters water in Study Area per day	147,558.29	7,377.91	212,984.08	244.16
Gallons per day	38,980.78	1,949.04	56,264.44	64.50
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.06	0.00
MGD per year	14.23	0.71	20.54	0.02
Increase in water use per year (MGD)	0.02			
Increase as a result of Ordinance - Million gallons per year	7.04			

Wastewater - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	50.00	50.00	130.70	2.63
Liters water per bag per day	0.08	0.08	0.30	0.01
Liters water in Study Area per day	140,264.53	7,013.23	160,907.62	244.16
Gallons per day	37,053.97	1,852.70	42,507.30	64.50
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.04	0.00
MGD per year	13.52	0.68	15.52	0.02
Increase as a result of Ordinance - per day (MGD)	0.01			
Increase as a result of Ordinance - per year Million gallons	2.69			

Solid Waste - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.19	4.19	3.84	0.25
kg waste per bag per day	0.01	0.01	0.01	0.00
kg waste in City per day	11,764.15	588.21	4,722.88	23.36
Tons per day (w/recycling)	12.97	0.65	5.21	0.0002
Tons per year	4,733.23	236.66	1,900.22	0.075
Increase in solid waste per year (MGD)			(2,833.01)	(4,733.15)
Increase as a result of Ordinance. Tons/year	(2,596.27)			

Energy - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
MJ per 9000 liters groceries	286.00		295.00	15.48
MJ per bag per day	0.44		0.67	0.06
MJ in Study Area per day	802,313.12		363,180.94	1,434.68
kWh in Study Area per day	222,864.76		100,883.59	398.52
million kWh in Study Area per day	0.22		0.10	0.00
Increase in million kWh per day			(0.12)	(0.22)
Increase as a result of Ordinance. Million kWh	(0.12)			
Increase in kWh	(121,582.64)			

Water Use - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
Gallons per 1000 paper bags (1500 plastic bags)	58.00	58.00	1,004.00
Gallons per bag	0.04	0.04	1.00
Gallons water in Study Area per day	69,731.51	3,486.58	543,184.42
Millions gallons per day (MGD) in Study Area	0.07	0.00	0.54
MGD per year	25.45	1.27	198.26
Increase in water use per year (MGD)	174.08		
Increase in water per day	0.48		

Solid Waste -Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.20	6.20	21.42
kg waste per bag per day	0.00	0.00	0.02
kg waste in Study Area per day	7,456.75	372.84	11,591.25
Tons per day	8.22	0.41	12.78
Tons per year	3,000.17	150.01	4,663.66
Increase in solid waste per year (MGD)			1,663.49
Increase as a result of Ordinance. Tons/day	4.97		
Increase as a result of Ordinance. Tons/year	1,813.50		

Energy - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
MJ per 1000 paper bags (1500 plastic)	763.00		2,622.00
MJ per bag per day	0.51		2.62
MJ in Study Area per day	917,330.03		1,418,555.31
kWh in Study Area per day	254,813.90		394,043.15
million kWh in Study Area per day	0.25		0.39
Increase in million kWh per day			0.14
Increase as a result of Ordinance. Million kWh	0.14		
Increase in kWh	139,229.25		

Area	Population	Percent of total bag use	Water Use - Ecobilan (million gallons per year)	Wastewater - Ecobilan (million gallons per year)	Solid Waste - Ecobilan	Energy - Ecobilan (kwh)	Water Use - Boustead (million gallons per year)	Solid Waste - Boustead (tons per year)	Energy - Boustead (kwh)
Santa Barbara County									
Unincorporated Santa Barbara County	134,890	12.95%	0.91	0.35	-336.32	-15,749.78	22.55	234.92	18,035.72
Buellton	4,858	0.47%	0.03	0.01	-12.11	-567.22	0.81	8.46	649.55
Goleta	29,930	2.87%	0.20	0.08	-74.62	-3,494.63	5.00	52.13	4,001.85
Guadalupe	7,097	0.68%	0.05	0.02	-17.69	-828.65	1.19	12.36	948.92
Lompoc	42,854	4.12%	0.29	0.11	-106.85	-5,003.64	7.16	74.63	5,729.87
Santa Barbara	89,082	8.55%	0.60	0.23	-222.11	-10,401.23	14.89	155.14	11,910.88
Santa Maria	100,199	9.62%	0.68	0.26	-249.83	-11,699.26	16.75	174.50	13,397.30
Solvang	5,281	0.51%	0.04	0.01	-13.17	-616.61	0.88	9.20	706.11
Ventura County									
Unincorporated Ventura County	96,589	9.28%	0.65	0.25	-240.82	-11,277.75	16.15	168.22	12,914.61
Camarillo	66,407	6.38%	0.45	0.17	-165.57	-7,753.70	11.10	115.65	8,879.07
Fillmore	15,145	1.45%	0.10	0.04	-37.76	-1,768.33	2.53	26.38	2,024.99
Moor Park	34,826	3.34%	0.24	0.09	-86.83	-4,066.29	5.82	60.65	4,656.48
Oxnard	200,390	19.24%	1.36	0.52	-499.63	-23,397.58	33.50	348.99	26,793.52
Port Hueneme	21,682	2.08%	0.15	0.06	-54.06	-2,531.59	3.62	37.76	2,899.03
Santa Paula	107,166	10.29%	0.72	0.28	-267.20	-12,512.72	17.92	186.64	14,328.83
Simi Valley	29,882	2.87%	0.20	0.08	-74.50	-3,489.03	5.00	52.04	3,995.43
Thousand Oaks	125,317	12.03%	0.85	0.32	-312.45	-14,632.04	20.95	218.25	16,755.75
Ventura	128,031	12.30%	0.87	0.33	-319.22	-14,948.93	21.40	222.97	17,118.63
Total	1,041,302	100.00%	7.04	2.69	-2,596.27	-121,582.64	174.08	1,813.50	139,229.25

Appendix F



*Air Quality URBEMIS Results, Air Quality and Greenhouse Gas
Estimates, and Utilities Calculations by Municipality for the
Alternatives*

ALTERNATIVE 2: Ban on Single Use Plastic Bags at all Retail Establishments Except Restaurants

Alternative 2 Air Pollution Emissions by Bag Type

Bag Type	Alt 2 # of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Alt 2 Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	Alt 2 AA Emissions per year (kg)
Single-use Plastic	6,582,414	1	0.023	151	1	1.084	7,135
Single-use Paper	223,802,078	1.3	0.03	6714	1.9	2.06	461,032
Reusable	8,228,018	1.4	0.032	263	3	3.252	26,758
Total Alt 2 Emissions				7,129	Total Alt 2 Emissions		494,925
Proposed Ordinance				6,944	Proposed Ordinance		469,227
Difference				184	Difference		25,698
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				(8,011)	Net Change (Total minus Existing)		(218,609)

