City of Santa Monica

Santa Monica Single-use Carryout Bag Ordinance EIR

Draft

Environmental Impact Report

SCH #2010041004

June 2010

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Santa Monica Single-use Carryout Bag Ordinance EIR

Table of Contents

List of Figures

List of Tables

Appendices

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 Carryout Bag Ordinance.

PROJECT SYNOPSIS

Project Sponsor

City of Santa Monica
Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

Project Characteristics

The City of Santa Monica proposes to adopt a Single-use Carryout Bag Ordinance that would: (1) prohibit all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale; and (2) create a Green Fee for each paper bag distributed by grocery stores, convenience stores, and pharmacies in the City, and requires that paper bags are at a minimum made of 40% post-consumer, recycled content and 100% recyclable. Restaurants and other food service providers may apply for an exemption from the ordinance that would allow 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 single-use plastic and paper carryout bags, and to promote a shift toward the use of reusable bags. The environmental impacts associated with the use of single-use plastic and paper bags include air quality, biological resources (including marine environments), greenhouse gas emissions, water quality and traffic. It is anticipated that by prohibiting single-use plastic carryout bags and requiring a Green Fee for each paper bag distributed by retailers, the proposed ordinance would reduce the amount of single-use plastic and paper bags within the City, promote a shift to the use of reusable bags by Santa Monica retail customers, and reduce the environmental impacts related to single-use plastic and paper bags such as litter and pollution in the marine environment.

Single-use plastic carryout bags are defined as bags made from petroleum or bio-based plastic (i.e., bags 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) that are less than 2.25 millimeters thick. The proposed Single-use Carryout Bag Ordinance would prohibit retailers from distributing both petroleum and bio-based single-use carryout plastic bags at the point of sale. The proposed Single-use Carryout Bag Ordinance would not prohibit the distribution of plastic "product bags" such as those distributed within a grocery store for bagging produce.

The Single-use Carryout Bag Ordinance would also impose a "Green Fee" on paper carryout bags at all Santa Monica grocery stores, convenience stores, mini-marts, liquor stores and pharmacies, and requires that paper bags are at a minimum made of 40% post-consumer, recycled content and 100% recyclable. It is anticipated that the Green Fee would be

approximately $0.25 (twenty-five cents) per paper bag with approximately $0.10 (ten cents) of this amount being retained by the affected stores to offset their costs. The Green Fee is intended to provide a disincentive to customers to request paper bags when shopping at regulated stores and is intended to promote a shift toward the use of reusable bags by Santa Monica consumers. The fee would not apply to other types of retail stores such as department stores, clothing stores, and stores that sell durable goods and, as such, do not typically distribute single-use plastic carryout bags to customers in large volumes. In addition, the Green Fee would not apply to paper bags distributed by vendors at the City's Farmers' Markets.

The Green Fee would charge customers for each paper carryout bag provided by the affected stores. Revenues generated from the fee would be used to offset the costs to the City for implementation and enforcement of the ordinance, and to compensate the affected stores for increased costs related to compliance with the ordinance. Stores would be required to indicate on the customer receipt the number of paper carryout bags provided and the total amount of the Green Fee charged. The stores would be required to regularly report and remit to the City the regulatory portion of the Green Fees collected.

Although not included in the proposed ordinance, as part of the Community Outreach for implementation of the Single-use Carryout Bag Ordinance, the City would purchase and distribute (at no cost) approximately 25,000 reusable bags to the public.

Santa Monica is a member of Green Cities California (GCC), which is a coalition of ten local governments that have implemented a range of environmental policies. The GCC's mission is to take collaborative action to accelerate the implementation of sustainability policies and programs. The GCC prepared a Master Environmental Assessment (MEA) on Single-Use and Reusable Bags that brings together a comprehensive collection of information about single-use carryout bags including existing regulations, life cycle analysis, potential impacts on the environment, reusable bags, and the use of fees to encourage consumers to reuse bags. The MEA has been used in the preparation of this EIR to assess the potential impacts of such ordinances.

PROJECT OBJECTIVES

The City's objectives for the proposed ordinance include:

- *Reducing the number of single-use plastic and paper bags distributed by retailers and used by customers in Santa Monica*
- *Promoting a shift toward the use of reusable carryout bags by retail customers in Santa Monica*
- *Reducing the environmental impacts related to single-use plastic and paper carryout bags such as air quality, biological resources (including marine environments), water quality and traffic*
- *Avoiding litter and adverse impacts to the marine environment*

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 Santa Monica Single-use Carryout Bag Ordinance would not occur. The existing retail stores would continue to provide single-use plastic bags and would continue to provide single-use paper bags free of charge to the customers.*

- ***Alternative 2: Ban on Single-use Plastic Bags, No Green Fee for Single-use Paper Bags*** - *This alternative would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, but would not create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city.*

- ***Alternative 3: Ban Both Single-use Plastic and Paper Bags*** - *This alternative would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic and paper carryout bags to customers at the point of sale.*

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 A shift toward reusable bags could potentially alter processing activities related to bag production which has the potential to increase air emissions. However, the proposed Single-use Carryout Bag Ordinance is expected to substantially reduce the number of single-use carryout bags, thereby reducing the amount of total bags manufactured and the overall	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
emissions. In addition, bag manufacturers would be required to comply with existing regulations. Therefore, air quality impacts related to alteration of processing activities would be Class IV, *beneficial*.		
Impact AQ-2 Implementation of the proposed Single-use Carryout Bag Ordinance would generate air pollutant emissions associated with an incremental increase in truck trips that deliver paper and reusable carryout bags to local retailers. However, emissions would not exceed SCAQMD operational significance thresholds. Therefore, operational air quality impacts would be Class III, *less than significant*.	Mitigation is not required.	Impacts would be less than significant without mitigation.
BIOLOGICAL RESOURCES		
Impact BIO-1 Although the proposed Carryout Bag Ordinance would incrementally increase the number of single-use paper and reusable bags within Santa Monica, the reduction in the amount of single-use plastic carryout bags would be expected to incrementally reduce the amount of litter entering the coastal habitat, thus reducing litter-related impacts to sensitive species. This is a Class IV, *beneficial*, effect.	Mitigation is not required.	The impact would be beneficial without mitigation.
GREENHOUSE GAS EMISSIONS		
Impact GHG-1 The proposed Single-Use Carryout Bag Ordinance is anticipated to reduce the amount of single-use carryout bags in Santa Monica and would promote reusable bags, which are intended to be used multiple times. The proposed ordinance would incrementally increase GHG emissions compared to existing conditions. However, the proposed ordinance would not exceed suggested CAPCOA thresholds and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be Class III, *less than significant*.	Mitigation is not required.	The impact would be beneficial without mitigation.
HYDROLOGY/WATER QUALITY		

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

Impact	Mitigation Measures	Significance After Mitigation
Impact HWQ-1 Although the proposed Carryout Bag Ordinance would incrementally increase the number of single-use paper and reusable bags within Santa Monica, the overall reduction in the amount of single-use plastic bags would incrementally reduce the amount of litter and waste entering storm drains, improving water quality. This would be a Class IV, *beneficial*, effect.	Mitigation is not required.	The impact would be beneficial without mitigation.
Impact HWQ-2 A shift toward reusable bags could potentially alter processing activities related to bag production, which could potentially degrade water quality in some instances and locations. However, bag manufacturers would be required to adhere 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, *less than significant.*	Mitigation is not required.	Impacts would be less than significant without mitigation.
TRANSPORTATION/TRAFFIC		
Impact T-1 The proposed Single-use Carryout Bag Ordinance is expected to generate less than one net new average weekday truck trip. This increase in trucks traveling on the surrounding roadway network would not result in a substantial increase in the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. The impact to the existing traffic load and capacity of the street system would be Class III, *less than significant*.	Mitigation is not required.	Impacts would be less than significant without mitigation.
Impact T-2 Based on Los Angeles County Congestion Management Program (CMP) criteria, the anticipated truck trips associated with the proposed Single-use Carryout Bag Ordinance would result in Class III, *less than significant*, impacts to CMP identified freeway monitoring segments and arterial intersections.	Mitigation is not required.	Impacts would be less than significant without mitigation.

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1.0 INTRODUCTION

This document is a Draft Environmental Impact Report (EIR) for the proposed Santa Monica Carryout Bag Ordinance. The Carryout Bag Ordinance would apply to all retail establishments (except restaurants) located throughout the City of Santa Monica's corporate limits. The City of Santa Monica is located in west Los Angeles County, approximately 10 miles west of the central business district of the City of Los Angeles, adjacent to the Pacific Ocean shoreline. The proposed Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City, and requires a minimum of 40% post-consumer, recycled content and 100% recyclable. The intent of the ordinance is to reduce the amount of single-use plastic and paper carryout bags, and to promote the use of reusable bags by Santa Monica retail customers. The ordinance is described in greater detail in Section 2.0, *Project Description*. This section discusses:

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

1.1 ENVIRONMENTAL IMPACT REPORT BACKGROUND

In response to concerns regarding the environmental impacts related to single-use plastic and paper carryout bags, the City of Santa Monica City Council on February 26, 2008, directed city-staff to prepare an ordinance prohibiting retail stores from distributing single-use plastic bags and regulating the use of paper bags through a collection fee. City-staff has prepared a draft Single-use Carryout Bag Ordinance and this document is an Environmental Impact Report analyzing the proposed ordinance's environmental impact in accordance with the California Environmental Quality Act (CEQA).

A number of cities/counties have 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, and the City of Palo Alto.

The City of Santa Monica is a member of Green Cities California (GCC), which is a coalition of local governments that have implemented a range of environmental policies. The GCC's mission is to take collaborative action to accelerate the implementation of sustainability policies and programs. The GCC prepared a Master Environmental Assessment (MEA) on Single-Use and Reusable Bags which brings together a comprehensive collection of information about single-use carryout bags including existing regulations, life cycle analysis, potential impacts on the environment, reusable bags, and the use of fees to encourage consumers to reuse bags. The information found within the MEA is intended to help cities and counties determine the

environmental impacts of actions that they may take to cut back on the use of single-use grocery bags.

The grocery bag MEA provides local governments a one-stop reference about the impacts of restricting the use of single-use grocery bags, or of imposing a fee or other restriction on single-use grocery bags. It can be used by local governments in the preparation of Environmental Impact Reports to assess the potential impacts of such ordinances. The data and analysis utilized within the MEA is utilized within this EIR to assist in the determination of environmental impacts associated with the City of Santa Monica's proposed Single-use Carryout Bag Ordinance.

A Notice of Preparation (NOP) of an environmental impact report was prepared for the proposed ordinance and distributed on March 31, 2010 for agency and public review for a 30-day review period. The City received 2 letters in response to the NOP. Table 1-1 below lists the specific issues raised in the responses to the NOP, along with where in the EIR relevant issues are addressed. The NOP and responses are presented in Appendix A, along with the Initial Study that was prepared for the project.

Table 1-1
Scoping Comments Received

Responder	Subject and Where Comments Addressed
1. Mark Gold, President, Heal the Bay	States that the potential significant impacts to aesthetics, solid waste, water quality/hydrology, and sensitive species from reusable bags would be negligible. Also comments that the impacts of the proposed ordinance to greenhouse gas emissions and traffic would be minimal and may decrease impacts compared to existing conditions. - Impacts related to aesthetics and solid waste from reusable bags are addressed in the Initial Study (Appendix A). Impacts related to hydrology and water quality, sensitive species, greenhouse gas emissions and traffic are addressed in Section 4.4, *Hydrology and Water Quality*, Section 4.2, *Biological Resources*, Section 4.3, *Greenhouse Gas Emissions*, and Section 4.5, *Transportation/Traffic*, respectively.
2. Stephen L. Joseph, Counsel, Save the Plastic Bag Coalition	The response letter identifies 27 subjects that he believes should be addressed in the EIR. **1.** Benefits of the proposed ordinance - The objectives of the ordinance are discussed in Section 2.0, *Project Description*. **2.** Number of plastic bags used in the City each year - Quantification of bag use is addressed in Section 4.1, *Air Quality*, Section 4.3, *Greenhouse Gas Emissions*, Section 4.4, *Hydrology and Water Quality*, and Section 4.5, *Transportation/Traffic*. **3.** Extent and causes of carryout bag litter - Litter is discussed in Section 4.2, *Biological Resources* and Section 4.4, *Hydrology and Water Quality*. **4.** Environmental impacts of plastic bags in the marine environment - Impacts to the marine environment are addressed in Section 4.2, *Biological Resources*. **5.** Costs of the plastic and paper bag issues - Monetary costs associated with the environmental impacts of carryout bag are not specifically addressed. The EIR analysis focuses on the environmental impacts associated with the proposed ordinance. Costs of individual carryout bags and the proposed Green Fee are discussed in Section 2.0, *Project Description*. **6.** Taking into account the fact that the amount of the Green Fee is unknown - The Green Fee is addressed in Section 2.0, *Project Description*.

Table 1-1
Scoping Comments Received

Responder	Subject and Where Comments Addressed
	7. Acknowledging and quantifying the increase in the number of paper bags if the Green Fee is not applied to all stores and retailers at which plastic bags would be banned - An alternative that considers a "Ban on Plastic Bags, No Green Fee" is addressed in Section 6.0, *Alternatives*. **8.** Environmental impacts of plastic versus paper bags - Environmental impacts resulting from the use of plastic, paper and reusable bags is addressed in Section 4.1, *Air Quality,* Section 4.2, *Biological Resources,* Section 4.3, *Greenhouse Gas Emissions,* Section 4.4, *Hydrology and Water Quality*, and Section 4.5, *Transportation/Traffic, respectively.* **9.** Effects of Carbon Dioxide emissions on the marine environment - The proposed ordinance's impact to greenhouse gas emissions is addressed in Section 4.3, *Greenhouse Gas Emissions.* **10.** Biodegradability of plastic bags - Biodegradability of plastic bags is addressed in Section 2.0, *Project Description,* **11.** Superfast oxo-biodegradable bags - Oxo-biodegradable bags are discussed in Section 6.0, *Alternatives*. **12.** Water soluble bags. – Water soluble bags are discussed in Section 6.0, *Alternatives*. **13.** Biodegradability of paper bags - The biodegradability of paper bags is addressed in Section 2.0, *Project Description.* **14.** Verification and environmental impacts of recycled content in paper bags - The proposed ordinance and the recyclable content requirement in paper bags is discussed in Section 2.0, *Project Description.* **15.** Environmental impacts of cockroach infestation or prevention - This comment is a health & safety issue, not an environmental impact addressed under CEQA. **16.** Environmental impact of the loss of plastic bag recycling bins at stores – Not specifically addressed since eliminating the use of plastic bags would eliminate the need for plastic bag recycling. **17.** Environmental impacts on landfills - Impacts to landfills as a result of the proposed ordinance are addressed in the Initial Study (Appendix A). **18.** Environmental impacts of reusable bags - Impacts associated with an increase number of reusable bags is addressed in Section 4.1, *Air Quality,* Section 4.2, *Biological Resources,* Section 4.3, *Greenhouse Gas Emissions,* Section 4.4, *Hydrology and Water Quality*, and Section 4.5, *Transportation/Traffic, respectively.* **19.** Environmental impacts of lead and other toxics in reusable bags – Hazard issues are addressed in the Initial Study (Appendix A). There is no evidence that use of reusable bags would increase exposure to toxic materials. **20.** Hygiene of reusable bags - Hygiene is a health & safety issue, not an environmental issue under CEQA. It is presumed that individuals would be responsible for their own hygiene. **21.** The reusability and reuse of plastic bags - The reuse of plastic bags is addressed in Section 2.0, *Project Description*. **22.** The disposal of reusable plastic bags - Impacts related to landfills as result of the proposed ordinance are addressed in the Initial Study (Appendix A). **23.** The alternative of improving plastic bag litter prevention and cleanup - This alternative has not been studied because it would not meet the project objective of promoting a shift toward the use of reusable bags.