Alternative 2 GHG Emissions by Bag Type

Use and Disposal					
Bag Type	Alt 2 # of Bags Used per Year	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO2E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Single-use Plastic	6,582,414	1	0.04 per 1,500 bags	176	0.0001
Single-use Paper	223,802,078	2.97	0.1188 per 1,000 bags	26,588	0.0214
Reusable	8,228,018	2.6	0.104 per 1,000 bags	856	0.0007
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				<i>27,619</i>	<i>0.0223</i>
Washing					
Bag Type	# of Loads per Year	Electricity Use Per Load (kw)	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Reusable	2,598,321	3.825	9,938,579	3,279	0.0026
<i>Subtotal (Washing)</i>				<i>3,279</i>	<i>0.0026</i>
Total GHG Emissions from Alternative 2				30,898	0.0249
Proposed Ordinance Total				28,472	0.0230
Difference				2,426	0.0020
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				13,345	0.0108

Existing and Alternative 2 Bag Use

Area	Alt 2 Plastic Bags (1% Remain)	Alt 2 Paper Bags (34% Switch to Paper)	Alt 2 Reusable Bags (65% Switch to Reusable)	Total Bags Used Annually	Alt 2: Ozone Emissions per year (kg)	Alt 2: AA Emissions per year (kg)	CO2e Emissions per year (metric tons)	CO2e per person per year (metric tons)
Santa Barbara County								
Unincorporated Santa Barbara County	716,266	24,353,041	895,332	25,964,639	776	53,855	3,362	0.0249
Buellton	25,796	877,063	32,245	935,104	28	1,940	121	0.0249
Goleta	158,928	5,403,562	198,660	5,761,151	172	11,950	746	0.0249
Guadalupe	37,685	1,281,292	47,106	1,366,084	41	2,834	177	0.0249
Lompoc	227,555	7,736,861	284,443	8,248,859	246	17,110	1,068	0.0249
Santa Barbara	473,025	16,082,864	591,282	17,147,171	512	35,566	2,220	0.0249
Santa Maria	532,057	18,089,927	665,071	19,287,055	576	40,005	2,497	0.0249
Solvang	28,042	953,432	35,053	1,016,526	30	2,108	132	0.0249
Ventura County								
Unincorporated Ventura County	512,888	17,438,178	641,109	18,592,175	555	38,564	2,408	0.0249
Camarillo	352,621	11,989,120	440,776	12,782,517	382	26,513	1,655	0.0249
Fillmore	80,420	2,734,278	100,525	2,915,223	87	6,047	377	0.0249
Moor Park	184,926	6,287,486	231,158	6,703,570	200	13,904	868	0.0249
Oxnard	1,064,071	36,178,411	1,330,089	38,572,570	1,152	80,006	4,995	0.0249
Port Hueneme	115,131	3,914,468	143,914	4,173,514	125	8,657	540	0.0249
Santa Paula	569,051	19,347,750	711,314	20,628,115	616	42,786	2,671	0.0249
Simi Valley	158,673	5,394,896	198,342	5,751,911	172	11,930	745	0.0249
Thousand Oaks	665,433	22,624,731	831,792	24,121,956	721	50,033	3,124	0.0249
Ventura	679,845	23,114,717	849,806	24,644,367	736	51,117	3,191	0.0249
Total	6,582,414	223,802,078	8,228,018	238,612,510	7,129	165,367	30,898	0.0249
Compared to Proposed Ordinance	(26,329,656)	26,329,656	Same	Same	184	(303,860)	2,426	0.0020
Compared to Existing Conditions	(651,658,992)	N/A	N/A	(419,628,896)	(8,011)	(548,166)	13,345	0.0108

Estimated Alternative 2 Truck Trips

Bag Type	Alt 2 # of Bags Used per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	6,582,414	2,080,000	3	0.01
Single-use Paper	223,802,078	217,665	1028	2.82
Reusable	8,228,018	108,862	76	0.21
Alternative 2 Total			1107	3.03
Proposed Ordinance Total			999	2.74
Difference			108	0.30
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 2 (Alternative 2 Total minus Existing Total)			790	2.17

Estimated Alt 2 Mobile Emissions

	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 2	0.09	0.48	0.05
<i>Thresholds</i>	25	25	80
<i>Threshold Exceeded?</i>	No	No	No

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 2.urb924

Project Name: BEACON Bag Ordinance - Alt 2

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.09	0.48	0.98	0.00	0.05	0.02	67.04

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.09	0.48	0.98	0.00	0.05	0.02	67.04

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 2.urb924

Project Name: BEACON Bag Ordinance - Alt 2

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag Ordinance	0.09	0.48	0.98	0.00	0.05	0.02	67.04
TOTALS (lbs/day, unmitigated)	0.09	0.48	0.98	0.00	0.05	0.02	67.04

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Temperature (F): 75 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag Ordinance		2.17	1000 sq ft	1.00	2.17	21.92
					2.17	21.92

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.4	99.4	0.2
Light Truck < 3750 lbs	0.0	1.2	95.8	3.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	73.3	26.7
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	33.3	66.7
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	52.6	47.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	91.7	8.3

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	9.9	5.6	6.1	5.7	4.1	5.7
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag Ordinance				2.0	1.0	97.0

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Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Greenhouse Gas Emission Worksheet

Operational Emissions

Washing/Drying Reusable Bags

Electricity Generation	(kWh)		Project units	Project Usage
Dryers***	3.825	per load per year	2,598,321.000	9,938,578
			Total	9,938,578

Total Project Annual KWh: **9,938,578** kWh/year
 Project Annual MWh: **9,939** MWh/year

Emission Factors:****

CO2	724.12 lbs/MWh/year
CH4	0.0302 lbs/MWh/year
N2O	0.0081 lbs/MWh/year

Total Annual Operational Emissions (metric tons) =
(Electricity Use (kWh) x EF)/2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)*****

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Operational Emissions:

	Total Emissions	Total CO2e Units
CO2 emissions, electricity:	3,598.3615 tons	3,264 metric tons CO2e
CO2 emissions*****:	0.00 tons	0 metric tons CO2e
CH4 emissions:	0.1361 metric tons	3 metric tons CO2e
N2O emissions:	0.0365 metric tons	11 metric tons CO2e

Project Total 3,279 metric tons CO2e

References

* CAPCOA CEQA and Climate Change White Paper, January 2008

** Generation Factor Source: Energy Information Administration, 2008. 2003 CBECs Detailed Tables

*** US Department of Energy: Energy Efficiency and Renewable Energy, 2010.for this land use).

**** Table C.2: Carbon Dioxide, Methane and Nitrous Oxide Electricity Emission Factors by eGRID Subregion

in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

***** SAR, 1996 conversion factors as reported in Table C.1 of CCAR, January 2009

***** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Alt 2: Utilities Calculations

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in participating jurisdictions per year	658,241,406
Number of plastic bags used in participating jurisdictions per day	1,803,401

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Alt 2	Per Day	Per Year
Number of Plastic bags still in (1% of existing)	18,034	6,582,414
Number of paper bags per day with 34% conversion	613,156	223,802,078
Number of reusable bags per day with 65% conversion	22,543	8,228,018

Water Use - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	52.6	52.6	173	2.634615385
Liters water per bag per day	0.08	0.08	0.39	0.01
Liters water in Study Area per day	147,558.29	1,475.58	241,381.95	244.16
Gallons per day	38,980.78	389.81	63,766.37	64.50
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.06	0.00
MGD per year	14.23	0.14	23.27	0.02
Increase in water use per year (MGD)	0.03			
Increase as a result of Ordinance - Million gallons per year	9.21			

Wastewater - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	50.00	50.00	130.70	2.63
Liters water per bag per day	0.08	0.08	0.30	0.01
Liters water in Study Area per day	140,264.53	1,402.65	182,361.97	244.16
Gallons per day	37,053.97	370.54	48,174.94	64.50
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.05	0.00
MGD per year	13.52	0.14	17.58	0.02
Increase as a result of Ordinance - per day (MGD)	0.01			
Increase as a result of Ordinance - per year Million gallons	4.22			

Solid Waste - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.19	4.19	3.84	0.25
kg waste per bag per day	0.01	0.01	0.01	0.00
kg waste in City per day	11,764.15	117.64	5,352.60	23.36
Tons per day (w/recycling)	12.97	0.13	5.90	0.0002
Tons per year	4,733.23	47.33	2,153.58	0.075
Increase in solid waste per year (MGD)			(2,579.65)	(4,733.15)
Increase as a result of Ordinance. Tons/year	(2,532.24)			

Energy - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
MJ per 9000 liters groceries	286.00		295.00	15.48
MJ per bag per day	0.44		0.67	0.06
MJ in Study Area per day	802,313.12		411,605.06	1,434.68
kWh in Study Area per day	222,864.76		114,334.74	398.52
million kWh in Study Area per day	0.22		0.11	0.00
Increase in million kWh per day			(0.11)	(0.22)
Increase as a result of Ordinance (Million kWh)	(0.11)			
Increase in kWh	(108,131.49)			

Water Use - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
Gallons per 1000 paper bags (1500 plastic bags)	58.00	58.00	1,004.00
Gallons per bag	0.04	0.04	1.00
Gallons water in Study Area per day	69,731.51	697.32	615,609.00
Millions gallons per day (MGD) in Study Area	0.07	0.00	0.62
MGD per year	25.45	0.25	224.70
Increase in water use per year (MGD)	199.50		
Increase in water per day	0.55		

Solid Waste -Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.20	6.20	21.42
kg waste per bag per day	0.00	0.00	0.02
kg waste in Study Area per day	7,456.75	74.57	13,136.75
Tons per day	8.22	0.08	14.48
Tons per year	3,000.17	30.00	5,285.48
Increase in solid waste per year (MGD)			2,285.31
Increase as a result of Ordinance. Tons/day	6.34		
Increase as a result of Ordinance. Tons/year	2,315.31		

Energy - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
MJ per 1000 paper bags (1500 plastic)	763.00		2,622.00
MJ per bag per day	0.51		2.62
MJ in Study Area per day	917,330.03		1,607,696.02
kWh in Study Area per day	254,813.90		446,582.23
million kWh in Study Area per day	0.25		0.45
Increase in million kWh per day			0.19
Increase as a result of Ordinance. Million kWh	0.19		
Increase in kWh	191,768.33		

ALTERNATIVE 3: Mandatory Charge of \$0.25 for Paper Bags

Alt 3 Air Pollution Emissions by Bag Type

Bag Type	Alt 3 # of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Alt 3 Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	Alt 2 AA Emissions per year (kg)
Single-use Plastic	32,912,070	1	0.023	757	1	1.084	35,677
Single-use Paper	39,494,484	1.3	0.03	1185	1.9	2.06	81,359
Reusable	11,266,055	1.4	0.032	361	3	3.252	36,637
Total Alt 3 Emissions				2,302	Total Alt 3 Emissions		153,673
Proposed Ordinance				6,944	Proposed Ordinance		469,227
Difference				(4,642)	Difference		(315,555)
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				(12,837)	Net Change (Total minus Existing)		(559,861)

Alternative 3 GHG Emissions by Bag Type

Use and Disposal					
Bag Type	Alt 3 # of Bags Used per Year	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO ₂ E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags	878	0.0007
Single-use Paper	39,494,484	2.97	0.1188 per 1,000 bags	4,692	0.0038
Reusable	11,266,055	2.6	0.104 per 1,000 bags	1172	0.0009
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				<i>6,741</i>	<i>0.0054</i>
Washing					
Bag Type	# of Loads per Year	Electricity Use Per Load (kw)	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Reusable	3,557,702	3.825	13,608,208	4,489	0.0036
<i>Subtotal (Washing)</i>				<i>4,489</i>	<i>0.0036</i>
Total GHG Emissions from Alternative 2				11,230	0.0091
Proposed Ordinance Total				28,472	0.0230
Difference				(17,242)	(0.0139)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(6,323)	(0.0051)