Table 1-1
Scoping Comments Received

Responder	Subject and Where Comments Addressed
	24. The Santa Monica "Plastic Litter Patrol" would make banning plastic bags unnecessary – See No. 23 above. **25.** The alternative of legislating mandatory best practices for stores – This alternative has not been studied because it would not meet the project objective of promoting a shift toward the use of reusable bags. **26.** The alternative of legislating mandatory percentage reductions for stores - This alternative has not been studied because it would not meet the project objective of promoting a shift toward the use of reusable bags. **27.** Cumulative environmental impacts - Cumulative impacts are addressed in Section 4.1, *Air Quality*, Section 4.2, *Biological Resources,* Section 4.3, *Greenhouse Gas Emissions*, Section 4.4, *Hydrology and Water Quality*, and Section 4.5, *Transportation/Traffic, respectively.*

1.2 PURPOSE AND LEGAL AUTHORITY

The proposed Carrout Bag Ordinance requires the discretionary approval of the City of Santa Monica City County. Therefore, it is subject to the requirements of the California Environmental Quality Act (CEQA). In accordance with Section 15121 of the *State of California Environmental Quality Act (CEQA) Guidelines,* the purpose of this 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 EIR has been prepared as a Project EIR pursuant to Section 15161 of the *CEQA Guidelines.* A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines:*

> *This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.*

This EIR is to serve as an informational document for the public and City of Santa Monica decision-makers. The process will culminate with City Council hearings to consider certification of a Final EIR and approval of the ordinance. Section 2.7 in Section 2.0, *Project Description,* provides a detailed description of approvals that may be necessary for the proposed project.

1.3 SCOPE AND CONTENT

This EIR addresses the issues that the City of Santa Monica determined to be potentially significant. The issues addressed in this EIR include:

- *Air Quality*
- *Biological Resources*
- *Greenhouse Gas Emissions*
- *Hydrology/Water Quality*
- *Transportation/Circulation*

This EIR addresses the issue areas referenced above that were identified in an Initial Study (see Appendix A) as having potentially significant environmental impacts, including site-specific and cumulative effects, of the project.

The EIR references pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, and background documents prepared by the City in preparing the analysis. A full reference list is contained in Section 7.0, *References and Report Preparers*.

The Alternatives section of the 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 two alternative scenarios for the ordinance. It also identifies the environmentally superior alternative among the alternatives assessed.

The level of detail contained throughout this 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 *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)*

1.4 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The State *CEQA Guidelines* define lead, responsible and trustee agencies. The City of Santa Monica is the lead agency for the project because it holds principal responsibility for approving the ordinance.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project, and a trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no responsible or trustee agencies for the proposed project.

1.5 ENVIRONMENTAL REVIEW PROCESS

The major steps in the environmental review process, as required under CEQA, are outlined below and illustrated on Figure 1-1. 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.

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.

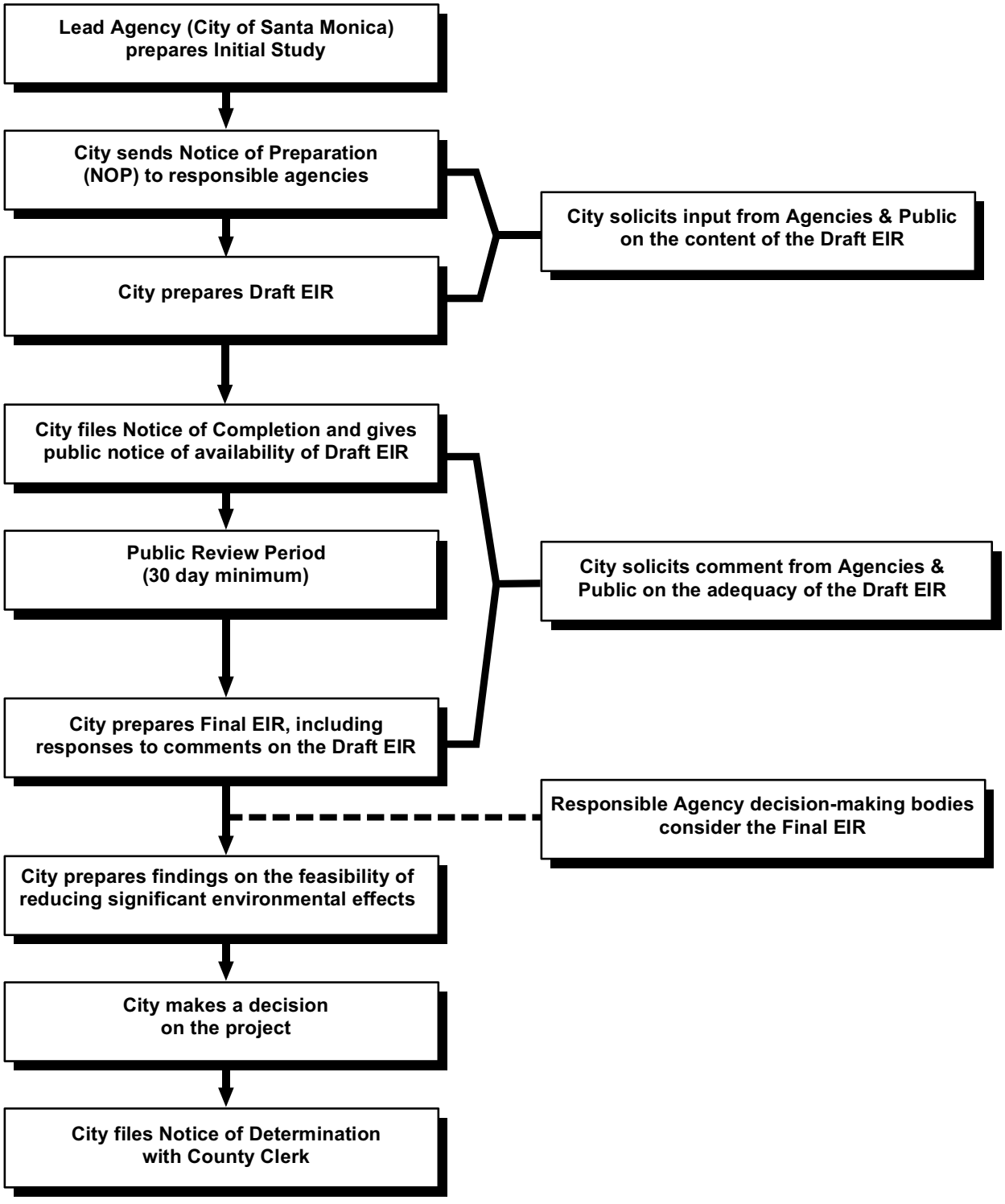
5. **Certification of FEIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the FEIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final ElR 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]).



Environmental Review Process

Figure 1-1

2.0 PROJECT DESCRIPTION

This section describes the proposed project, including information about the project applicant, project location, a description of the major project characteristics, project objectives, and a list of discretionary approvals needed for project approval.

2.1 PROJECT APPLICANT

City of Santa Monica
Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

2.2 PROJECT LOCATION

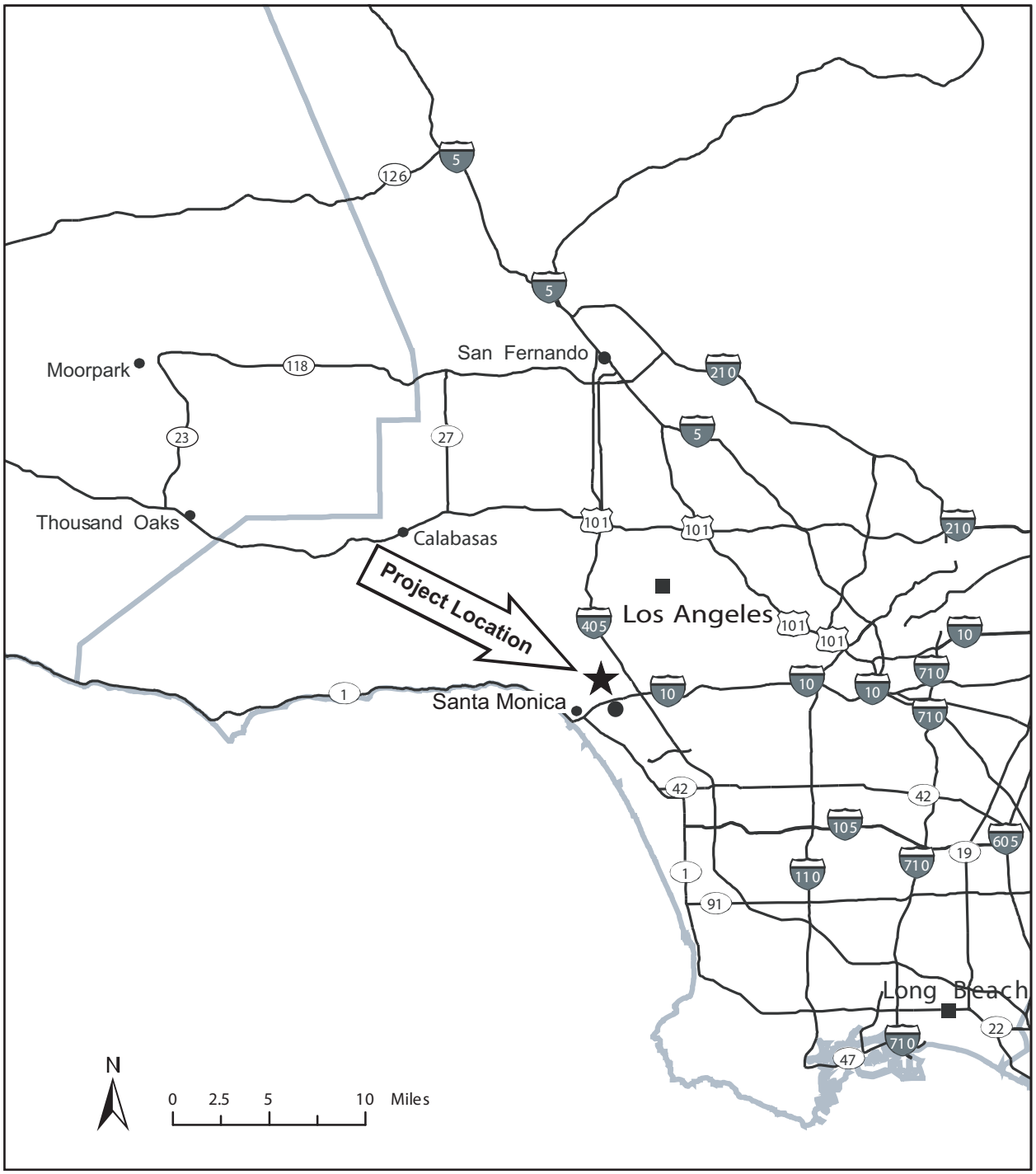
The Single-use Carryout Bag Ordinance would apply to all retail establishments (except restaurants) located throughout the City of Santa Monica's corporate limits. Santa Monica is located in west Los Angeles County, approximately 10 miles west of the central business district of the City of Los Angeles, adjacent to the Pacific Ocean shoreline. Approximately 8 square miles in size, the City is bounded on the north, south and east by the City of Los Angeles and on the west by the Pacific Ocean. Regional access to the City is provided by Interstate 10 (Santa Monica Freeway), which bisects the City, and the Pacific Coast Highway (State Route 1), which traverses the western edge of the City. Figure 2-1 illustrates the location of Santa Monica in its regional context, and Figure 2-2 shows an aerial of the City and surrounding communities.

2.3 EXISTING CHARACTERISTICS

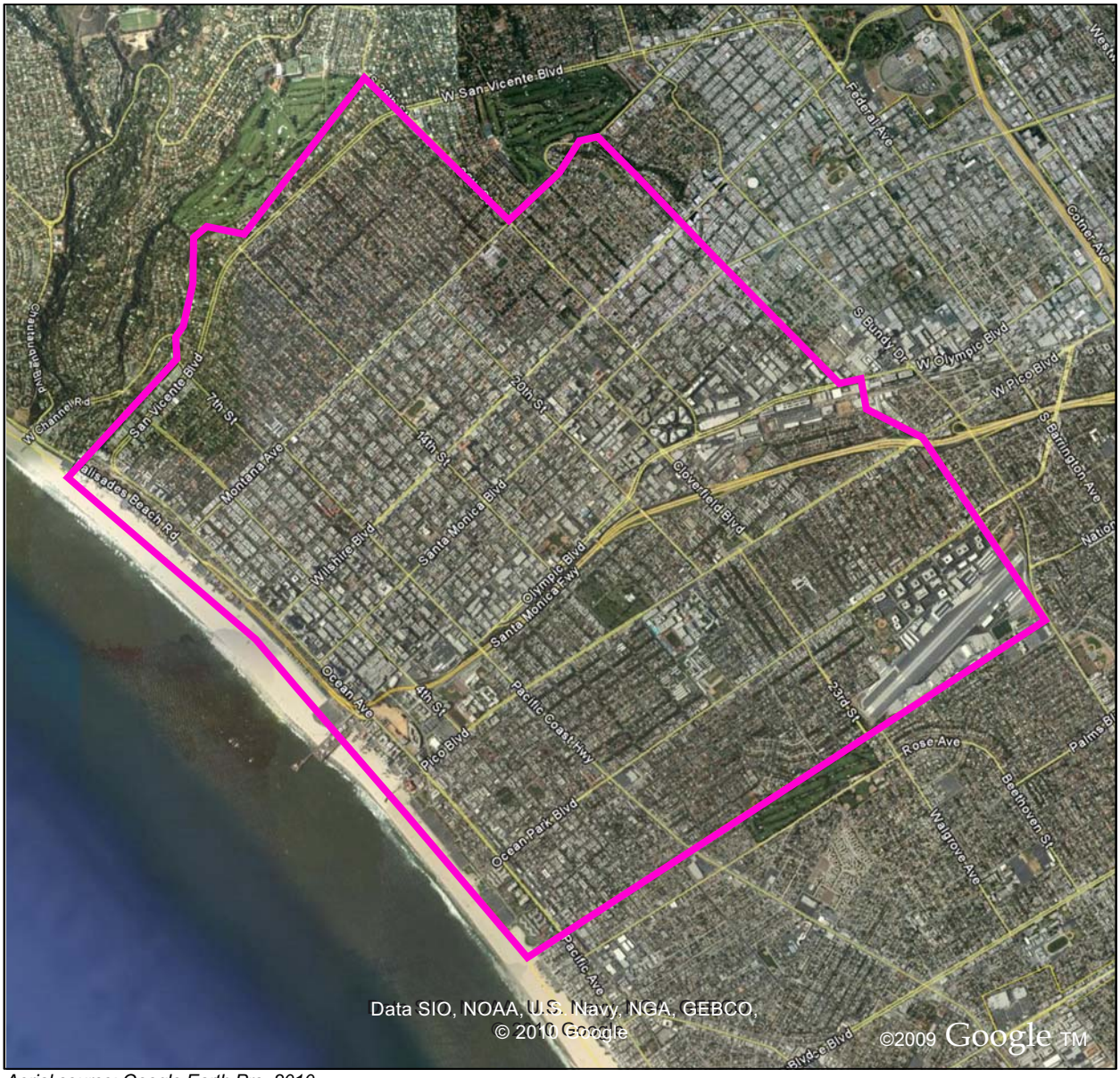
Santa Monica is bounded to the north, east, and south by urban districts within the City of Los Angeles and to the west by the Pacific Ocean. Santa Monica is almost entirely developed, with only 1% of its land area considered undeveloped. Santa Monica contains a variety of land uses including residential (single and multifamily), retail, commercial, office, medical, public facilities, industrial/manufacturing, and parklands/recreation facilities. Surrounding communities in the City of Los Angeles include Pacific Palisades, Brentwood, West Los Angeles, Mar Vista, and Venice.

In response to concerns regarding the environmental impacts related to single-use plastic and paper carryout bags, the Santa Monica City Council on February 26, 2008, directed city-staff to prepare an ordinance prohibiting retail stores from distributing single-use plastic bags and regulating the use of paper bags through a collection fee.

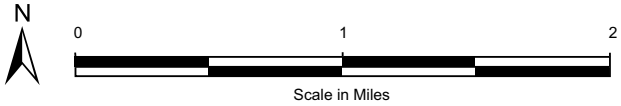
A number of cities/counties have considered or passed similar ordinances within their respective jurisdictions. These include but are not limited to: the City of San Francisco, the City of Seattle, the County of Los Angeles, the City of Berkeley, the City of San Jose, the City of Manhattan Beach, and the City of Palo Alto.



Regional Location Figure 2-1



Aerial source: Google Earth Pro, 2010.



Santa Monica City Boundary

City of Santa Monica Aerial

Figure 2

The City of Santa Monica is a member of Green Cities California (GCC), which is a coalition of local governments that have implemented a range of environmental policies. The GCC's mission is to take collaborative action to accelerate the implementation of sustainability policies and programs. The GCC prepared a Master Environmental Assessment (MEA) on Single-Use and Reusable Bags which brings together a comprehensive collection of information about single-use carryout bags including existing regulations, life cycle analysis, potential impacts on the environment, reusable bags, and the use of fees to encourage consumers to reuse bags. The information found within the MEA is intended to help cities and counties determine the environmental impacts of actions that they may take to cut back on the use of single-use grocery bags.