Existing and Alternative 3 Bag Use

Area	Alt 3 Plastic Bags (5% Remain)	Alt 3 Paper Bags (6% Switch to Paper)	Alt 3 Reusable Bags (89% Switch to Reusable)	Total Bags Used Annually	Alt 3: Ozone Emissions per year (kg)	Alt 3: AA Emissions per year (kg)	CO2e Emissions per year (metric tons)	CO2e per person per year (metric tons)
Santa Barbara County								
Unincorporated Santa Barbara County	3,581,330	4,297,595	1,225,917	9,104,842	427	36,793	1,222	0.0091
Buellton	128,980	154,776	44,151	327,907	15	1,325	44	0.0091
Goleta	794,642	953,570	272,012	2,020,223	95	8,164	271	0.0091
Guadalupe	188,425	226,110	64,499	479,035	22	1,936	64	0.0091
Lompoc	1,137,774	1,365,328	389,469	2,892,571	136	11,689	388	0.0091
Santa Barbara	2,365,127	2,838,153	809,601	6,012,881	282	24,298	807	0.0091
Santa Maria	2,660,283	3,192,340	910,635	6,763,259	317	27,331	908	0.0091
Svang	140,211	168,253	47,995	356,458	17	1,440	48	0.0091
Ventura County								
Unincorporated Ventura County	2,564,438	3,077,326	877,827	6,519,590	306	26,346	875	0.0091
Camarillo	1,763,106	2,115,727	603,525	4,482,358	210	18,113	602	0.0091
Fillmore	402,100	482,520	137,642	1,022,261	48	4,131	137	0.0091
Moor Park	924,630	1,109,556	316,508	2,350,695	110	9,499	316	0.0091
Oxnard	5,320,355	6,384,425	1,821,198	13,525,978	634	54,659	1,815	0.0091
Port Hueneme	575,657	690,789	197,052	1,463,497	69	5,914	196	0.0091
Santa Paula	2,845,257	3,414,309	973,953	7,233,520	339	29,231	971	0.0091
Simi Valley	793,367	952,041	271,576	2,016,983	95	8,151	271	0.0091
Thousand Oaks	3,327,166	3,992,600	1,138,915	8,458,681	397	34,182	1,135	0.0091
Ventura	3,399,223	4,079,068	1,163,580	8,641,871	405	34,922	1,160	0.0091
Total	32,912,070	39,494,484	11,266,055	83,672,609	3,924	112,976	11,230	0.0091
Compared to Proposed Ordinance	Same	(157,977,937)	3,038,037	(154,939,900)	(3,021)	(356,252)	(17,242)	(0.0139)
Compared to Existing Conditions	(625,329,336)	N/A	N/A	(574,568,797)	(11,216)	(600,558)	(6,323)	(0.0051)

Estimated Truck Trips

Bag Type	Alt 3 # of Bags Used per Year	Number of Bags per Truck Load	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	32,912,070	2,080,000	16	0.04
Single-use Paper	39,494,484	217,665	181	0.50
Reusable	11,266,055	108,862	103	0.28
Alternative 3 Total			301	0.82
Proposed Ordinance Total			999	2.74
Difference			(698)	(1.91)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 3 (Alternative 3 Total minus Existing Total)			(16)	(0.04)

Estimated Alt 3 Mobile Emissions

	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 3	(<0.01)	(0.01)	(<0.01)
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 3.urb924

Project Name: BEACON Bag Ordinance - Alt 3

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.02	0.00	0.00	0.00	1.24

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.02	0.00	0.00	0.00	1.24

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 3.urb924

Project Name: BEACON Bag Ordinance - Alt 3

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag Ordinance	0.00	0.01	0.02	0.00	0.00	0.00	1.24
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.02	0.00	0.00	0.00	1.24

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Temperature (F): 75 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag Ordinance		0.04	1000 sq ft	1.00	0.04	0.40
					0.04	0.40

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.4	99.4	0.2
Light Truck < 3750 lbs	0.0	1.2	95.8	3.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	73.3	26.7
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	33.3	66.7
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	52.6	47.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	91.7	8.3

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	9.9	5.6	6.1	5.7	4.1	5.7
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag Ordinance				2.0	1.0	97.0

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Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Greenhouse Gas Emission Worksheet

Operational Emissions

Washing/Drying Reusable Bags

Electricity Generation	(kWh)		Project units	Project Usage
Dryers***	3.825	per load per year	3,557,701.579	13,608,209
Total			13,608,209	

Total Project Annual KWh: **13,608,209** kWh/year
 Project Annual MWh: **13,608** MWh/year

Emission Factors:****

CO2	724.12 lbs/MWh/year
CH4	0.0302 lbs/MWh/year
N2O	0.0081 lbs/MWh/year

Total Annual Operational Emissions (metric tons) =
(Electricity Use (kWh) x EF)/2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)*****

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Operational Emissions:

	Total Emissions	Total CO2e Units
CO2 emissions, electricity:	4,926.9880 tons	4,470 metric tons CO2e
CO2 emissions*****:	0.00 tons	0 metric tons CO2e
CH4 emissions:	0.1864 metric tons	4 metric tons CO2e
N2O emissions:	0.0500 metric tons	15 metric tons CO2e
Project Total		4,489 metric tons CO2e

References

* CAPCOA CEQA and Climate Change White Paper, January 2008

** Generation Factor Source: Energy Information Administration, 2008. 2003 CBECS Detailed Tables

*** US Department of Energy: Energy Efficiency and Renewable Energy, 2010.for this land use).

**** Table C.2: Carbon Dioxide, Methane and Nitrous Oxide Electricity Emission Factors by eGRID Subregion in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

***** SAR, 1996 conversion factors as reported in Table C.1 of CCAR, January 2009

***** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Alt 3: Utilities Calculations

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37

Number of plastic bags used in participating jurisdictions per year	658,241,406
Number of plastic bags used in participating jurisdictions per day	1,803,401

Alt 3	Per Day	Per Year
Number of Plastic bags still in (5% of existing)	90,170	32,912,070
Number of paper bags per day with 6% conversion	108,204	39,494,484
Number of reusable bags per day with 89% conversion	30,866	11,266,055

Water Use - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	52.6	52.6	173	2.634615385
Liters water per bag per day	0.08	0.08	0.39	0.01
Liters water in Study Area per day	147,558.29	7,377.91	42,596.82	334.31
Gallons per day	38,980.78	1,949.04	11,252.89	88.32
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.01	0.00
MGD per year	14.23	0.71	4.11	0.03
Increase in water use per year (MGD)	(0.03)			
Increase as a result of Ordinance - Million gallons per year	(9.38)			

Wastewater - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	50.00	50.00	130.70	2.63
Liters water per bag per day	0.08	0.08	0.30	0.01
Liters water in Study Area per day	140,264.53	7,013.23	32,181.52	334.31
Gallons per day	37,053.97	1,852.70	8,501.46	88.32
Millions gallons per day (MGD) in Study Area	0.04	0.00	0.01	0.00
MGD per year	13.52	0.68	3.10	0.03
Increase as a result of Ordinance - per day (MGD)	(0.03)			
Increase as a result of Ordinance - per year Million gallons	(9.71)			

Solid Waste - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.19	4.19	3.84	0.25
kg waste per bag per day	0.01	0.01	0.01	0.00
kg waste in City per day	11,764.15	588.21	944.58	31.99
Tons per day (w/recycling)	12.97	0.65	1.04	0.0003
Tons per year	4,733.23	236.66	380.04	0.103
Increase in solid waste per year (MGD)			(4,353.18)	(4,733.12)
Increase as a result of Ordinance. Tons/year	(4,116.42)			

Energy - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
MJ per 9000 liters groceries	286.00		295.00	15.48
MJ per bag per day	0.44		0.67	0.06
MJ in Study Area per day	802,313.12		72,636.19	1,964.40
kWh in Study Area per day	222,864.76		20,176.72	545.67
million kWh in Study Area per day	0.22		0.02	0.00
Increase in million kWh per day			(0.20)	(0.22)
Increase as a result of Ordinance. Million kWh	(0.20)			
Increase in kWh	(202,142.37)			

Water Use - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
Gallons per 1000 paper bags (1500 plastic bags)	58.00	58.00	1,004.00
Gallons per bag	0.04	0.04	1.00
Gallons water in Study Area per day	69,731.51	3,486.58	108,636.88
Millions gallons per day (MGD) in Study Area	0.07	0.00	0.11
MGD per year	25.45	1.27	39.65
Increase in water use per year (MGD)	15.47		
Increase in water per day	0.04		

Solid Waste -Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.20	6.20	21.42
kg waste per bag per day	0.00	0.00	0.02
kg waste in Study Area per day	7,456.75	372.84	2,318.25
Tons per day	8.22	0.41	2.56
Tons per year	3,000.17	150.01	932.73
Increase in solid waste per year (MGD)			(2,067.44)
Increase as a result of Ordinance. Tons/day	(5.25)		
Increase as a result of Ordinance. Tons/year	(1,917.43)		

Energy - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
MJ per 1000 paper bags (1500 plastic)	763.00		2,622.00
MJ per bag per day	0.51		2.62
MJ in Study Area per day	917,330.03		283,711.06
kWh in Study Area per day	254,813.90		78,808.63
million kWh in Study Area per day	0.25		0.08
Increase in million kWh per day			(0.18)
Increase as a result of Ordinance. Million kWh	(0.18)		
Increase in kWh	(176,005.27)		

ALTERNATIVE 4: Ban on Both Single Use Plastic and Paper Carryout Bags

Alt 4 Air Pollution Emissions by Bag Type

Bag Type	Alt 4 # of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Alt 4 Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	Alt 4 AA Emissions per year (kg)
Single-use Plastic	32,912,070	1	0.023	757	1	1.084	35,677
Single-use Paper	0	1.3	0.03	0	1.9	2.06	0
Reusable	12,025,564	1.4	0.032	385	3	3.252	39,107
Total Alt 4 Emissions				1,142	Total Alt 4 Emissions		74,784
Proposed Ordinance				6,944	Proposed Ordinance		469,227
Difference				-5,803	Difference		-394,444
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				-13,998	Net Change (Total minus Existing)		-638,750

Alternative 4 GHG Emissions by Bag Type

Use and Disposal					
Bag Type	Alt 4 # of Bags Used per Year	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO2E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Single-use Plastic	32,912,070	1	0.04 per 1,500 bags	878	0.0007
Single-use Paper	0	2.97	0.1188 per 1,000 bags	0	0.0000
Reusable	12,025,564	2.6	0.104 per 1,000 bags	1251	0.0010
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				<i>2,128</i>	<i>0.0017</i>
Washing					
Bag Type	# of Loads per Year	Electricity Use Per Load (kw)	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Reusable	3,797,547	3.825	14,525,616	4,792	0.0039
<i>Subtotal (Washing)</i>				<i>4,792</i>	<i>0.0039</i>
Total GHG Emissions from Alternative 2				6,920	0.0056
Proposed Ordinance Total				28,472	0.0230
Difference				(21,552)	(0.0174)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				(10,633)	(0.0086)

Existing and Alternative 4 Bag Use

Area	Alt 4 Plastic Bags (5% Remain)	Alt 4 Paper Bags (0 convert to paper)	Alt 4 Reusable Bags (95% Switch to Reusable)	Total Bag Use Annually	Alt 4: Ozone Emissions per year (kg)	Alt 4: AA Emissions per year (kg)	CO2e Emissions per year (metric tons)	CO2e per person per year (metric tons)
Santa Barbara County								
Unincorporated Santa Barbara County	3,581,330	0	1,308,563	4,889,892	196	18,598	753	0.0056
Buellton	128,980	0	47,127	176,107	7	670	27	0.0056
Goleta	794,642	0	290,350	1,084,991	43	4,127	167	0.0056
Guadalupe	188,425	0	68,848	257,273	10	978	40	0.0056
Lompoc	1,137,774	0	415,725	1,553,499	62	5,908	239	0.0056
Santa Barbara	2,365,127	0	864,181	3,229,308	129	12,282	497	0.0056
Santa Maria	2,660,283	0	972,027	3,632,310	145	13,815	559	0.0056
Solvang	140,211	0	51,231	191,441	8	728	29	0.0056
Ventura County								
Unincorporated Ventura County	2,564,438	0	937,006	3,501,444	140	13,317	539	0.0056
Camarillo	1,763,106	0	644,212	2,407,318	96	9,156	371	0.0056
Fillmore	402,100	0	146,921	549,021	22	2,088	85	0.0056
Moor Park	924,630	0	337,846	1,262,476	51	4,802	194	0.0056
Oxnard	5,320,355	0	1,943,976	7,264,330	291	27,628	1,119	0.0056
Port Hueneme	575,657	0	210,336	785,993	31	2,989	121	0.0056
Santa Paula	2,845,257	0	1,039,613	3,884,871	156	14,775	598	0.0056
Simi Valley	793,367	0	289,884	1,083,251	43	4,120	167	0.0056
Thousand Oaks	3,327,166	0	1,215,695	4,542,862	182	17,278	700	0.0056
Ventura	3,399,223	0	1,242,024	4,641,247	186	17,652	715	0.0056
Total	32,912,070	0	12,025,564	44,937,634	1,799	57,105	6,920	0.0056
Compared to Proposed Ordinance	Same	(197,472,422)	3,797,547	(193,674,875)	(5,146)	(412,122)	(21,552)	(0.0174)
Compared to Existing Conditions	(625,329,336)	N/A	N/A	(613,303,772)	(13,341)	(656,428)	(10,633)	(0.0086)