The grocery bag MEA provides local governments a one-stop reference about the impacts of restricting the use of single-use grocery bags, or of imposing a fee or other restriction on single-use grocery bags. It can be used by local governments in the preparation of Environmental Impact Reports to assess the potential impacts of such ordinances. The data and analysis utilized within the MEA is utilized within this EIR to assist in the determination of environmental impacts associated with the City of Santa Monica's proposed Single-use Carryout Bag Ordinance.

2.3.1 Carryout Bags in Santa Monica

There are 1,718 commercial and retail establishments in Santa Monica (City of Santa Monica Nexus Study, January 2010)(see Appendix C). Various types of carryout bags are provided to customers to retailers at the point of sale. The different types of carryout bags that are routinely distributed by retailers are described below.

Single-use disposable plastic grocery bags are typically made of thin, lightweight high density polyethylene (HDPE) (Hyder Consulting, 2007). For consumers, they offer a hygienic, odorless, waterproof and sturdy carrying sack, but are intended for one use before disposal. Currently, almost 20 billion of these plastic grocery bags are consumed annually in California (CIWMB, 2007). Conventional single-use plastic bags are a product of the petrochemical industry. Their life 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 then stretched to the desired size of the bag and cut into individual bags. Typical single-use plastic bags are approximately 5-9 grams in weight, and can be purchased in bulk for approximately 2-5 cents per bag (AEA Technology, 2009). Single-use plastic bags can be re-used 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).

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. However, paper bags are recyclable and can be re-used by customers. Paper grocery bags are typically produced from kraft paper and weigh anywhere from 50-100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). These bags can be purchased in bulk for approximately 15-25 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). Processed and then dried and shaped into large rolls, the paper is then formed into bags, baled, and then distributed to grocery stores.

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. They can be purchased in bulk for approximately 12-30 cents per bag (www.ecoproducts.com, 2009).

Reusable bags can be made from plastic or a variety of cloth 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 $3.00 wholesale, weigh at least 10 times what an HDPE plastic bag weighs and 2 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) 100% 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 $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 multiple uses, and then typically disposed either in the landfill or recycling facility.

2.3.2 Regulatory Setting

In 2006, California enacted AB 2449 (Chapter 845, Statutes of 2006), which 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 spot to collect used bags for recycling. The store operator must also 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 required to maintain records of their AB 2449 compliance and make them available to the California Integrated Waste Management Board (CIWMB) or local jurisdiction.

AB 2449 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 must also work with stores on their at-store recycling programs to help ensure the proper collection, transportation and recycling of the plastic bags.

AB 2449 restricts 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) provides as follows:

(b) 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.

AB 2449 expires under its own terms on January 1, 2013, unless extended. There are no other California statutes that directly focus on grocery bags.

2.4 PROPOSED ORDINANCE CHARACTERISTICS

The City of Santa Monica proposes to adopt a Single-use Carryout Bag Ordinance that would prohibit all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale, and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city, and requires that paper bags are at a minimum made of 40% post-consumer, recycled content and 100% recyclable. Restaurants and other food service providers may apply for an exemption from the ordinance that would allow 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 single-use plastic and paper carryout bags, and promote a shift toward the use of reusable bags. The environmental impacts associated with the use of single-use plastic and paper bags include air quality, biological resources (including marine environments), greenhouse gas emissions, water quality and traffic. It is anticipated that by prohibiting single-use plastic carryout bags and requiring a Green Fee for each paper bag distributed by the respective retailers, the proposed ordinance would incrementally reduce the amount of single-use plastic and paper bags within the City, while promoting a shift to the use of reusable bags by Santa Monica retail customers.

Single-use plastic carryout bags are made from petroleum or bio-based plastic (i.e., 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) that are less than 2.25 millimeters thick. The proposed Single-use Carryout Bag Ordinance would prohibit retailers from distributing both petroleum and bio-based single-use plastic bags. The proposed Single-use Carryout Bag Ordinance would not prohibit the distribution of plastic "product bags" such as those distributed within a grocery store for bagging produce. As described above, restaurants and other food service providers may apply for an exemption from the ordinance that would allow them to provide plastic bags to customers for prepared take-out food intended for consumption off of the food provider's premises. This exception is included as a public health safeguard based on input from restaurant owners who expressed concern that some hot

and liquid foods could leak from take-out containers and potentially cause paper bags to weaken and fail.

The Single-use Carryout Bag Ordinance would also impose a "Green Fee" on paper carryout bags at all Santa Monica grocery stores, convenience stores, mini-marts, liquor stores and pharmacies. It is anticipated that the Green Fee would be at least $0.25 (twenty-five cents) per paper bag with at least $0.10 (ten cents) of this amount being retained by the affected stores to offset their costs. The Green Fee is intended to provide a disincentive to customers to request paper bags when shopping at regulated stores and is intended to promote a major shift toward the use of reusable bags by consumers in Santa Monica. The fee would not apply to other types of retail stores such as department stores, clothing stores, and stores that sell durable goods because these types of stores do not typically distribute single-use plastic carryout bags to customers in large volumes as compared to grocery stores, convenience stores, mini-marts, liquor stores and pharmacies. The Green Fee would also not apply to paper bags distributed by vendors at the City's Farmers' Markets.

The Green Fee would charge customers for each paper carryout bag provided by the affected stores. Revenues generated by the fee would be used to offset the costs to the City for implementation and enforcement of the ordinance, and to compensate the affected stores for increased costs related to compliance with the ordinance. Stores would be required to indicate on the customer receipt the number of paper carryout bags provided and the total amount of Green Fee charged. The stores would be required to regularly report and remit to the City the regulatory portion of the Green Fees collected.

Although not included in the proposed ordinance, as part of the Community Outreach and implementation of the Single-use Carryout Bag Ordinance, the City would purchase and distribute (at no cost) approximately 25,000 reusable bags to the public.

2.5 PROJECT OBJECTIVES

The City's objectives for the proposed ordinance include:

- *Reducing the number of single-use plastic and paper bags distributed by retailers and used by customers in Santa Monica*
- *Promoting a shift toward the use of reusable carryout bags by retail customers in Santa Monica*
- *Reducing the environmental impacts related to single-use plastic and paper carryout bags, such as impacts to air quality, biological resources (including marine environments), water quality and traffic*
- *Avoiding litter and adverse impacts to the marine environment*

2.6 REQUIRED APPROVALS and PERMITS

The Single-use Carryout Bag Ordinance would require an amendment to the Santa Monica Municipal Code (Section 1, Chapter 5.45) with discretionary approval by the Santa Monica City Council. The following approvals would be required:

- *Certification of the Final EIR (City Council)*
- *Adoption of Ordinance amending the Municipal Code (City Council)*

No other agencies have discretionary approval authority over any aspect of the proposed Single-use Carryout Bag Ordinance.

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 Single-use Carryout Bag Ordinance would apply to all retail establishments (except restaurants) located throughout the City of Santa Monica's corporate limits. The City of Santa Monica is in western Los Angeles County, within the greater Los Angeles metropolitan area (refer to Figure 2-1, *Regional Location*, and Figure 2-2, *City of Santa Monica Aerial*). Santa Monica is approximately 10 miles west of downtown Los Angeles. The City is bounded to the north, east, and south by urban districts within the City of Los Angeles and to the west by the Pacific Ocean. The Mediterranean climate of the region and the coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months. The region is subject to various natural hazards, including earthquakes, landslides, and wildfires.

Santa Monica is almost entirely developed, with only 1% of its land area considered undeveloped. Santa Monica contains a variety of land uses including residential (single- and multi-family), retail, commercial, office, medical, public facilities, industrial/manufacturing, and parklands/recreation facilities. Surrounding communities in the City of Los Angeles include Pacific Palisades, Brentwood, West Los Angeles, Mar Vista, and Venice.

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 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 the proposed 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 Carryout Bag Ordinance has been analyzed within the context of other carryout 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 nine adopted, proposed and pending carryout bag ordinances (including the proposed Santa Monica Single-use Carryout Bag Ordinance) located throughout California.

Table 3-1
Planned and Pending Carryout Bag Ordinances in California

Ordinance Name/Location	Proposed Action	Status
City of San Francisco Plastic Bag Reduction Ordinance	Retail stores governed by this ordinance can only provide the following types of bags: a. compostable plastic b. recyclable paper c. reusable bag of any material	Adopted in 2007
County of Los Angeles Voluntary Single Use Bag Reduction and Recycling Program	A comprehensive strategy to reduce single use bag consumption and litter while increasing recycling in the unincorporated areas of the County of Los Angeles.	Adopted in 2008.
City of Los Angeles Resolution to Ban Plastic Bags	The Los Angeles City Council voted to ban plastic carryout bags in the city's supermarkets and stores by July 2010 -- but only if the state fails to impose a 25-cent fee on every shopper who requests them.	Pending
City of Malibu Plastic Bag Ordinance	Bans the use of non-compostable and compostable plastic shopping bags for point-of-sale distribution.	Adopted 2008.
City of Manhattan Beach Plastic Bag Ban Ordinance	Bans the distribution of plastic bags at the point-of-sale for all retail establishments in Manhattan Beach.	Adopted 2008. Pending environmental review under CEQA.
City of Palo Alto Plastic Bag Ban Ordinance	Large grocery stores in Palo Alto may not distribute 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 2009
City of Berkeley Plastic Bag Ban Ordinance	The Ordinance would prohibit retail product stores from making plastic bags available at checkout stands, and would require them to charge a fee of 25 cents on each paper checkout bag. Paper checkout bags would be required to have minimum post consumer recycled content.	Proposed, Pending environmental review under CEQA.
City of San Jose Single-Use Carryout Bag Ordinance	Would prohibit 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, this may be accompanied by a fee to the customers to be retained by the retailers [to cover the cost to the business of providing the bags].	Proposed, Pending environmental review under CEQA.

Source: City of San Jose, City of Palo Alto, City of Berkeley, City of Los Angeles, County of Los Angeles, City of Malibu, City of Manhattan Beach, City of San Francisco Homepages, March 2010.

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 as having the potential to experience significant impacts. "Significant effect" is defined by the *State 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 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 City, 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:*** *An impact that would reduce 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 future development in the area.

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4.1 AIR QUALITY

This section analyzes the proposed Single-use Carryout Bag Ordinance's long-term impacts to local and regional air quality. The analysis focuses on air quality impacts associated with manufacturing facilities and the impacts associated with truck trips that deliver carryout bags in Santa Monica. Impacts related to global climate change are addressed in Section 4.3, *Greenhouse Gas Emissions*.

4.1.1 Setting

a. Characteristics of Air Pollutants. As a result of the climate and meteorology in the South Coast Air Basin, two types of temperature inversions (warmer air on top of colder air) are created in the area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high pressure area to the low pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. Surface inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion. The primary air pollutant of concern during the subsidence inversions is ozone, while the greatest pollutant problems during winter inversions are carbon monoxide and nitrogen oxides. The general characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Ozone. Ozone 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 mostly occurs in concentrations considered serious 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 is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide 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 (NO_2) 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 NO_2, creating the mixture of NO and NO_2 commonly called NO_x. Nitrogen dioxide is an acute

irritant. A relationship between NO_2 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. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. PM_{10} 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 PM_{10} 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. Current Air Quality. The South Coast Air Basin monitoring station located nearest to Santa Monica is the West Los Angeles VA Hospital monitoring station, approximately one mile northwest of the site. However, particulate matter data is not available from the West LA VA Hospital monitoring station; therefore, data for this pollutant has been taken from the Los Angeles – North Main Street monitoring station, located approximately 15 miles east of Santa Monica. Table 4.1-1, on the following page, indicates the number of days each of the standards has been exceeded at these stations. As shown, the ozone concentration exceeded state standard three times in 2006 and 2008 and two times in 2007. The PM_{10} concentration exceeded state standards three times in 2006, five times in 2007 and two times in 2008. The $PM_{2.5}$ concentration exceeded federal standards on 11 days 2006, ten days in 2007 and 10 days in 2008. No exceedances of either the state or federal standards for NO_2 or CO have occurred at the West LA VA Hospital monitoring station since 1995.

c. Air Quality Management. Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. SCAQMD updates the plan every three years. Each iteration of the plan is an update of the previous plan and has a 20-year horizon. The plan was last updated in 2007. The AQMP is incorporated by reference and available to download at http://www.aqmd.gov/aqmp/07aqmp/index.html.

Table 4.1-1
Ambient Air Quality Data

Pollutant	2006	2007	2008
Ozone, ppm - Worst Hour[a]	0.099	0.117	0.111
Number of days of State exceedances (>0.09 ppm)	3	2	3
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Carbon Monoxide, ppm - Worst 8 Hours[a]	2.0	1.96	1.76
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
Nitrogen Dioxide, ppm - Worst Hour[a]	0.078	0.082	0.090
Number of days of State exceedances (>0.25 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours[b]	58	77	64
Number of samples of State exceedances (>50 $\mu g/m^3$)	3	5	2
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours[b]	56.2	64.1	78.3
Number of samples of Federal exceedances (>35 $\mu g/m^3$)	11	20	10

a = Data collected for the West LA VA Hospital monitoring station
b = Data collected for the Los Angeles – North Main Street monitoring station
Source: CARB, 2006, 2007, & 2008 Annual Air Quality Data Summaries available at http://www.arb.ca.gov

d. Air Quality and Carryout Bags. Carryout bags can affect air quality in two ways, either through emissions associated with manufacturing process or 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 amount 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 pollutant emissions in the production of carryout bags, manufacturing facilities are subject to air quality regulations, as described in the *Regulatory Setting*, which are intended to reduce the amount of emissions and the impacts related to air quality. For this EIR, the analysis is focused on the South Coast Air Basin, of which Santa Monica is a part.

Truck Trips. Delivery trucks that transport carryout bags from manufacturers or distributors to the local retailers in Santa Monica also contribute air emissions locally and regionally. As discussed in Section 4.5, *Transportation/Traffic*, based on a baseline estimate of

approximately 26 million carryout bags used per year by retailers (Santa Monica Nexus Study in Appendix C) that would be subject to the proposed Single-use Carryout Bag Ordinance, it is anticipated that approximately 36 truck trips per year are required to deliver carryout bags.

Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material (ARB "Health Effects of Diesel Exhaust", 2010). The visible emissions in diesel exhaust are known as particulate matter or PM, which are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Compared to other air toxics that the California Air Resources Board (ARB) has identified and controlled, 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") (ARB, Health Effects of Diesel Exhaust", 2010).

Like manufacturing facilities, delivery trucks are also subject to existing regulations primarily related to diesel emissions, as described in the *Regulatory Setting*. These regulations are intended to reduce emissions associated with fuel combustion and the impacts related to local and regional air quality.

Air Emission Rates per Bag. 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. Through the manufacturing and transportation of a single-use paper bag, air emissions result in 1.9 times the impact on atmospheric acidification as one single-use plastic bag. Similarly, 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 only one time. In addition, based on a per bag basis, a single-use paper bag has 1.3 times the impact on ground level ozone formation compared to a single-use plastic bag. And 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 compared to a single-use plastic bag (Stephen L. Joseph, 2009; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010).

Table 4.1-2 lists the emissions associated contributing to ground level ozone and atmospheric acidification using the per bag impact rates discussed above and the estimated existing carryout bags used in Santa Monica. The total single-use carryout bag estimate (approximately 26 million) was generated in the City of Santa Monica Nexus Study (see Appendix C). For this analysis it is assumed that 80% of the single-use carryout bags in Santa Monica are single-use plastic bags and 20% are single-use paper bags. In contrast to the air emission rates discussed above, this analysis makes the reasonable assumption that reusable bags are actually reused more than one time in Santa Monica. In order to estimate the number of existing reusable carryout bags, it is assumed that reusable carryout bags are used once per week for one year (52 times), which is a conservative estimate since reusable bags are designed to be used up to hundreds of times (Green Cities California MEA, 2010). It is also assumed that approximately 150,000 reusable bags were purchased for use in one year. This total would mean that each household in Santa Monica (approximately 50,405 in 2010) would have purchased at least three reusable bags in one year.