Estimated Truck Trips

Bag Type	Alt 4 # of Bags Used per Year	Number of Bags per Truck Load	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	32,912,070	2,080,000	16	0.04
Single-use Paper	0	217,665	0	0.00
Reusable	12,025,564	108,862	110	0.30
Alternative 4 Total			126	0.35
Proposed Ordinance Total			999	2.74
Difference			(872)	(2.39)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 4 (Alternative 4 Total minus Existing Total)			(190)	(0.52)

Estimated Alt 4 Mobile Emissions

	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 4	(0.02)	(0.12)	(0.01)
<i>Thresholds</i>	25	25	80
Threshold Exceeded?	No	No	No

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 4.urb924

Project Name: BEACON Bag Ordinance - Alt 4

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.02	0.12	0.24	0.00	0.01	0.00	16.07

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.02	0.12	0.24	0.00	0.01	0.00	16.07

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 4.urb924

Project Name: BEACON Bag Ordinance - Alt 4

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag Ordinance	0.02	0.12	0.24	0.00	0.01	0.00	16.07
TOTALS (lbs/day, unmitigated)	0.02	0.12	0.24	0.00	0.01	0.00	16.07

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Temperature (F): 75 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag Ordinance		0.52	1000 sq ft	1.00	0.52	5.25
					0.52	5.25

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.4	99.4	0.2
Light Truck < 3750 lbs	0.0	1.2	95.8	3.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	73.3	26.7
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	33.3	66.7
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	52.6	47.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	91.7	8.3

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	9.9	5.6	6.1	5.7	4.1	5.7
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag Ordinance				2.0	1.0	97.0

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Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Greenhouse Gas Emission Worksheet

Operational Emissions

Washing/Drying Reusable Bags

Electricity Generation	(kWh)		Project units	Project Usage
Dryers***	3.825	per load per year	3,797,547	14,525,615
			Total	14,525,615

Total Project Annual KWh: **14,525,615** kWh/year
 Project Annual MWh: **14,526** MWh/year

Emission Factors:****

CO2	724.12 lbs/MWh/year
CH4	0.0302 lbs/MWh/year
N2O	0.0081 lbs/MWh/year

Total Annual Operational Emissions (metric tons) =
(Electricity Use (kWh) x EF)/2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)*****

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Operational Emissions:

	Total Emissions	Total CO2e Units
CO2 emissions, electricity:	5,259.1443 tons	4,771 metric tons CO2e
CO2 emissions*****:	0.00 tons	0 metric tons CO2e
CH4 emissions:	0.1990 metric tons	4 metric tons CO2e
N2O emissions:	0.0534 metric tons	17 metric tons CO2e
Project Total		4,792 metric tons CO2e

References

* CAPCOA CEQA and Climate Change White Paper, January 2008

** Generation Factor Source: Energy Information Administration, 2008. 2003 CBECS Detailed Tables

*** US Department of Energy: Energy Efficiency and Renewable Energy, 2010.for this land use).

**** Table C.2: Carbon Dioxide, Methane and Nitrous Oxide Electricity Emission Factors by eGRID Subregion in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

***** SAR, 1996 conversion factors as reported in Table C.1 of CCAR, January 2009

***** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Alt 4: Utilities Calculations

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37

Number of plastic bags used in participating jurisdictions per year	658,241,406
Number of plastic bags used in participating jurisdictions per day	1,803,401

Alt 4	Per Day	Per Year
Number of Plastic bags still in (5% of existing)	90,170	32,912,070
No paper bags	0	-
Number of reusable bags per day with 95% conversion	32,947	12,025,564

Water Use - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	52.6	52.6	173	2.634615385
Liters water per bag per day	0.08	0.08	0.39	0.01
Liters water in Study Area per day	147,558.29	7,377.91	-	356.85
Gallons per day	38,980.78	1,949.04	-	94.27
Millions gallons per day (MGD) in Study Area	0.04	0.00	-	0.00
MGD per year	14.23	0.71	-	0.03
Increase in water use per year (MGD)	(0.04)			
Increase as a result of Ordinance - Million gallons per year	(13.48)			

Wastewater - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	50.00	50.00	130.70	2.63
Liters water per bag per day	0.08	0.08	0.30	0.01
Liters water in Study Area per day	140,264.53	7,013.23	-	356.85
Gallons per day	37,053.97	1,852.70	-	94.27
Millions gallons per day (MGD) in Study Area	0.04	0.00	-	0.00
MGD per year	13.52	0.68	-	0.03
Increase as a result of Ordinance - per day (MGD)	(0.04)			
Increase as a result of Ordinance - per year Million gallons	(12.81)			

Solid Waste - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.19	4.19	3.84	0.25
kg waste per bag per day	0.01	0.01	0.01	0.00
kg waste in City per day	11,764.15	588.21	-	34.15
Tons per day (w/recycling)	12.97	0.65	-	0.0003
Tons per year	4,733.23	236.66	-	0.110
Increase in solid waste per year (MGD)			(4,733.23)	(4,733.12)
Increase as a result of Ordinance. Tons/year	(4,496.46)			

Energy - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
MJ per 9000 liters groceries	286.00		295.00	15.48
MJ per bag per day	0.44		0.67	0.06
MJ in Study Area per day	802,313.12		-	2,096.84
kWh in Study Area per day	222,864.76		-	582.45
million kWh in Study Area per day	0.22		-	0.00
Increase in million kWh per day			(0.22)	(0.22)
Increase as a result of Ordinance (Million kWh)	(0.22)			
Increase in kWh	(222,282.30)			

Water Use - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
Gallons per 1000 paper bags (1500 plastic bags)	58.00	58.00	1,004.00
Gallons per bag	0.04	0.04	1.00
Gallons water in Study Area per day	69,731.51	3,486.58	-
Millions gallons per day (MGD) in Study Area	0.07	0.00	-
MGD per year	25.45	1.27	-
Increase in water use per year (MGD)	-24.18		
Increase in water per day	-0.07		

Solid Waste -Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.20	6.20	21.42
kg waste per bag per day	0.00	0.00	0.02
kg waste in Study Area per day	7,456.75	372.84	-
Tons per day	8.22	0.41	-
Tons per year	3,000.17	150.01	-
Increase in solid waste per year (MGD)			(3,000.17)
Increase as a result of Ordinance. Tons/day	(7.81)		
Increase as a result of Ordinance. Tons/year	(2,850.16)		