As shown in Table 4.1-2, through the manufacturing and transportation of carryout bags currently used in Santa Monica each year, 639 kilograms (kg) emissions associated with ground level ozone and approximately 33,747 kg of emissions associated with atmospheric acidification. Since the number of single-use plastic bags used in one year is substantially greater than the number of single-use paper or reusable bags, single-use plastic bags represent the largest percentage of emissions from both ground level ozone (75%) and atmospheric acidification (67%).

Table 4.1-2
Existing Emissions from Ground Level Ozone and Atmospheric Acidification (AA) from Carryout Bags in Santa Monica

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	20,800,000	1.0	0.023	478	1.0	1.084	22,547
Single-use Paper	5,200,000	1.3	0.03	156	1.9	2.06	10,712
Reusable	150,000*	1.4	0.032	4.8	3.0	3.252	488
			Total	**639**		**Total**	**33,747**

Source: City of Santa Monica Nexus Study, 2010.(Appendix C)
** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*
***Impact rate per bag as stated in Stephen L. Joseph, 2009; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010*
**** Emissions per 1,000 bags from Ecobilan, 2004*
***** Emissions per 1,000 bags from FRIDGE, 2002 and Green Cities California MEA, 2010*

e. Air Pollution Regulation. Federal and state standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$ respectively), and lead (Pb). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 4.1-3 lists the current federal and state standards for criteria pollutants.

Santa Monica is located within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is 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." The South Coast Air Basin (Basin) is in attainment of the State and Federal standards for nitrogen dioxide and carbon monoxide. However, the Basin is a non-attainment area for both the

federal and state standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$). Thus, the SCAQMD is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. The non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion

Table 4.1-3
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)	0.18 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (annual avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million $\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board (2008), accessed online March 2010 at:
www.arb.ca.gov/research/aaqs/aaqs2.pdf

and diffusion of pollutants, the limited capacity of the local air shed to eliminate pollutants from the air, and the number, type, and density of emission sources within the Basin.

The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards. The AQMP is described in more detail below.

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 Environmental Protection Agency (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 Requirement, accessed March 2010). 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's 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, like oxides of nitrogen (NOx), carbon monoxide (CO), fine particulate matter (PM10), oxides of sulfur (SOx), 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 South Coast Air Quality Management District (SCAQMD), the local air quality management district serving Santa Monica, requires 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 emission controls meet the need for the South Coast Region to make steady progress toward achieving and maintaining federal and state air quality standards (as shown in Table 4.1-3) (SCAQMD "Getting Permits", 2010). Permits also ensure proper operation of control devices, establish recordkeeping and reporting mechanisms, limit toxic emissions, and control dust or odors. In addition, the SCAQMD routinely inspect operating facilities to verify that equipment has been built and installed as required by the, and to confirm that the equipment operates in compliance with SCAQMD 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 significantly reduce emissions from existing on-road diesel vehicles operating in California. The regulation requires affected trucks and buses to meet performance requirements between 2011 and 2023. 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 2010). All trucks making deliveries of carryout bags in California would be required to adhere to this regulation.

Diesel-Fueled Commercial Motor Vehicle Idling Limit. 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. 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 engine 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). All trucks making deliveries in Santa Monica would be required to comply with the no-idling requirements.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. Since the proposed Single-use Carryout Bag Ordinance does not include any physical development or construction related activities, the analysis focuses on emissions related to carryout bag manufacturing processes and truck trips associated with delivering carryout bags to retailers in Santa Monica. Operational emissions associated with the truck trips to deliver carryout bags to Santa Monica Retailers were calculated using the URBEMIS 2007 v. 9.2.4 computer program (Rimpo and Associates, 2007). Rimpo and Associates (www.urbemis.com) has developed the most recent model revisions under the cooperative direction and funding of several California air districts and the California Air Pollution Control Officers Association (CAPCOA). The estimate of operational emissions by URBEMIS includes truck trips (assumed to be heavy trucks - 33,000 – 60,000 pounds) and utilizes the trip generation rates based on the traffic analysis contained in Section 4.6, *Transportation/Traffic*.

The proposed ordinance would create an air quality significant 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 potentially result in a significant impact while the first, fourth and fifth criteria do not apply to the proposed Single-use Carryout Bag Ordinance and would result in no impact. Hence, only the second and third criteria are addressed in this section.

The SCAQMD has established the following significance thresholds for project operations within the South Coast Air Basin:

- *55 pounds per day of ROC*
- *55 pounds per day of NO_x*
- *550 pounds per day of CO*
- *150 pounds per day of SO_x*
- *150 pounds per day of PM_{10}*
- *55 pounds per day of $PM_{2.5}$*

b. Project Impacts and Mitigation Measures.

Impact AQ-1 **A shift toward reusable bags could potentially alter processing activities related to bag production which has the potential to increase air emissions. However, the proposed Single-use Carryout Bag Ordinance is expected to substantially reduce the number of single-use carryout bags, thereby reducing the amount of total bags manufactured and the overall emissions. In addition, bag manufacturers would be required to comply with existing regulations. Therefore, air quality impacts related to alteration of processing activities would be Class IV, *beneficial*.**

The intent of the proposed Single-use Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags, and to promote the use of reusable bags by Santa Monica retail customers. The proposed ordinance would incrementally reduce the number of single-use plastic carryout bags that are manufactured and would incrementally increase the number of single-use paper and reusable bags manufactured compared to existing conditions.

As described in the *Setting*, emissions associated with single-use paper bag production results in 1.9 times the impact on atmospheric acidification as a 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. Similarly, based on a per bag basis, a single-use paper bag has 1.3 times the impact on ground level ozone formation compared to a single-use plastic bag and a reusable carryout bag that is made of LDPE plastic would result in 1.4 times the ground level ozone formation compared to a single-use plastic bag (Stephen L. Joseph, 2009; FRIDGE, 2002; and Green Cities California MEA, 2010).

Although a reusable bag results in greater impacts to ground level ozone formation and atmospheric acidification than a single-use plastic bag on a per bag basis, reusable carryout bags are intended to be used multiple times. With reuse of carryout bags, fewer total carryout bags would need to be manufactured compared to the processing of single-use plastic bags. Based on the proposed Green Fee for the Santa Monica Single-use Carryout Bag Ordinance (at least $0.25 per bag), it is anticipated that a reduction of approximately 50% of the total single-use bags (plastic and paper) would be achieved in Santa Monica (Santa Monica Nexus Study, 2010 Table 8)(contained in Appendix C). As described in the City of Santa Monica Nexus Study, an estimated 26 million single-use carryout bags are currently used each year in Santa Monica. With a 50% reduction as a result of the proposed Single-use Carryout Bag Ordinance, the number of single-use bags would be reduced to approximately 13 million. However, all 13 million single-use bags would be paper bags.

In order to estimate the number of reusable carryout bags, it is assumed that a reusable carryout bag would be used once per week for one year (52 times). This is a conservative estimate as reusable bags are designed to be used up to hundreds of times (Green Cities California MEA, 2010). Therefore, in order to replace the volume of groceries contained in the 13 million single-use plastic bags that would be removed, an increase of approximately 250,000 reusable bags per year would be purchased by customers at retail stores. Added to the approximately 150,000 reusable bags that are currently purchased each year in Santa Monica, the proposed ordinance

would result in a total of approximately 400,000 reusable bags per year purchased by customers at retail stores. It should be noted that approximately 400,000 reusable bags would mean that each household in Santa Monica (50,405 in 2010) would purchase around 8 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 26 million single-use plastic and single-use paper carryout bags would be carried within approximately 13.4 million reusable and single-use paper bags.

Table 4.1-4 provides an estimate of emissions from ground level ozone and atmospheric acidification that would result from the reduction of carryout bags in Santa Monica associated with the implementation of the proposed Single-use Carryout Bag Ordinance.

Table 4.1-4
Estimated Emissions from Ground Level Ozone and Atmospheric Acidification (AA) from Carryout Bags in Santa Monica

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	0	1.0	0.023	0	1.0	1.084	0
Single-use Paper	13,025,000	1.3	0.03	391	1.9	2.06	26,832
Reusable	400,000*	1.4	0.032	12.8	3.0	3.252	1,301
			Total	**404**		**Total**	**28,133**
			Existing	**639**		**Total**	**33,747**
			Net Change	**(235)**		**Net Change**	**(5,614)**

Source: City of Santa Monica Nexus Study, 2010.(Appendix C)
** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*
***Impact rate per bag as stated in Stephen L. Joseph, 2009; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010*
**** Emissions per 1,000 bags from Ecobilan, 2004*
***** Emissions per 1,000 bags from FRIDGE, 2002 and Green Cities California MEA, 2010*

As shown in Table 4.1-4, a reduction in the amount of overall carryout bags in the City would reduce emissions associated with atmospheric acidification (reduced by approximately 5,614 kg per year) and ground level ozone (reduced by approximately 235 kg per year). Reducing the amount of single-use plastic bags that are manufactured and transported in Santa Monica combined with an approximately 50% reduction in the total amount of single-use carryout bags in Santa Monica would reduce air emissions.

As discussed in the *Setting*, air pollutant emissions from manufacturing facilities are also regulated under the Clean Air Act and would be subject to requirements by the local air quality management district (in Los Angeles County, the SCAQMD). A reusable carryout bag manufacturing facility that emits 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. As described above, the proposed ordinance would reduce emissions associated with ozone and atmospheric acidification. Therefore, the proposed ordinance would have a beneficial impact on air quality.

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

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

Impact AQ-2 Implementation of the proposed Single-use Carryout Bag Ordinance would generate air pollutant emissions associated with an incremental increase in truck trips that deliver paper and reusable carryout bags to local retailers. However, emissions would not exceed SCAQMD operational significance thresholds. Therefore, operational air quality impacts would be Class III, *less than significant*.

Long-term emissions associated with the proposed Single-use Carryout Bag Ordinance would include those emissions associated with truck trips to deliver carryout bags (paper and reusable) from manufacturing facilities or distributors to the local retailers in Santa Monica. The URBEMIS 2007 v.9.2.4 model was used to calculate emissions for mobile emissions resulting from the number of trips generated by the proposed ordinance. Trip generation rates were taken from the traffic analysis contained in Section 4.6, *Transportation/Traffic*, which estimates that the increase in truck traffic would be less than one truck trip per day.

Mobile emissions associated with the proposed Single-use Carryout Bag Ordinance are summarized in Table 4.1-5. As indicated, daily ROG emissions are estimated at 0.02 pounds, the increase in daily NO_X emissions is estimated at about 0.25 pounds, the increase in CO emissions would be about 0.1 pounds, the increase in PM_{10} emissions would be about 0.03 pounds, and the increase in $PM_{2.5}$ emissions would be about 0.01 pounds. The incremental increases in ROG, NOx, CO, PM_{10}, and $PM_{2.5}$ emissions associated with the proposed project would be substantially less than the SCAQMD thresholds of 55 pounds per day of ROG, NOx, or $PM_{2.5}$, 550 pounds per day of CO, and 150 pounds per day of PM_{10}. Because long-term emissions would not exceed SCAQMD thresholds, impacts would not be significant.

Mitigation Measures. Operational emissions associated with the increase in truck traffic as a result of the proposed Single-use Carryout Bag Ordinance would not exceed SCAQMD thresholds. Therefore, mitigation is not required.

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

Table 4.1-5
Operational Emissions Associated with Proposed Ordinance

Emission Source	Emissions (lbs/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Mobile Emissions (Truck Traffic)	0.02	0.25	0.1	0.03	0.01
Total Emissions	**0.02**	**0.25**	**0.1**	**0.03**	**0.01**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***

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

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 plastic and paper bags, and promote a shift toward reusable carryout bags. Similar to the proposed Santa Monica 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 Santa Monica ordinance, other adopted and pending ordinances could incrementally change the number of truck trips associated with carryout bag delivery and associated emissions. Four other agencies in Los Angeles County (City and County of Los Angeles, City of Malibu, and City of Manhattan Beach) have either adopted or are considering such ordinances. However, based on the incremental increase in air pollutant emissions associated with the proposed Santa Monica ordinance (increase of ¼ pound per day or less of each criteria pollutant), the other ordinances are not expected to generate an increase in emissions that would exceed SCAQMD thresholds or adversely affect regional air quality. Therefore, cumulative air quality impacts would not be significant.

4.2 BIOLOGICAL RESOURCES

This section analyzes the proposed project's impacts to biological resources. Both direct impacts associated with the proposed Single-use Carryout Bag Ordinance and indirect impacts to off-site biological resources are addressed.

4.2.1 Setting

a. Santa Monica. Santa Monica is located in west Los Angeles County, approximately 10 miles west of the central business district of the City of Los Angeles, adjacent to the Pacific Ocean shoreline. The City is almost entirely developed, with only 1% of its land area considered undeveloped. The majority of Santa Monica lacks significant native vegetation that would provide a habitat for any unique, rare, or endangered plant or animal species. The only native terrestrial habitat is located along the Palisades Bluff, and this area is highly disturbed. As a consequence, vegetation within the City is generally limited to species that are capable of surviving in urban conditions. Important biological resources (sensitive species) are generally limited to the coastal (beach and intertidal) and marine environments (as described below).

b. Coastal and Marine Habitat. The coastal and marine environment of Santa Monica Bay includes a variety of habitat types, including coastal wetlands, sandy beaches, seagrass beds, rocky reefs, soft bottom and open ocean. The majority of Santa Monica (approximately 95%) is located within the Santa Monica Bay Watershed and drains directly to the Pacific Ocean. The Santa Monica Bay Watershed comprises the 414 square mile area of land that drains naturally to the Bay, bordered on the north by the Santa Monica Mountains from Ventura-Los Angeles County line to Griffith Park, extending south and west across the Los Angeles coastal plain to include the area east of Ballona Creek and north of Baldwin Hills, south of Ballona Creek, a narrow coastal strip between Playa del Rey and the Palos Verdes Peninsula forms the southern boundary of the watershed. A small portion of Santa Monica (approximately 5%) is located within the Ballona Creek Watershed. Ballona Creek is a nine-mile long flood protection channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Ballona Creek Watershed totals about 130 square miles (LACDPW, 2010). With flow directly to Santa Monica Bay, pollutants and other substances that enter Ballona Creek, will eventually empty into the Pacific Ocean.

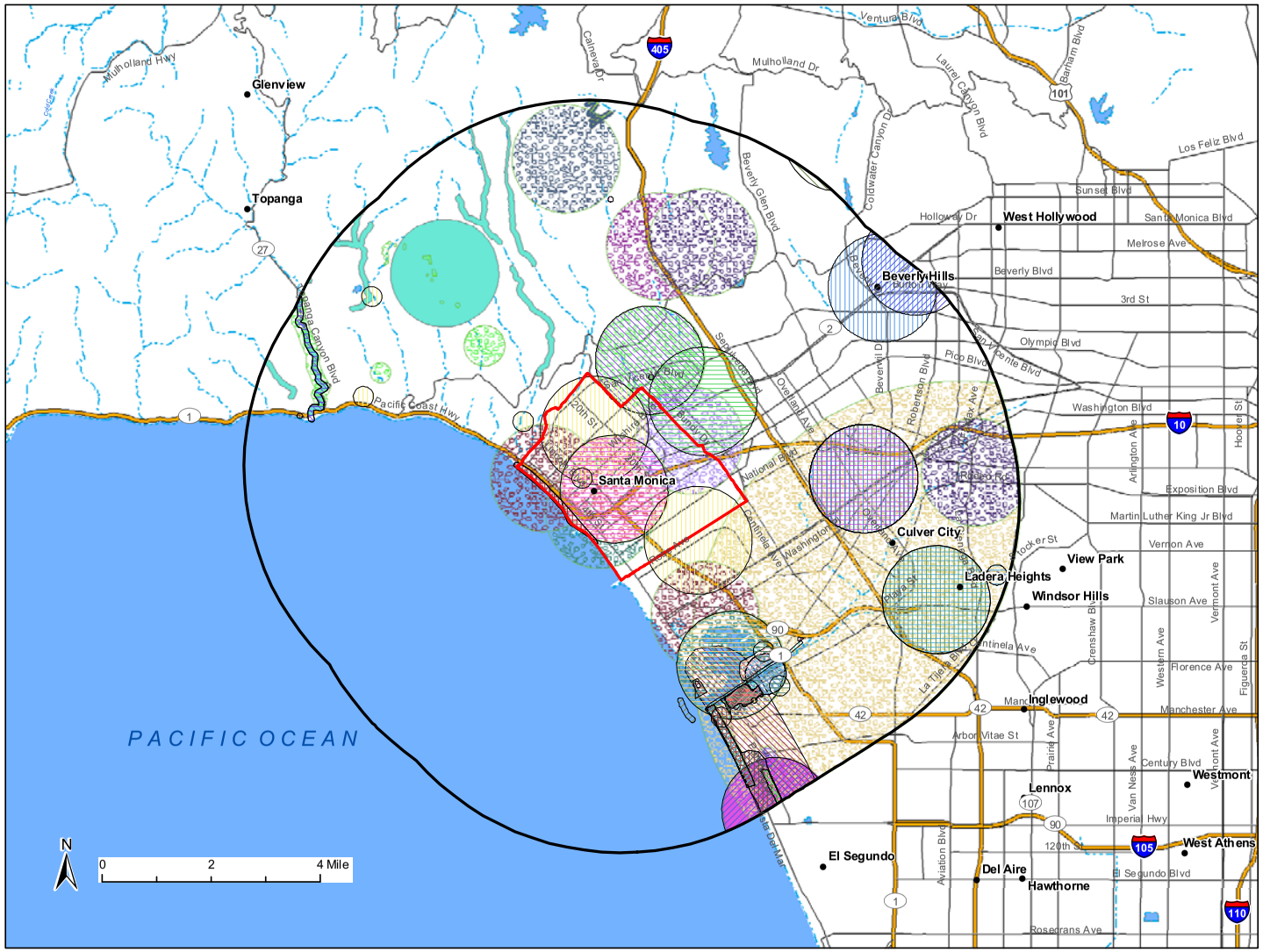
While the coastal and marine habitat of Santa Monica Bay has been altered due to human disturbance, a number of sensitive species have the potential to occur in these environments. Sensitive species, as described below in *Regulatory Setting* that may inhabit the coastal and marine environment are listed in Table 4.2-1. Species include various sea turtles, bird species such as the Coastal California gnatcatcher, Western Snowy plover, California least tern and brown pelican and marine mammals such as whales, seals, southern sea otter, and the California sea lion. The location of special-status species found in the vicinity of Santa Monica as listed on the California Natural Diversity Database (CNDDB) is mapped on Figure 4.2-1.

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

Table 4.2-1
Coastal/Marine Special-Status Species

Scientific Name	Common Name	Current Federal/State Status
Reptiles		
Chelonia mydas	Green sea turtle	FT
Dermochelys coriacea	Leatherback sea turtle	FE
Lepidochelys olivacea	Olive Ridley sea turtle	FT
Birds		
Polioptila californica	Coastal California gnatcatcher	FT
Charadrius alexandrinus nivosus	Western Snowy plover	FT/SSC
Sterna antillarum browni	California least tern	FE/SE
Pelecanus occidentalis californicus	Brown pelican	FE/delisted
Athene cunicularia	Burrowing owl	-/CSC
Mammals		
Zalophus californianus	California sea lion	MMPA
Phoca vitulina	Harbour seal	MMPA
Enhydra lutris nereis	Southern Sea otter	FT/MMPA
Balaenoptera musculus	Blue whale	FE/MMPA
Balaenoptera physalus	Finback whale	FE/MMPA
Megaptera novaeangliae	Humpback whale	FE/MMPA
Balaenoptera borealis	Sei whale	FE/MMPA
Physeter catodon	Sperm whale	FE/MMPA

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



LEGEND

Animals
- Belding's savannah sparrow
- Belkin's dune tabanid fly
- Busck's gallmoth
- California black rail
- California brown pelican
- California least tern
- Dorothy's El Segundo Dune weevil
- El Segundo blue butterfly
- Gertsch's socalchemmis spider
- Henne's eucosman moth
- Lange's El Segundo Dune weevil
- Pacific pocket mouse
- burrowing owl
- coast horned lizard
- coastal California gnatcatcher
- coastal whiptail
- globose dune beetle
- hoary bat
- mimic tryonia (=California brackishwater snail)
- monarch butterfly
- pallid bat
- sandy beach tiger beetle
- silver-haired bat
- south coast marsh vole
- southern California saltmarsh shrew
- southern steelhead - southern California ESU
- wandering (=saltmarsh) skipper
- western mastiff bat
- western pond turtle
- western snowy plover

Plants
- Ballona cinquefoil
- Brand's star phacelia
- Braunton's milk-vetch
- Coulter's goldfields
- Orcutt's pincushion
- Parish's brittlescale
- Plummer's mariposa-lily
- Salt Spring checkerbloom
- San Fernando Valley spineflower
- Ventura Marsh milk-vetch
- beach spectaclepod
- coastal dunes milk-vetch
- mesa horkelia
- mud nama
- salt marsh bird's-beak
- southern tarplant

Natural Communities
- California Walnut Woodland
- Southern Coast Live Oak Riparian Forest
- Southern Coastal Salt Marsh
- Southern Dune Scrub
- Southern Sycamore Alder Riparian Woodland

Note: CNDDB Suppressed Records in these quads- Monarch Butterfly. Call CDFG to get the specific location of these sensitive species.

Sources: California Natural Diversity Database, March 2010, U.S. Bureau of the Census TIGER 2000 data, and ESRI, 2002.
Note - Map to be printed in color, due to subtleties in symbology noticeable only on color version.

Sensitive Elements Reported by the California Natural Diversity Database

Figure 4.2-1

Single-use plastic carryout bags enter the biological environment primarily as litter. This can adversely affect terrestrial animal species, birds, 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 reproductivity, 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).

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 running less risk of 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). Thus, reusable bags are less likely to enter the environment as litter compared to single-use plastic or paper bags.

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 Game (CDFG) is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the State and Federal Endangered Species Acts, the CDFG and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered. The U.S. Department of Army Corps of Engineers (Corps) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the Federal Clean Water Act.

Plants or animals have "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"). Species may be formally listed and protected as Threatened or Endangered by the CDFG or USFWS or as California Fully Protected (CFP). Informal listings by agencies include California Species of Special Concern (CSC) (a broad database category applied to species, roost sites, or nests) and USFWS Candidate taxa (a central database with changes in status due to proposals and determinations to add taxa to the Lists of Endangered and Threatened Wildlife and Plants as published in the Federal Register). CDFG and local governmental agencies may also recognize special listings developed by focal groups (i.e. Audubon Society Blue List; California Native Plant Society (CNPS) Rare and Endangered Plants; U.S. Forest Service

regional lists). Section 3503.5 of the Fish and Game Code of California specifically protects birds of prey, and their nests and eggs against take, possession, or destruction. Section 3503 of the Fish and Game Code also incorporates restrictions imposed by the federal Migratory Bird Treaty Act (MBTA) with respect to migratory birds (which consists of most native bird species). Figure 4.2-1 shows the locations of known sitings of the special-status species and communities in the vicinity of Santa Monica.

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 project would have a significant impact if it were found to:

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 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, regulations or by the California 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; and*
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 (Appendix A to this EIR) determined that impacts related to the second, third, fourth, fifth and sixth criteria would not be significant. Therefore, the impact discussion below focuses on impacts related to the first criteria (sensitive species).

b. Project Impacts and Mitigation Measures.

Impact BIO-1 Although the proposed Carryout Bag Ordinance would incrementally increase the number of paper and reusable bags within Santa Monica, the reduction in the amount of single-use plastic bags would be expected to incrementally reduce the amount of litter entering the coastal habitat, thus reducing litter-related impacts to sensitive species. This is a Class IV, *beneficial*, effect.

The proposed Single-use Carryout Bag Ordinance does not include any physical activities that would result in direct biological impacts. The ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City, and requires that a minimum of 40% post-consumer, recycled content and 100% recyclable. The intent of the ordinance is to reduce the amount of single-use plastic and paper carryout bags and promote the use of reusable bags by Santa Monica retail customers.

All carryout bags, including single-use plastic and paper bags and reusable bags have the potential to affect the coastal habitat such as the Santa Monica Bay-Pacific Ocean (adjacent to west of Santa Monica) when bags are improperly disposed of and become litter that enters the storm drain system and ultimately coastal and marine environments. As described in the *Setting*, litter that enters coastal habitats can adversely affect sensitive species that inhabit coastal and marine environments, including sea turtles, seals, whales, 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 bags weigh approximately 5-9 grams and are made of thin (less than 2.25 millimeters thick) high density polyethylene (HDPE) (Hyder Consulting, 2007). Post-use from a retail store, a customer a may reuse a single-use plastic bag at home, but eventually the bags are disposed in the landfill or 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 and nationwide are currently recycled (US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007). The majority of single-use plastic bags end up as litter or in the landfill, and even those in the landfill may be blown 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 there is the potential that marine species may ingest the plastic bags (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 reproductivity, lacerations, ulcers, and death to sensitive species in the marine environment, including sea turtles, seals, whales, otters, or bird species.

Single-use paper grocery 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 50-100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). A paper bag weighs substantially more (by approximately 40-90 grams heavier) than single-use plastic bags. Because of the weight, biodegradability of the materials, 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, there would be less risk of entanglement if entering the marine environment compared to single-use plastic bags. In addition, 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 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 the single-use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloth such as vinyl or cotton. Built to withstand many uses, reusable bags weigh at least 10 times what a single-use plastic bag weighs and 2 times what a single-use paper bag weighs, therefore restricting the movement by wind. 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 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 100 times or more (Green Cities California MEA, 2010), 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. Therefore, reusable bags would generally be expected to result in fewer impacts to sensitive species than single-use plastic and paper carryout bags.

The proposed Santa Monica Single-use Carryout Bag Ordinance would be expected to promote a shift to the use of reusable bags by Santa Monica retail customers and would, therefore, incrementally reduce the amount of litter associated with single-use plastic bags. Based on the proposed Green Fee for the Santa Monica Single-use Carryout Bag Ordinance (at least $0.25 per bag), it is anticipated that a reduction of approximately 50% of the total single-use bags (plastic and paper) would be achieved in Santa Monica (Santa Monica Nexus Study, 2010 Table 8)(contained in Appendix C). With a 50% reduction as a result of the proposed Single-use Carryout Bag Ordinance, the number of single-use bags would be reduced to approximately 13 million. A total reduction of approximately 13 million carryout bags in the City (including removing approximately 20 million single-use plastic bags) would be expected to generally reduce litter-related impacts to sensitive species. Impacts to sensitive species such as sea turtles, mammals, and bird species would benefit from the proposed Carryout Bag Ordinance, which would reduce the amount litter which 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 generally have beneficial effects with respect to sensitive biological resources since each ordinance is intended to reduce the amount of single-use plastic bags in each respective jurisdiction. In addition, each proposed or adopted ordinance is reviewed by the local jurisdiction with discretionary approval of the ordinance and undergoes environmental review when it is deemed appropriate. Significant impacts to biological resources are minimized through this review process, which requires mitigation to reduce significant impacts to the greatest extent feasible and below significance thresholds in most cases. The biological impacts associated with the proposed Santa Monica Single-use Carryout Bag Ordinance would not be significant and would not contribute to any cumulative impacts to regional biological resources.

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4.3 GREENHOUSE GAS EMISSIONS

This section analyzes the proposed ordinance's impacts related to global climate change. The analysis focuses on manufacturing, transportation and disposal of carryout bags as these are the largest contributors to greenhouse gas emissions.

4.3.1 Setting

a. Overview of Global Climate Change and Greenhouse Gases. Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs), analogous to the way in which a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O_x), fluorinated gases, and ozone. GHG are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. 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 rate of Global Climate Change (GCC) has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. However, scientists have observed an unprecedented acceleration in the rate of warming during the past 150 years likely due to the observed increase in anthropogenic GHG concentrations (United Nations Intergovernmental Panel on Climate Change (IPCC), November 2007). Current annual anthropogenic GHG emitted from the world, United States, and California are listed in Table 4.3-1.

Table 4.3-1
Annual Anthropogenic GHG Emissions

Worldwide	United States	California
40,000 MM CDE	7,054 MM CDE	492 MM CDE

MM = million metric tons
CDE = carbon dioxide equivalent

Source: IPPC, 2007; USEPA, April 2008; CEC, December 2006

California is the second largest emitters of GHGs among states and, if California were a country, it would be the sixteenth highest emitter among countries (AEP, 2007). Out of the 492 million metric tons of carbon dioxide equivalent (CDE[1]) produced in California (7% of US total), 41% is associated with transportation. Electricity generation is the second largest source, contributing 22% of the

[1] *Carbon dioxide equivalent (CDE or CO_2E) is a quantity that describes, for a given mixture and amount of GHGs, the amount of CO_2 (usually in metric tons; million metric tons [megatonne] = $MMTCO_2E$ = terragram [Tg] CO_2 Eq; 1,000 MMT = gigatonne) that would have the same global warming potential (GWP) when measured over a specified timescale (generally, 100 years).*

state's GHG emissions (CEC, December 2006). Most, 81%, of California's 2004 GHG emissions (in terms of CDE) were CO_2 produced from fossil fuel combustion, with 2.8% from other sources of CO_2, 5.7% from methane, and 6.8% from nitrous oxide (CEC, December 2006).

b. Effects of Global Climate Change. GCC 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. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to the California Energy Commission's (CEC) Draft Climate Action Team Biennial Report, potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CEC, March 2009). Below is a summary of some of the potential effects reported by an array of studies that could be experienced in California as a result of global climate change.

Air Quality. Higher temperatures, 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. Uncertainty remains with respect to the overall impact of GCC on future water supplies in California. Studies have found that, "considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain, until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change" (California Department of Water Resources [DWR], 2006). For example, some studies identify little change in total annual precipitation in projections for California (California Climate Change Center [CCCC], 2006). Other studies show significantly more precipitation (DWR, 2006). Even assuming that climate change leads to long-term increases in precipitation, analysis of the impact of climate change is further complicated by the fact that no studies have identified or quantified the runoff impacts that such an increase in precipitation would have in particular watersheds (CCCC, 2006). Also, little is known about how groundwater recharge and water quality will be affected (Id.). Higher rainfall could lead to greater groundwater recharge, although reductions in spring runoff and higher evapotranspiration could reduce the amount of water available for recharge (Ibid.).

The California Department of Water Resources (DWR, 2006) report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San

Joaquin Delta concludes that "[c]limate change will likely have a significant effect on California's future water resources… [and] future water demand." DWR also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain" (DWR, 2006).

This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood (DWR, 2006). DWR adds that "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky, 2003; DWR, 2006; Cayan, 2006, Cayan, D., et al, 2006).

Hydrology. As discussed above, climate changes 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. 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 CO_2 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 ozone 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 expect that the average global surface temperature could rise as discussed previously: 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.

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 or through disposal during landfill degradation. Each is summarized below.

Manufacturing Process. The manufacturing process to make carryout bags requires fuel and energy consumption which creates GHG emissions including CO_2, CH_4, N_2O_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 manufacturing of carryout bags also has the potential to emit N_2O_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 of 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 the local retailers in Santa Monica also contribute GHG emissions. GHG emissions from truck trips result primarily from the combustion of fossil fuels and include CO_2, CH_4, andN_2O_x. As discussed in Section 4.5, *Transportation/Traffic*, based on a baseline estimate of approximately 26 million carryout bags used per year by retailers that would be subject to the proposed Single-use Carryout Bag Ordinance, it is anticipated that approximately 36 truck trips per year are required to deliver these carryout bags in Santa Monica.

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 the type and materials used, a carryout bag will degrade at various rates. When carryout bag materials degrade in aerobic conditions at a landfill, CH_4 is emitted. This contributes to GCC (Green Cities California MEA, 2010).

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 (CDE) as a result of manufacturing, transportation, and disposal. Based on the Scottish Report (AEA Technology, 2005), through the manufacturing, transportation, and disposal of a single-use paper bag, GHG emissions result in 3.3 times the emissions compared to the manufacturing, use and disposal of a single-use plastic bag. Thus using the single-use plastic bag GHG emissions rate of 0.04 CDE per 1,500 from the Boustead Report, single-use paper bags would emit 0.132 CDE per 1,000 bags. If only used once, the manufacturing, 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). Thus, reusable LDPE carryout bags would emit 0.104 CDE per 1,000 bags (if used only once) (Stephen L. Joseph, 2009; AEA Technology, 2005; Ecobilan, 2004; and Green Cities California MEA, 2010).

However, it should be noted that if used over 20 times, a reusable LDPE carryout bag results in 0.1 times the GHG emissions of a single-use HDPE plastic bag (AEA Technology, 2005).