Energy - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
MJ per 1000 paper bags (1500 plastic)	763.00		2,622.00
MJ per bag per day	0.51		2.62
MJ in Study Area per day	917,330.03		-
kWh in Study Area per day	254,813.90		-
million kWh in Study Area per day	0.25		-
Increase in million kWh per day			(0.25)
Increase as a result of Ordinance. Million kWh	(0.25)		
Increase in kWh	(254,813.90)		

ALTERNATIVE 5: Mandatory Charge of \$0.10 for Plastic and Paper Carryout Bags

Alt 5 Air Pollution Emissions by Bag Type

Bag Type	Alt 5 # of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Alt 5 Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	Alt 5 AA Emissions per year (kg)
Single-use Plastic	144,813,109	1	0.023	3331	1	1.084	156,977
Single-use Paper	92,153,797	1.3	0.03	2765	1.9	2.06	189,837
Reusable	8,101,433	1.4	0.032	259	3	3.252	26,346
Total Alt 5 Emissions				6,355	Total Alt 5 Emissions		373,160
Proposed Ordinance				6,944	Proposed Ordinance		469,227
Difference				(590)	Difference		(96,067)
Existing				15,140	Existing		713,534
Net Change (Total minus Existing)				(8,785)	Net Change (Total minus Existing)		(340,374)

Alt 5 GHG Emissions by Bag Type

Use and Disposal					
Bag Type	Alt 5 # of Bags Used per Year	GHG Impact Rate (per Bag)	GHG Impact Rate (metric tons CO2E)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Single-use Plastic	144,813,109	1	0.04 per 1,500 bags	3,862	0.0031
Single-use Paper	92,153,797	2.97	0.1188 per 1,000 bags	10,948	0.0088
Reusable	8,101,433	2.6	0.104 per 1,000 bags	843	0.0007
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				<i>15,652</i>	<i>0.0126</i>
Washing					
Bag Type	# of Loads per Year	Electricity Use Per Load (kw)	Total Electricity Use Per Year (kW)	CO ₂ E per year (metric tons)	CO ₂ E per Person (metric tons)
Reusable	2,558,347	3.825	9,785,678	3,228	0.0026
<i>Subtotal (Washing)</i>				<i>3,228</i>	<i>0.0026</i>
Total GHG Emissions from Alternative 2				18,880	0.0152
Proposed Ordinance Total				28,472	0.0230
Difference				(9,592)	(0.0077)
Existing GHG Emissions				17,553	0.0142
Net Change (Total minus Existing)				1,327	0.0011

Existing and Alternative 5 Bag Use

Area	Alt 5 Plastic Bags (22% Remain)	Alt 5 Paper Bags (14% Switch to Paper)	Alt 5 Reusable Bags (64% Switch to Reusable)	Total Bags Used Annually	Proposed: Ozone Emissions per year (kg)	Proposed: AA Emissions per year (kg)	CO2e Emissions per year (metric tons)	CO2e per person per year (metric tons)
Santa Barbara County								
Unincorporated Santa Barbara County	15,757,850	10,027,723	881,558	26,667,130	1,110	99,408	2,054	0.0152
Buellton	567,512	361,144	31,749	960,404	40	3,580	74	0.0152
Goleta	3,496,423	2,224,996	195,604	5,917,023	246	22,057	456	0.0152
Guadalupe	829,072	527,591	46,382	1,403,044	58	5,230	108	0.0152
Lompoc	5,006,204	3,185,766	280,067	8,472,038	353	31,581	653	0.0152
Santa Barbara	10,406,559	6,622,356	582,185	17,611,100	733	65,649	1,357	0.0152
Santa Maria	11,705,247	7,448,794	654,839	19,808,880	825	73,842	1,526	0.0152
Svang	616,926	392,590	34,513	1,044,029	43	3,892	80	0.0152
Ventura County								
Unincorporated Ventura County	11,283,527	7,180,426	631,246	19,095,200	795	71,182	1,471	0.0152
Camarillo	7,757,666	4,936,696	433,995	13,128,357	547	48,939	1,011	0.0152
Fillmore	1,769,239	1,125,879	98,978	2,994,097	125	11,161	231	0.0152
Moor Park	4,068,373	2,588,965	227,601	6,884,939	287	25,665	530	0.0152
Oxnard	23,409,560	14,896,993	1,309,626	39,616,178	1,650	147,678	3,052	0.0152
Port Hueneme	2,532,891	1,611,840	141,700	4,286,431	178	15,979	330	0.0152
Santa Paula	12,519,132	7,966,720	700,371	21,186,224	882	78,976	1,632	0.0152
Simi Valley	3,490,815	2,221,428	195,290	5,907,533	246	22,022	455	0.0152
Thousand Oaks	14,639,532	9,316,066	818,995	24,774,593	1,032	92,353	1,909	0.0152
Ventura	14,956,581	9,517,825	836,732	25,311,138	1,054	94,353	1,950	0.0152
Total	144,813,109	92,153,797	8,101,433	245,068,339	10,205	305,239	18,880	0.0152
Compared to Proposed Ordinance	111,901,039	(105,318,625)	(126,585)	6,455,829	3,260	(163,988)	(9,592)	(0.0077)
Compared to Existing Conditions	(513,428,297)	N/A	N/A	-413,173,067	(4,935)	(408,294)	1,327	0.0011

Estimated Alt 5 Truck Trips

Bag Type	Alt 5 # of Bags Used per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	144,813,109	2,080,000	70	0.19
Single-use Paper	92,153,797	217,665	423	1.16
Reusable	8,101,433	108,862	74	0.20
Alternative 5 Total			567	1.55
Proposed Ordinance Total			999	2.74
Difference			(431)	(1.18)
Existing Total for Plastic Bags (without an Ordinance)			316	0.87
Net Change of Alternative 5 (Alternative 5 Total minus Existing Total)			251	0.69

Estimated Alt 5 Mobile Emissions

	Emissions (lbs/day)		
	ROG	NO _x	PM ₁₀
Mobile Emissions: Proposed Ordinance	0.08	0.41	0.04
Mobile Emissions: Alternative 5	0.03	0.15	0.02
<i>Thresholds</i>	25	25	80
<i>Threshold Exceeded?</i>	No	No	No

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 5.urb924

Project Name: BEACON Bag Ordinance - Alt 5

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.03	0.15	0.31	0.00	0.02	0.00	21.32

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.03	0.15	0.31	0.00	0.02	0.00	21.32