Table 4.3-2 lists the current GHG emissions associated with the manufacturing, transportation and disposal of carryout bags in Santa Monica using the per bag GHG emissions rates discussed above and the estimated existing carryout bags used in Santa Monica from the City of Santa Monica Nexus Study (2010)(see Appendix C). The total number of single-use carryout bags used in one year in Santa Monica was estimated to be approximately 26 million (City of Santa Monica Study (Appendix C)). For this analysis it is assumed that 80% of the single-use carryout bags in Santa Monica were single-use plastic bags and 20% are single-use paper bags. It is also assumed that approximately 150,000 reusable bags were purchased for use in one year. This total would mean that each household in Santa Monica (approximately 50,405 in 2010) would have purchased at least three reusable bags in one year.

Table 4.3-2
Existing Greenhouse Gas Emissions from Carryout Bags in Santa Monica

Bag Type	Existing Number of Bags Used per Year	GHG Impact Rate per Bag	CDE (metric tons)	CDE per year (metric tons)
Single-use Plastic	20,800,000	1.0	0.04 per 1,500 bags**	555
Single-use Paper	5,200,000	3.3	0.132 per 1,000 bags***	686.4
Reusable	150,000*	2.6	0.104 per 1,000 bags***	15.6
			Total	**1,257**

CDE = Carbon Dioxide Equivalent units
Source: City of Santa Monica Nexus Study, 2010 (Appendix C)
** Approximate estimate of reusable bags purchased in one year by Santa Monica retail customers.*
*** Based on Boustead Report, 2007.*
****Based on AEA Technology "Scottish Report, 2005.*

As shown in Table 4.3-2, overall GHG emissions associated with carryout bag use in Santa Monica are 1,257 CDE per year. Compared to the statewide GHG inventory, manufacturing, use and disposal of carryout bags used per in Santa Monica represents approximately 0.00026% of the statewide GHG inventory. Because single-use paper bags used in one year have a greater impact rate per bag than single-use plastic or reusable bags, single-use paper bags represent the largest percentage of GHG emissions associated with carryout bags (55%).

d. Regulatory Setting

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 signed on March 21, 1994. The Kyoto Protocol is a treaty, made under the UNFCCC, and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5% from 1990 levels, during the first commitment period of 2008–2012. Although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol 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; http://www.epa.gov/climatechange/policy/cctp.html).

To date, the United States Environmental Protection Agency (USEPA) has not regulated GHGs under the Clean Air Act; however, the U.S. Supreme Court in *Massachusetts v. EPA* (April 2, 2007) held that the USEPA can, and should, consider regulating motor-vehicle GHG emissions. On June 30, 2009, the USEPA granted California's request for a waiver to directly limit GHG tailpipe emissions for new motor vehicles beginning with the current model year. On December 7, 2009, the USEPA determined that emissions of GHGs contribute to air pollution that "endangers public health and welfare" within the meaning of the Clean Air Act. This action finalizes the USEPA's "endangerment determination" initially proposed on April 17, 2009, and now obligates the USEPA to regulate GHG emissions from new motor vehicles. This finding sets the stage for the inevitable regulation under the Clean Air Act of GHG emissions from a wide range of stationary and mobile sources unless Congress preempts such regulation by enacting climate change legislation. Although the USEPA has not yet promulgated federal regulations limiting GHG emissions, further action is pending.

California Regulations. Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation, was signed into law in September 2002. In 2005, Executive Order S-3-05 established statewide GHG emissions reduction targets. 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 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 identified 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 S-3-05 targets are met and can be met with existing authority of the state agencies. 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.

AB 32, the "California Global Warming Solutions Act of 2006," was signed into law in the fall of 2006. AB 32 required the ARB to adopt regulations to require reporting and verification of statewide GHG emissions. The ARB was required to produce a plan by January 1, 2009 to indicate how emission reductions will be achieved from major GHG sources via regulations, market mechanisms, and other actions. In addition, this law requires the ARB to adopt regulations by January 1, 2010 to implement the early action GHG emission reduction measures that can be implemented before the adoption of those recommended by the 2009 plan. The bill requires achievement by 2020 of a statewide GHG emissions limit equivalent to 1990 emissions (essentially a 25% reduction below 2005 emission levels; the same requirement as under S-3-05), and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions.

In response to the requirements of AB 32, the ARB produced a list of 37 early actions for reducing GHG emissions in June 2007. The ARB expanded this list in October 2007 to 44 measures that have the potential to reduce GHG emissions by at least 42 million metric tons of CO_2 emissions by 2020, representing about 25% of the estimated reductions needed by 2020 (ARB, October 2007). After completing a comprehensive review and update process, the ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CDE. The scoping plan required under AB 32 was approved by the ARB Board on December 12, 2008, and it provides the outline for actions to reduce GHG in California. The scoping plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program.

Senate Bill (SB) 97, signed in August 2007, acknowledges that GCC is an environmental issue that requires analysis under CEQA. In December 2009, the California Resources Agency (Resources Agency) adopted amendments to the State 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 GHG and GCC impacts.

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

Senate Bill (SB) 375, signed in August 2008, requires the inclusion of sustainable communities' strategies (SCS) in regional transportation plans (RTPs) for the purpose of reducing GHG emissions. The bill requires ARB to set regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles, for 2020 and 2035. On January 23, 2009 ARB appointed a Regional Targets Advisory Committee (RTAC) to provide recommendations on factors to be considered and methodologies to be used in the ARB target setting process, as required under SB 375. The RTAC final report, issued on September 30, 2009, recommended "ambitious but achievable" targets, with a significant emphasis on improving home affordability (rents and mortgages) near job centers as a means to reduce driving. The ARB will set the final targets by September 30, 2010.

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**.** GHG emissions and their contribution to GCC have only recently been addressed in CEQA documents, such that CEQA and case law do not provide guidance relative to their assessment. Quantitative significance thresholds have been proposed by CARB. Quantitative significance thresholds have not been adopted by the State of California, or any particular air pollution control district (APCD). 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 regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and GCC impacts. In addition, in an effort to guide professional planners, land use officials and CEQA practitioners, OPR prepared *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA)*. This document offers informal guidance regarding the steps lead agencies should take to address climate change in CEQA documents. This guidance was developed in cooperation with the Resources Agency, Cal EPA, and the CARB.

The City of Santa Monica has developed a Sustainable City Progress Report to measure its performance in achieving goals set forth in the City's Sustainable City Plan (revised 2006). The Progress Report uses a range of indicators to measure the City's progress toward a more sustainable city. The City has included a measure of GHG emissions among its indicators because it recognizes the physical and socio-economic disruptions that climate change could cause if unabated. The target for this indicator is to reduce emissions to 30% below 1990 levels by 2015 for City operations and to reduce emissions to 15% below 1990 levels by 2015 for the City as a whole. As part of the Progress Report, beginning in 1990, the City has maintained a GHG emissions inventory (last updated November 2009), which allows the City to measure its progress toward achieving the goals contained in the Sustainable City Plan. According to the 2009 GHG Emissions Report, there was a reduction in GHG emissions from 1990 to 2007. Overall, GHG emissions in 2007 declined by 7% as compared to 1990 levels. The majority of the reduction in GHG emissions occurred in the waste sector, in which emissions fell by 48%. In addition, the City's Renewable Energy Portfolio and use of green power energy sources has also reduced community emissions (reduced by 8%) and the corporate emissions (reduced by 36%).

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. The information provided in this section is based on recently established California goals for reducing GHG emissions, as well as a specific emissions projection for the proposed Single-Use Carryout Bag Ordinance that compares to existing GHG impacts resulting from use of carryout bags in Santa Monica.

Impacts associated with GHG emissions would be significant if:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

2. *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

Determining how a project might contribute to climate change, and what the overall effect of an individual project would be based on that contribution is still undergoing debate at this time. An individual project (unless it is a massive construction project, such as a dam or a new freeway project, or a large fossil-fuel fired power plant) does not generate sufficient GHG emissions to directly influence global climate change; therefore, the issue of global climate change typically involves an analysis of whether the contribution toward a cumulative 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, the effects of other current projects, and the effects of probable future projects.

CAPCOA (January 2008) provided several approaches to consider potential cumulative significance of projects with respect to GHGs. A zero threshold approach can be considered based on the concept that climate change is a global phenomenon in that all GHG emissions generated throughout the earth contribute to it, and not controlling small source emissions would potentially neglect a major portion of the GHG inventory. However, the California Environmental Quality Act (CEQA) Guidelines also recognizes that there may be a point where a project's contribution, although above zero, would not be a considerable contribution to the cumulative impact (CEQA Guidelines, Section 15130 (a)). Therefore, a threshold of greater than zero is considered more appropriate for the analysis of GHG emissions under CEQA. Table 4.3-3 shows CAPCOA's suggested thresholds for GHG emissions. In Santa Monica, where infill projects are the norm and it is reasonably foreseeable that projects will relocate and reduce emissions, a zero threshold would be unreasonable.

Table 4.3-3
CAPCOA Suggested Thresholds for Greenhouse Gases

Quantitative (900 tons)	~900 tons CDE/year
Quantitative CARB Reporting Threshold/Cap and Trade	Report: 25,000 tons CDE/year Cap and Trade: 10,000 tons CDE/year
Quantitative Regulated Inventory Capture	~40,000 - 50,000 tons CDE/year
Qualitative Unit-Based Threshold	Commercial space > 50,000 sf*
Statewide, Regional or Areawide (CEQA Guidelines 15206(b)).	Office Space > 250,000 sf

**sf = square feet*
Sources: California Air Pollution Control Officers Association (CAPCOA), CEQA & Climate Change, January 2008.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 The proposed Single-Use Carryout Bag Ordinance is anticipated to reduce the amount of single-use carryout bags in Santa Monica and would promote reusable bags, which are intended to be used multiple times. The proposed ordinance would incrementally increase GHG emissions compared to existing conditions. However, the proposed ordinance would not exceed suggested CAPCOA thresholds and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be Class III, *less than significant*.

The intent of the Single-use Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags, and to promote the use of reusable bags by Santa Monica retail customers. As such, the proposed ordinance would incrementally reduce the number of single-use plastic carryout bags that are manufactured and incrementally increase the number of single-use paper and reusable bags that are manufactured, transported, and disposed of compared to existing conditions.

As described in the *Setting*, through the manufacturing, transportation, and disposal, each single-use paper bag results in 3.3 times the emissions compared to the manufacturing, transportation and disposal of a single-use plastic bag. If only used once, the manufacturing, 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, fewer total carryout bags would need to be manufactured, transported or disposed of compared to the existing processing activities of single-use plastic bags. Based on the proposed Green Fee for the Santa Monica Single-use Carryout Bag Ordinance (at least $0.25 per bag), it is anticipated that a reduction of approximately 50% of the total single-use bags (plastic and paper) would be achieved in Santa Monica (Santa Monica Nexus Study, 2010, Table 8) (containedAppendix C)). With a 50% reduction as a result of the proposed Single-use Carryout Bag Ordinance, the number of single-use bags would be reduced from approximately 26 million single-use bags to approximately 13 million bags. However, all 13 million single-use bags would be paper bags.

In order to estimate the number of reusable carryout bags, it is assumed that a reusable carryout bag would be used once per week for one year (52 times). Therefore, in order to replace the volume of groceries contained in the 13 million single-use plastic bags that would be removed as a result of the ordinance, an increase of approximately 250,000 reusable bags per year would be purchased by customers at retail stores. Added to the approximately 150,000 reusable bags that are currently purchased each year in Santa Monica, the proposed ordinance would result in a total of 400,000 reusable bags purchased per year by customers at retail stores.

Table 4.3-4 provides an estimate of GHG emissions that would result from the reduction of carryout bags in Santa Monica associated with the implementation of the proposed Single-use Carryout Bag Ordinance. Although the total number of carryout bags would be reduced by approximately 13 million bags per year, as a result of the increase of single-use paper bags, GHG emissions associated with the manufacturing, transport, and disposal of carryout bags would increase by approximately 501 CDE per year compared to existing conditions.

Table 4.3-4
Estimated Greenhouse Gas Emissions
from Carryout Bags in Santa Monica

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CDE (metric tons)	CDE per year (metric tons)
Single-use Plastic	0	1.0	0.04 per 1,500 bags**	0
Single-use Paper	13,000,000	3.3	0.132 per 1,000 bags***	1,716
Reusable	400,000*	2.6	0.104 per 1,000 bags***	42
			Total	**1758**
			Existing	**1,257**
			Net Change	**501**

CDE = Carbon Dioxide Equivalent units
Source: City of Santa Monica Nexus Study, 2010 (Appendix C)
** Approximate estimate of reusable bags purchased in one year by Santa Monica retail customers.*
*** Based on Boustead Report, 2007.*
****Based on AEA Technology "Scottish Report, 2005.*

As shown in Table 4.3-4, the GHG emissions associated with the manufacturing, transportation and disposal of carryout bags used in Santa Monica as a result of the proposed ordinance would be approximately 1,758 CDE per year. This represents approximately 0.00038% of California's statewide GHG inventory of 492 million CDE per year.

Based on CAPCOA suggested thresholds in Table 4.3-3, the proposed ordinance's increase of about 501 metric tons CDE/year compared to existing conditions would not exceed any of the five thresholds. Santa Monica has selected a dual threshold methodology that considers the 10,000 tons CDE/year threshold (the second lowest non-zero threshold) as a quantitative benchmark for significance and qualitative consideration of the California Environmental Protection Agency's (CalEPA) GHG emissions reduction strategies. A project's contribution to cumulative impacts to global climate change is considered cumulatively considerable if the project would generate 10,000 tons CDE/year. For projects that would generate fewer than 10,000 tons CDE/year, the impact would be considered cumulatively considerable if the project would be inconsistent with one or more of the 2006 CalEPA's Climate Action Team (CAT) Report and the 2008 Attorney General's Greenhouse Gas Reduction Report. The CAT strategies are recommended to reduce GHG

emissions at a statewide level to meet the goals of the Executive Order S-3-05 (http://www.climatechange.ca.gov). In addition, the Attorney General's Greenhouse Gas Reduction Report was prepared in 2008 by the California Attorney General's Office. This report specifies measures that may reduce global warming related impacts at the individual project level. Several of the actions identified in the tables below are already required by California regulations.

Tables 4.3-5 and 4.3-6 illustrate that the proposed Single-use Carryout Bag Ordinance would be consistent with the GHG reduction strategies set forth by the 2006 CAT Report and the 2008 Attorney General's Greenhouse Gas Reduction Report.

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

Strategy	*Project Consistency*
California Air Resources Board	
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.	**Consistent** The trucks that deliver carryout backs to and from Santa Monica on public roadways would be in compliance with ARB vehicle standards that are in effect at the time of vehicle purchase.
Diesel Anti-Idling The ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.	**Consistent** Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to Santa Monica are subject to this state-wide law.
Alternative Fuels: Biodiesel Blends ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.	**Consistent** The diesel vehicles that deliver carryout bags to and from Santa Monica on public roadways could utilize this fuel once it is commercially available.
Alternative Fuels: Ethanol Increased use of E-85 fuel.	**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.
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.	**Consistent** The heavy-duty trucks that deliver carryout bags to and from Santa Monica on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture.
Achieve 50% Statewide Recycling 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	**Consistent** The City has completed a comprehensive waste reduction and recycling plan in compliance with State Law AB 939, which requires every city in California to reduce the waste it sends to landfills by 50% by the year 2000. As of 2000, the City was recycling 55% of its solid waste, thereby complying with the standards established by AB 939. Currently, the City requires that 65% of all solid waste, including carryout bags that are disposed of, be diverted from landfills, which is

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

Strategy	*Project Consistency*
diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.	higher than the State mandate of 50%. The City has also set a goal of increasing the amount of solid waste diverted from landfills to 70% by the year 2010 (City of Santa Monica Sustainable City Plan, 2003). Any disposal of carryout bags would be required to adhere to the existing standards.
Zero Waste – High Recycling Efforts to exceed the 50% goal would allow for additional reductions in climate change emissions.	**Consistent** As described above, the City has set a goal of diverting 70% of solid waste by 2010. The proposed ordinance would also assist by promoting reusable carryout bags, thus reducing the amount of solid waste attributed to single-use carryout bags.
Energy Commission (CEC)	
Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.	**Consistent** Carryout bag delivery drivers could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.
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.	**Consistent** Carryout bag delivery drivers could purchase alternative fuel vehicles and utilize these fuels once they are commercially available regionally and locally.

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

Strategy	*Project Consistency*
Transportation-Related Emissions	
Diesel Anti-Idling Set specific limits on idling time for commercial vehicles, including delivery vehicles.	**Consistent** Currently, the CARB'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 Santa Monica are subject to this state-wide law.
Solid Waste and Energy Emissions	
Solid Waste Reduction Strategy Project construction shall require reuse and recycling of construction and demolition waste.	**Consistent** The City has completed a comprehensive waste reduction and recycling plan in compliance with State Law AB 939, which requires every city in California to reduce the waste it sends to landfills by 50% by the year 2000. As of 2000, the City was recycling 55% of its solid waste, thereby complying with the standards established by AB 939. Currently, the City requires that 65% of all solid waste, including carryout bags that are disposed of, be diverted from landfills, which is higher than the State mandate of 50%. The City has also set a goal of increasing the amount of solid waste diverted from landfills to 70% by the year 2010 (City of Santa Monica Sustainable City Plan, 2003). 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 attributed to single-use carryout bags.

The proposed Single-use Carryout Bag Ordinance would result in a net increase of approximately 501 CDE per year. However, the increase of GHG emissions would be less than 10,000 CDE per year and the Single-use Carryout Bag 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 Single-use Carryout Bag Ordinance would be consistent with the objectives of AB 32, SB 97, SB 375 and the Santa Monica Sustainable City Plan. Impacts would be less than significant.

Mitigation Measures. No mitigation is required since the impact would not be significant.

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

c. Cumulative Impacts. Similar to the proposed Santa Monica Carryout Bag Ordinance, adopted or 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 plastic and paper bags, and promote a shift towards reusable carryout bags. As discussed above, the greenhouse gas emissions impacts associated with the proposed Santa Monica Single-use Carryout Bag Ordinance are not considered significant. Other existing or proposed carryout bag ordinances throughout California would be expected to result in similar impacts related to greenhouse gas 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

Carryout bags are manufactured at various facilities, which may or may not be located in Santa Monica or in Los Angeles County. 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 carryout bags.

a. Surface Water Drainage and Carryout Bags. The majority of Santa Monica (approximately 95%) is located within the Santa Monica Bay Watershed, which drains directly to the Pacific Ocean. The Santa Monica Bay Watershed comprises the 414 square mile area of land that drains naturally to the Bay, bordered on the north by the Santa Monica Mountains from Ventura-Los Angeles County line to Griffith Park, extending south and west across the Los Angeles coastal plain to include the area east of Ballona Creek and north of Baldwin Hills, south of Ballona Creek, a narrow coastal strip between Playa del Rey and the Palos Verdes Peninsula forms the southern boundary of the watershed. A small portion of Santa Monica (approximately 5%) is located within the Ballona Creek Watershed. Ballona Creek is a nine-mile long flood protection channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Ballona Creek Watershed totals about 130 square miles (LACDPW, 2010). With flow directly to Santa Monica Bay, pollutants and other substances that enter Ballona Creek, will eventually empty into the Pacific Ocean.

The overall drainage flow pattern within the City is from the north and east to the south and west. An underground storm drain system collects surface runoff through a series of catch basins and carries the majority of the storm water west to the Santa Monica Urban Runoff Recycling Facility (SMURRF). The SMURRF was constructed and placed in operation by the City in 2001 to intercept and treat up to 500,000 gallons per day (gpd) of dry-weather runoff with the capability to also treat small first flush storm events up to 750,000 gpd. The City of Santa Monica Utilities Division manages storm water collection for Santa Monica.

Carryout bags that enter the storm drain system 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 5-9 grams and are made of thin (less than 2.25 millimeters thick) high density polyethylene (HDPE) (Hyder Consulting, 2007). Post-use from a retail store, a customer a may reuse a single-use plastic bag at home, but eventually the bags are disposed in the 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 and nationwide are currently recycled (US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007). The majority of single-use plastic bags end up as litter or in the landfill, and

even those in the landfill may be blown 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 or the Pacific Ocean.

Single-use paper grocery bags also have the potential to enter the storm drains as litter. As described in Section 4.2, *Biological Resources*, because of the weight, biodegradability of the materials, 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, there is less potential to clog catch basins compared to single-use plastic bags. Thus, although single-use paper bag litter may enter storm drains and affect hydrologic flow of surface water runoff, the potential to enter storm drains and cause hydrologic affects is less than with single-use plastic bags.

Reusable bags may also become litter and enter storm drains; however, these bags differ from the single-use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloth such as vinyl or cotton. Built to withstand many uses, reusable bags weigh at least 10 times what a single-use plastic bag weighs and 2 times what a single-use paper bag weighs, therefore restricting the movement by wind. 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 be carried from landfills by wind as litter 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 Carryout Bags. The quality of the storm water draining into Santa Monica Bay remains a concern for the region. Each year, an average of 30 billion gallons of storm water and urban runoff are discharged through more than 200 outlets. Even in dry weather, 10 to 25 million gallons of water flow through storm drains into Santa Monica Bay every day (The Santa Monica Bay Restoration Commission, 2005). Street litter, garden fertilizers, pesticides, animal feces, oil, grease, and other contaminants generated from motor vehicles are some of the many urban wastes that are carried to the ocean along with rainwater. Over 100 National Pollutant Discharge Elimination System (NPDES) permitted dischargers release treated wastewater into these channels. Accidental sewer-overflows, as well as other miscellaneous wastewater from commercial and industrial sources, such as fire fighting wastewater, illegally discharged household and industrial hazardous wastes, and operational spills (i.e., truck and work area washdowns) are potential dischargers into the channels.

Surface runoff constitutes the largest source of contaminants to the Bay and may be an important source of trace metals, pesticides, and coliform bacteria to the Bay (Santa Monica Civic Center Specific Plan EIR). Coliform bacteria are of particular concern since surface runoff discharges across or near beaches, where the likelihood of contact with swimmers is high. Coliform counts are several times higher during and just after rains than on dry days. 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.

Water quality may be affected by carryout bags in two different ways, litter from carryout bags and the use of materials for processing activities. As described above in *Surface Water Drainage*

and Water Quality, 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 requirement (as described below in the *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-plastic bags are more likely to affect water quality as a result of litter, the manufacturing process utilizes "pre-production plastic," which may degrade water quality if released either directly to a surface water body or indirectly through storm water runoff. Single-use paper carryout bags have less litter-related effect 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). This 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 if discharged into water bodies, either directly or indirectly through storm water runoff. If released into the environment, these potential pollutants can degrade water quality in local water bodies.

Reusable carryout bags are less likely to affect water quality. 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). However, similar to single-use paper carryout bags, reusable bags can utilize materials in the manufacturing process 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 are also regulated under the NPDES system. Although the CWA has established 126 "priority contaminants (metals and organic chemicals), the California Ocean Plan has 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 primary state agency responsible for implementing the CWA and the state's Porter-Cologne Water Quality Act within state waters. 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, to monitor their discharges, and to submit monthly reports to the RWQCB and the EPA.

In addition to infrastructure deficiencies, the increasing volume of storm water runoff has become the major source of pollutants discharging into the Santa Monica Bay. As a co-permittee under the Los Angeles County NPDES, the City of Santa Monica is obligated to

implement a Standard Urban Water Mitigation Plan and Best Management Practice procedures to regulate and reduce urban runoff. As a result, the City requires all new construction to mitigate runoff to a storm event, equal to ¾" of rainfall within a consecutive 24-hour period. The Sustainable City Program also established a target to reduce by 60% the total volume of dry weather storm drain discharge to the ocean by Year 2000. The purpose of this goal was to reduce the amount of polluted runoff entering Santa Monica Bay. In addition, the RWQCB is currently developing a Trash Total Maximum Daily Load (TMDL) for the Santa Monica Bay Watershed which is scheduled for adoption in September 2010. The intent of the Trash TMDL is to reduce the amount of litter/waste that enters Santa Monica Bay which impacts the surface flow and water quality. Although the Trash TMDL is still under development, the Board is anticipating that the implementation schedule will be similar to existing Trash TMDLs, with reductions starting in year 4 (late 2014 or early 2015), and 100% reduction in year 8 (2018 or 2019). For non-point sources, a Trash Monitoring and Reporting Plan (TMRP) must be completed and submitted to the RWQCB. Once submitted, monitoring must occur to ensure the TMRP is being properly implemented.

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 Resource Control Board and RWQCBs to implement a program 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 (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. Additionally, the Los Angeles Regional Water Quality Control Board has conducted hundreds of inspections of facilities suspected to be "non-filers," or facilities subject to the permit, but have not enrolled. 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."

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. The Initial Study (contained in Appendix A) determined that the Santa Monica Single-use Carryout Bag Ordinance would not deplete groundwater supplies, alter the course of any stream or other drainage, increase the potential for flooding, contribute runoff water, or expose people or structures to significant flood hazards. The Initial Study also found that no impact due to flooding, dam or levee failures, seiches, or tsunamis is anticipated. Thus, further analysis of these issues in the EIR is not warranted.

The Initial Study determined that the proposed project could result in potentially significant impacts related to water quality and waste discharge requirements. Therefore, analyses of impacts related to these issues are included in this section of the EIR. Impacts would be considered potentially significant if the proposed project would:

- *Violate any water quality standards or waste discharge requirements*
- *Otherwise substantially degrade water quality*

b. Project Impacts and Mitigation Measures.

Impact HWQ-1 Although the proposed Carryout Bag Ordinance would incrementally increase the number of single-use paper and reusable bags within Santa Monica, the overall reduction in the total amount of carryout bags would incrementally reduce the amount of litter and waste entering storm drains, improving water quality. This would be a Class IV, *beneficial*, effect.

The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City, and requires that a minimum of 40% post-consumer, recycled content and 100% recyclable. The intent of the ordinance is to reduce the amount of single-use plastic and paper carryout bags and promote the use of reusable bags by Santa Monica retail customers.

Each type of carryout bags' potential to become litter is based on the bag's weight, material and quantity of bags used within Santa Monica. 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, and even those in the landfill may be blown 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 the City of Santa Monica Nexus Study (2010) (see Appendix C), in one year approximately 20,800,000 single-use plastic bags are

used in Santa Monica.

Similarly, single-use paper grocery bags also 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 the weight, biodegradability of the materials, 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, it would be less likely for single-use paper bags to block or clog drains compared to single-use plastic bags and would therefore be less likely to result in storm drain blockage or contamination compared to single-use plastic bags. Based on the City of Santa Monica Nexus Study (Appendix C), in one year approximately 5.1 million single-use paper bags are used in Santa Monica.

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). Reusable bags are less likely to become litter compared to single-use plastic and paper carryout bags. 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. It is estimated that approximately 150,000 reusable carryout bags per year are purchased within Santa Monica (approximately 3 bags per household per year).

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 carryout bags used in Santa Monica per year by approximately 13 million bags. Therefore, the proposed Single-use Carryout Bag Ordinance would reduce the amount of litter associated with single-use plastic carryout bags. Reducing the amount of litter that enters the storm drain system and Santa Monica Bay would be consistent with goals of the Santa Monica Bay Trash Total Maximum Daily Load (TMDL), which targets a 100% reduction in year 8 (2018 or 2019). Therefore, water quality would benefit from the proposed Single-use Carryout Bag Ordinance, which would be expected to incrementally reduce the amount litter that could enter storm drains and local waterways, thus improving water quality and reducing the potential for storm drain blockage.

Mitigation Measures. Water quality and storm drains and associated hydrological conditions would benefit from the proposed Carryout Bag Ordinance because the proposed ordinance would be expected to incrementally reduce 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 could potentially alter processing activities related to bag production, which could potentially degrade water quality in some instances and locations. However, bag manufacturers would be required to adhere 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, *less than significant*.

The manufacturing process for single-use plastic and paper carryout bags and reusable bags utilize various chemicals and materials. Single-use plastic bag manufacturers utilize "pre-production plastic." As discussed in the *Setting*, single-use paper carryout bags and reusable carryout 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. If released into the environment, these pollutant materials from the processing activities for carryout bags could degrade water quality.

The intent of the proposed Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags and promote the use of reusable bags by Santa Monica retail customers. As such, the proposed ordinance would be expected to incrementally reduce the number of single-use plastic carryout bags that are manufactured and would incrementally increase the number of single-use paper and reusable bags manufactured. Based on the proposed Green Fee for the Santa Monica Single-use Carryout Bag Ordinance (at least $0.25 per bag), it is anticipated that a reduction of approximately 50% of the total single-use bags (plastic and paper) would be achieved in Santa Monica (Santa Monica Nexus Study, 2010 Table 8)(contained in Appendix C). With a 50% reduction as a result of the proposed Single-use Carryout Bag Ordinance, the number of single-use bags (plastic and paper) would be reduced to approximately 13 million. However, all single-use carryout bags would be paper bags.

Conventional single-use plastic bags are a product of the petrochemical industry. 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 the *Setting*, the plastic resin pellets are a concern when accidentally released (from spilling into storm drains during use or transport) into aquatic environments. AB 258 was enacted to address these concerns by implementing program control measures which 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.

In addition, 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 United States Environmental Protection Agency (USEPA) set forth Preliminary Remediation Goals (PRGs) for various pollutants in soil, air, and tap water (USEPA Region IX, Preliminary Remediation Goals Tables, 2002). 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.

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 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. 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).

Single-use paper bag manufacturers would be required to comply with the local plans and policies of the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) which regulate discharges to surface and groundwater, regulate waste disposal sites, and require clean up of discharges of hazardous materials and other pollutants. For example, in Los Angeles County, single-use paper bag manufacturers would be required to adhere to the County Standard Urban Storm Water Mitigation Plan (SUSMP) (March 2000) which specifies requirements for Site Design Best Management Practices (BMPs), Source Control BMPs, and Treatment Control BMPs. Site Design BMPs are BMPs that are incorporated into the design of a manufacturing facility such as conserving natural areas and properly designing trash storage areas. Source Control BMPs are pollution prevention BMPs that can be structural or nonstructural practices. Treatment Control BMPs are physical devices that remove pollutants from storm water. Single-use paper bag manufacturing facilities would be required to implement BMPs, reducing the likelihood that pollutants would enter storm drains and other aquatic environments.

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 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.

Although various materials that could be considered pollutants if released may used in the process to manufacture single-use plastic, single-use paper and reusable bags, manufacturing facilities would generally be located in areas zoned for industrial land use and generally would not be expected to be located in close proximity to an existing surface water body. In addition, although the proposed Single-use Carryout Bag Ordinance would be expected to incrementally increase the manufacturing of single-use paper bags (increase from approximately 5 million to approximately 13 million) and reusable bags (increase from 150,000 to 400,000 reusable bags per year in Santa Monica), it would also incrementally reduce the existing number of single-use plastic bags manufactured. It is anticipated that the total amount of single-use carryout bags (plastic and paper) would be reduced by approximately 50% (from approximately 26 million single-use plastic and paper bags per year to approximately 13 million single-use paper bags per year) (Santa Monica Nexus Study, 2010 Table 8)(contained in Appendix C). With implementation of the proposed ordinance, approximately 13.4 million carryout bags (single-use paper and reusable bags) would be manufactured for use in Santa Monica compared to approximately 26 million carryout bags per year (single-use plastic, paper and reusable bags) that are currently manufactured for use in Santa Monica. Therefore, the proposed ordinance would reduce the overall impacts to water quality associated with bag manufacturing.

The proposed Santa Monica Single-use Carryout Bag Ordinance would incrementally increase the amount of single-use paper and reusable carryout bags manufactured. However, any existing or potential manufacturing facilities would be required to adhere to existing federal, state and local regulations which are intended to protect water quality. Paper and 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 require 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. Thus, by obtaining and compliance with an Individual NPDES Permit, impacts to water quality as a result of discharges from a single-use paper or reusable carryout bag manufacturing facility would be less than significant.

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 Los Angeles County, reusable bag manufacturers must comply with the "Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach"

(NPDES Permit No. CAS00401, dated December 13, 2001, issued by the California Regional Water Quality Control Board – Los Angeles Region). Therefore, single-use paper and reusable bag manufacturers would be required to adhere to the County Standard Urban Storm Water Mitigation Plan (SUSMP) (March 2000) which specifies requirements for Site Design Best Management Practices (BMPs), Source Control BMPs, and Treatment Control BMPs. During operation of single-use paper and reusable carryout bag manufacturing facilities, additional Best Management Practices (BMPs) would be designed and installed to comply with the NPDES General Permit in order to reduce the discharge of potentially polluted runoff. A storm water mitigation plan may be required to include (1) collection, storage, and minimization of urban runoff; (2) maintenance of equipment; (3) removal of debris; and (4) prohibition of the use of any pesticides and fungicides that are banned by the USEPA. With implementation of BMPs as required by the local NPDES General Permit, impacts to water quality as a result of storm water runoff at a single-use paper or reusable carryout bag manufacturing facility would be less than significant.