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Users\mmaddox\AppData\Roaming\Urbemis\Version9a\Projects\BEACON Bag Ordinance-Alt 5.urb924

Project Name: BEACON Bag Ordinance - Alt 5

Project Location: Santa Barbara County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag Ordinance	0.03	0.15	0.31	0.00	0.02	0.00	21.32
TOTALS (lbs/day, unmitigated)	0.03	0.15	0.31	0.00	0.02	0.00	21.32

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Temperature (F): 75 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag Ordinance		0.69	1000 sq ft	1.00	0.69	6.97
					0.69	6.97

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.4	99.4	0.2
Light Truck < 3750 lbs	0.0	1.2	95.8	3.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	73.3	26.7
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	33.3	66.7
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	52.6	47.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	91.7	8.3

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	9.9	5.6	6.1	5.7	4.1	5.7
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag Ordinance				2.0	1.0	97.0

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Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Greenhouse Gas Emission Worksheet

Operational Emissions

Washing/Drying Reusable Bags

Electricity Generation	(kWh)		Project units	Project Usage
Dryers***	3.825	per load per year	2,558,347	9,785,678
			Total	9,785,678

Total Project Annual KWh: **9,785,678** kWh/year
 Project Annual MWh: **9,786** MWh/year

Emission Factors:****

CO2	724.12 lbs/MWh/year
CH4	0.0302 lbs/MWh/year
N2O	0.0081 lbs/MWh/year

Total Annual Operational Emissions (metric tons) =
(Electricity Use (kWh) x EF)/2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)*****

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Operational Emissions:

	Total Emissions	Total CO2e Units
CO2 emissions, electricity:	3,543.0027 tons	3,214 metric tons CO2e
CO2 emissions*****:	0.00 tons	0 metric tons CO2e
CH4 emissions:	0.1340 metric tons	3 metric tons CO2e
N2O emissions:	0.0360 metric tons	11 metric tons CO2e

Project Total 3,228 metric tons CO2e

References

* CAPCOA CEQA and Climate Change White Paper, January 2008

** Generation Factor Source: Energy Information Administration, 2008. 2003 CBECS Detailed Tables

*** US Department of Energy: Energy Efficiency and Renewable Energy, 2010.for this land use).

**** Table C.2: Carbon Dioxide, Methane and Nitrous Oxide Electricity Emission Factors by eGRID Subregion

in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

***** SAR, 1996 conversion factors as reported in Table C.1 of CCAR, January 2009

***** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Alt 5: Utilities Calculations

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37

Number of plastic bags used in participating jurisdictions per year	658,241,406
Number of plastic bags used in participating jurisdictions per day	1,803,401

Alt 5	Per Day	Per Year
Number of Plastic bags still in (22% of existing)	396,748	144,813,109
Number of paper bags per day with 14% conversion	252,476	92,153,797
Number of reusable bags per day with 64% conversion	22,196	8,101,433

Water Use - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	52.6	52.6	173	2.634615385
Liters water per bag per day	0.08	0.08	0.39	0.01
Liters water in Study Area per day	147,558.29	32,462.82	99,392.57	240.41
Gallons per day	38,980.78	8,575.77	26,256.74	63.51
Millions gallons per day (MGD) in Study Area	0.04	0.01	0.03	0.00
MGD per year	14.23	3.13	9.58	0.02
Increase in water use per year (MGD)	(0.00)			
Increase as a result of Ordinance - Million gallons per year	(1.49)			

Wastewater - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
Liters water per 9000 liters groceries	50.00	50.00	130.70	2.63
Liters water per bag per day	0.08	0.08	0.30	0.01
Liters water in Study Area per day	140,264.53	30,858.20	75,090.22	240.41
Gallons per day	37,053.97	8,151.87	19,836.74	63.51
Millions gallons per day (MGD) in Study Area	0.04	0.01	0.02	0.00
MGD per year	13.52	2.98	7.24	0.02
Increase as a result of Ordinance - per day (MGD)	(0.01)			
Increase as a result of Ordinance - per year Million gallons	(3.29)			

Solid Waste - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.19	4.19	3.84	0.25
kg waste per bag per day	0.01	0.01	0.01	0.00
kg waste in City per day	11,764.15	2,588.11	2,204.01	23.01
Tons per day (w/recycling)	12.97	2.85	2.43	0.0002
Tons per year	4,733.23	1,041.31	886.77	0.074
Increase in solid waste per year (MGD)			(3,846.46)	(4,733.15)
Increase as a result of Ordinance. Tons/year	(2,805.07)			

Energy - Ecobilan	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use	Proposed Reusable Bag Use
MJ per 9000 liters groceries	286.00		295.00	15.48
MJ per bag per day	0.44		0.67	0.06
MJ in Study Area per day	802,313.12		169,484.44	1,412.60
kWh in Study Area per day	222,864.76		47,079.01	392.39
million kWh in Study Area per day	0.22		0.05	0.00
Increase in million kWh per day			(0.18)	(0.22)
Increase as a result of Ordinance. Million kWh	(0.18)			
Increase in kWh	(175,393.36)			

Water Use - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
Gallons per 1000 paper bags (1500 plastic bags)	58.00	58.00	1,004.00
Gallons per bag	0.04	0.04	1.00
Gallons water in Study Area per day	69,731.51	15,340.93	253,486.06
Millions gallons per day (MGD) in Study Area	0.07	0.02	0.25
MGD per year	25.45	5.60	92.52
Increase in water use per year (MGD)	72.67		
Increase in water per day	0.20		

Solid Waste -Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.20	6.20	21.42
kg waste per bag per day	0.00	0.00	0.02
kg waste in Study Area per day	7,456.75	1,640.49	5,409.25
Tons per day	8.22	1.81	5.96
Tons per year	3,000.17	660.04	2,176.38
Increase in solid waste per year (MGD)			(823.80)
Increase as a result of Ordinance. Tons/day	(0.45)		
Increase as a result of Ordinance. Tons/year	(163.76)		

Energy - Boustead	Existing Plastic Bag Use	Proposed Plastic Bag Use (5%)	Proposed Paper Bag Use
MJ per 1000 paper bags (1500 plastic)	763.00		2,622.00
MJ per bag per day	0.51		2.62
MJ in Study Area per day	917,330.03		661,992.48
kWh in Study Area per day	254,813.90		183,886.80
million kWh in Study Area per day	0.25		0.18
Increase in million kWh per day			(0.07)
Increase as a result of Ordinance. Million kWh	(0.07)		
Increase in kWh	(70,927.10)		