Although reusable bags may utilize various materials, reusable carryout 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 the *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 carryout 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.

Since the proposed Carryout Bag Ordinance would incrementally reduce the number of single-use plastic carryout bags manufactured, impacts to water quality associated with those manufacturing facilities would be reduced compared to existing conditions. With implementation and compliance with the required regulatory framework, including the NPDES Permit, AB 258 and the California Health and Safety Code, impacts to water quality as result of single-use paper and reusable carryout bag processing activities would also be incrementally reduced. Therefore, impacts to water quality related to the potential change of processing activities as a result of the proposed Santa Monica Single-use Carryout Bag Ordinance would not be significant.

Mitigation Measures. As the impact would not be significant, 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. Similar to the proposed Santa Monica Carryout Bag Ordinance, adopted or 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 plastic and paper bags, and promote a shift towards reusable carryout bags. As discussed above, the hydrology and water quality impacts associated with the proposed Santa Monica Single-use Carryout Bag

Ordinance are not considered significant and are generally considered beneficial. Other existing or proposed carryout bag ordinances throughout California would be expected to result in similar reductions in the amount 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 single-use paper and reusable bag manufacturing facilities would be required to 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 carryout bag ordinances throughout the state are not anticipated.

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4.5 TRANSPORTATION/TRAFFIC

This section discusses the proposed ordinance's potential impacts to the local circulation system.

4.5.1 Setting

a. Existing Transportation System in Santa Monica . In addition to being a regional destination, Santa Monica is surrounded by a variety of traffic generators. A substantial portion of the traffic on Santa Monica's major streets and thoroughfares is made up of vehicles passing through the City from neighboring communities to other neighboring communities (City of Santa Monica Draft LUCE EIR, 2009). Communities in the vicinity of Santa Monica include Brentwood to the north; West Los Angeles, Westwood, and the University of California, Los Angeles (UCLA) to the east; and Venice and Los Angeles International Airport (LAX) to the south.

Regional access to Santa Monica is provided primarily by the Santa Monica Freeway (I-10), the San Diego Freeway (I-405), Wilshire Boulevard, Santa Monica Boulevard, Lincoln Boulevard (SR 1) and Cloverfield Boulevard. Overburdening of the regional transportation system results in the use of many additional roadways in the City for travel to and from various destinations. This places pressure on the City's internal transportation network (City of Santa Monica Draft LUCE EIR, 2009).

Within Santa Monica, current and planned investments in the transit system currently provide, and will continue to provide, additional capacity. Wilshire Boulevard, Santa Monica Boulevard, Pico Boulevard, and Lincoln Boulevard all serve as Rapid Bus corridors. The Exposition Light Rail line from Santa Monica through West Los Angeles to downtown Los Angeles is a major planned transit enhancement, with three stations in Santa Monica (Bergamot Station, Memorial Park, and Downtown) with operation expected to begin in 2015. Preliminary planning is also underway for a subway extension along Wilshire Boulevard (City of Santa Monica Draft LUCE EIR, 2009).

b. Carryout Bag Traffic. Traffic resulting from the use of carryout bags is associated with trucks delivering the products to retail stores. Estimated existing truck trips associated with carryout bag delivery in Santa Monica is shown in Table 4.5-1. It has been suggested that paper bags "are anywhere between six to ten times heavier than lightweight plastic carrier bags, and therefore require more transport and its associated costs" (Stephen L. Joseph, January 12, 2009). As shown in Section 2.0, *Project Description*, the analysis contained in this EIR estimates that single-use paper bags (approximately 50 – 100 grams) are approximately ten times heavier than single-use plastic bags (approximately 5 – 9 grams). In addition, this EIR assumes that reusable bags (approximately 50 – 200 grams) are at least ten times heavier than single-use plastic bags.

To estimate the existing truck traffic associated with delivering carryout bags to retail stores in Santa Monica, this analysis utilizes the average total of single-use bags used per year (approximately 26 million single-use bags) within the baseline data calculated for the City of Santa Monica Nexus Study (2010)(see Appendix C) and takes into account the approximate

Table 4.5-1
Existing Truck Trips per Year

Bag Type	Number of Bags per Year	Number of Bags per Pallet	Number of Pallets per Truck Load*	Number of Bags per Truck Load	Number of Truck Trips per Year
Single-use Plastic	20,800,000	40,000	52	2,080,000	10
Single-use Paper	5,200,000	7,875	28	217,665	24
Reusable	150,000**	3,938	28	108,862	2
				Total	**36**

Source: City of Santa Monica Nexus Study, 2010 (Appendix C).
** Maximum pallets per truck load is 52 based on a 48" X 45" pallet. Maximum weight per truck is 80,000 lbs (total truck + cargo) – 32,000 lbs (weight of empty truck) = 48,000 lbs per load.*
*** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*

weight of carryout bags (as described in Section 2.0, *Project Description*). The analysis assumes that approximately 80% of existing single-use carryout bags in Santa Monica are single-use plastic bags and that 20% are single-use paper bags. It is also assumed that approximately 150,000 reusable bags were purchased for use in one year. This total would mean that every household in Santa Monica (approximately 50,405 in 2010) would have purchased at least three reusable bags in one year. The estimate of truck trips also assumes that carryout bags are transported via a standard 53-foot diesel delivery truck, which has a maximum load capacity of approximately 48,000 pounds and a maximum capacity to hold approximately 52 pallets (at 48" X 45"). It is also utilizes an estimate from the Nexus Study (Appendix C) that one pallet can hold approximately 40,000 single-use plastic bags or 7,875 single-use paper bags. Based on the weight of reusable bags (as described in Section 2.0, *Project Description*), it is assumed that a pallet can hold approximately 3,938 reusable bags. As shown in Table 4.5-1, based on an average of 26 million single-use carryout bags used per year in Santa Monica, approximately 36 truck trips per year (approximately 0.14 truck trips per work day) are currently necessary to deliver carryout bags to City retailers. It should also be noted that exact routes that trucks may use in delivering carryout bags is undetermined. However, it is anticipated that trucks would primarily travel along major freeways and arterial streets where commercial retailers are located.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. The methodology used in this assessment included a review of readily relevant literature regarding carryout bags and delivery of products to retailers and based on an estimate of anticipated truck trips associated with the proposed Single-use Carryout Bag Ordinance. As described in the *Setting*, based on the weight of carryout bags, the size of delivery trucks, the maximum weight of trucks and the

estimated amount of carryout bags that would be used by customers in Santa Monica per year as a result of the proposed ordinance, an overall estimate of the anticipated truck trips was determined and compared to existing thresholds. According to the City of Santa Monica's CEQA thresholds, the proposed ordinance would create a transportation/traffic significant impact if it would:

1. *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*
2. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*
3. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*
4. *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*
5. *Result in inadequate emergency access?*
6. *Result in inadequate parking capacity?*
7. *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*
8. *Involve right-of-way dedication resulting in a reduced lot area?*
9. *Reduce access to other properties and uses?*
10. *Create abrupt grade differential between public and private property?*

The Initial Study (see Appendix A) concluded that only the first two criteria could potentially result in a significant impact while the last eight do not apply to the proposed Single-use Carryout Bag Ordinance and would result in no impact. Hence, only the first two criteria are addressed in this section.

b. Project Impacts and Mitigation Measures.

Impact T-1 The proposed Single-use Carryout Bag Ordinance is expected to generate less than one net new average weekday truck trip. This increase in trucks traveling on the surrounding roadway network would not result in a substantial increase in the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. The impact to the existing traffic load and capacity of the street system would be Class III, *less than significant*.

As described in Section 2.0, *Project Description*, the proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city, and requires that a minimum of 40% post-consumer, recycled content and 100% recyclable. Based on a Green Fee of at least $0.25 per paper bag, it is anticipated that the number of single-use carryout bags in Santa Monica would be reduced by approximately 50% (City of Santa Monica Nexus Study, 2010, Table 8)(see Appendix C). Based on an average of approximately 26 million single-use carryout bags currently used in Santa Monica annually, a 50% reduction in single-use bags as a result of the proposed ordinance would reduce the overall number of single-use bags

used in Santa Monica to approximately 13 million bags per year. However, all 13 million single-use bags would be paper bags.

It is assumed that a reusable carryout bag would be used once per week for one year (52 times). Therefore, in order to replace the volume of groceries contained in the 13 million single-use plastic bags that would be removed as a result of the proposed ordinance, an increase of approximately 250,000 reusable bags per year would be purchased by customers at retail stores. Added to the approximately 150,000 reusable bags that are currently purchased each year in Santa Monica, the proposed ordinance would result in a total of 400,000 reusable bags per year purchased by customers at retail stores. This analysis assumes that as a result of the proposed ordinance the existing total volume of groceries currently carried in approximately 26 million single-use plastic and single-use paper carryout bags would be carried within approximately 13.4 million reusable and single-use paper bags.

The anticipated truck trips associated with the delivery of approximately 13 million single-use paper bags and approximately 400,000 reusable carryout bags to retailers in Santa Monica is summarized in Table 4.5-2. As shown in Table 4.5-2, implementation of the proposed ordinance would be expected to generate an estimated 28 net new truck trips per year or approximately 0.11 truck trips per weekday.

Table 4.5-2
Estimated Truck Trips per Year
Following Implementation of the Proposed Single-use Carryout Bag Ordinance

Bag Type	Number of Bags per Year	Number of Bags per Truck Load	Truck Trips per Year	Truck Trips per Weekday
Single-use Plastic	0	2,080,000	0	0
Single-use Paper	13,025,000*	217,665	60	0.23
Reusable	400,000**	108,862	4	0.014
		Total	**64**	**0.24**
		Existing Truck Trips	(36)	(0.14)
		Net New Truck Trips	**28**	**0.11**

**Based on estimated 50% reduction compared to baseline data as a result of the implementation of the Single-use Carryout Bag Ordinance, per the City of Santa Monica Nexus Study, 2010 (Appendix C).*
*** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*

Truck trips would be expected to primarily utilize major regional transportation facilities (such as the Santa Monica and San Diego freeways and Pacific Coast Highway) and major arterials in the City (such as Wilshire Boulevard and Santa Monica Boulevard). Trucks may periodically travel on residential streets, but an increase of less than one truck trip per weekday would not

cause a significant traffic impact at any existing intersections or street segments in Santa Monica. Therefore, impacts related to the existing traffic load and capacity of the local street system would less than significant.

Mitigation Measures. Mitigation measures would not be required.

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

Impact T-2 Based on Los Angeles County Congestion Management Program (CMP) criteria, the anticipated truck trips associated with the proposed Single-use Carryout Bag Ordinance would result in Class III, *less than significant*, impacts to CMP identified freeway monitoring segments and arterial intersections.

The CMP guidelines require that the first issue to be addressed is the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are the following:

- *All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.*
- *All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.*

The CMP arterial monitoring intersection nearest to the center of Santa Monica is at Cloverfield Boulevard/Santa Monica Boulevard. Based on the estimated truck trips generated by the proposed Single-use Carryout Bag Ordinance, as shown in Table 4.5-2, the proposed ordinance would generate less than one new truck trip per day. Thus, it would not add more than 50 net vehicles per hour (vph) at the Cloverfield Boulevard/Santa Monica Boulevard intersection during either peak hour and a CMP arterial intersection analysis is not required. Impacts to CMP arterial monitoring intersections would not be significant.

The nearest mainline freeway monitoring location nearest to the center of Santa Monica is I-10 at Lincoln Boulevard (Station No. 1010). Based on the incremental increase in truck trips associated with the proposed ordinance (less than one truck trip per day), the proposed Single-use Carryout Bag Ordinance would not add new traffic exceeding the 150 peak hour trip freeway analysis criterion at this location. Therefore, no further CMP freeway analysis is required and impacts to mainline freeway monitoring locations would not be significant.

Mitigation Measures. No mitigation measures would be 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 plastic and paper bags and promote a shift towards reusable carryout bags. Similar to what is expected to occur in Santa Monica, minor increases in truck traffic could occur. Four other ordinances are either adopted or pending in Los Angeles County (City and County of Los Angeles, City of Malibu, and City of Manhattan Beach). The actual change in truck trips would depend on the size of the individual community and the nature or the ordinance. However, in no case would changes in truck traffic be expected to have the potential for significant impacts to the local or regional transportation systems as any increase in truck traffic would be minor in comparison to regional traffic.

As discussed above, the traffic impacts associated with the proposed Santa Monica Single-use Carryout Bag Ordinance would not be significant. Similar to the proposed Santa Monica ordinance, other existing or proposed carryout bag ordinances located in Los Angeles County and throughout California would likely result in a reduction in the amount of single-use plastic bags delivered to retailers and increasing deliveries of reusable bags and an increase in truck trips for the delivery of single-use paper and reusable bags. However, such changes would not substantially alter overall travel patterns or in themselves overburden local or regional transportation systems. Significant cumulative traffic impacts are not anticipated.

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* requires 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. The proposed Single-Use Carryout Bag Ordinance's growth-inducing potential is therefore 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 Single-use Carryout Bar Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City, and requires that a minimum of 40% post-consumer, recycled content and 100% recyclable. The intent of the ordinance is to reduce the amount of single-use plastic and paper carryout bags and promote the use of reusable bags by Santa Monica retail customers. The proposed Single-use Carryout Bag Ordinance would not include development of any physical structures or involve any construction activity. Therefore, the proposed Single-use Carryout Bag Ordinance would not be growth-inducing as it would not affect long-term employment opportunities or increase the City's population.

The Green Fee would charge customers for each paper carryout bag provided by the affected stores. Revenues generated by the fee would be used to offset the costs to the City for implementation and enforcement of the ordinance, and to compensate the affected stores for increased costs related to compliance with the ordinance. Stores would be required to indicate on the customer receipt the number of paper carryout bags provided and the total amount of Green Fee charged. The stores would be required to regularly report and remit to the City the regulatory portion of the Green Fees collected. The Single-use Carryout Bag Ordinance's Green Fee would not affect economic growth and therefore would not be significant.

5.1.2 Removal of Obstacles to Growth

The proposed Single-use Carryout Bar Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. No improvements to water, sewer, and

drainage connection infrastructure would be necessary. No new roads would be required. Because the proposed ordinance would not include any physical development or construction related activities 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 Single-Use Carryout Bar Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. As a City ordinance, the proposed Single-use Carryout Bag Ordinance 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 (single-use paper and reusable bags) to Santa Monica would incrementally reduce 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 carryout bags in Santa Monica, 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 501 CDE/year) compared to existing conditions, the Single-use Carryout Bag Ordinace would be consistent with applicable plans, policies and regulations related to reducing GHG emissions. Thus, the proposed Single-use Carryout Bag 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 three alternatives are evaluated:

- *Alternative 1: No Project (a carryout bag ordinance is not adopted)*
- *Alternative 2: Ban on Single-use Plastic, No Green Fee*
- *Alternative 3: Ban on Both Single-use Plastic and Paper Carryout Bags*

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

6.1 NO PROJECT ALTERNATIVE

6.1.1 Description

The No Project alternative assumes that the proposed Single-use Carryout Bag Ordinance would not be adopted. Thus, the use of carryout bags at retail stores in Santa Monica would not change compared to current conditions. Single-use plastic and paper carryout bags would be available free-of-charge to customers at most retail stores in Santa Monica. In addition, reusable carryout bags would be available for purchase by retailers.

6.1.2 Impact Analysis

No change in environmental conditions would occur under this alternative because no bans or fees on carryout bags would occur. Thus, Santa Monica retail customers would have no incentive to alter their existing carryout bag preferences. Existing conditions would not change under this alternative. Therefore, none of the impacts in the studied issue areas associated with the proposed ordinance would occur. Although the No Project alternative would not create any significant impacts, this alternative would not achieve the proposed ordinance's beneficial effects relative to air quality, biological resources (sensitive species), and hydrology and water quality, nor would it result in the general benefits with respect to litter accumulation that are expected to result from implementation of the proposed ordinance. Because this alternative would not reduce the use of single-use plastic bags in Santa Monica, impacts to the marine environment and water quality as a result of single-use plastic bag litter and pollution would remain the same.

6.2 BAN ON SINGLE-USE PLASTIC, NO GREEN FEE

6.2.1 Description

Similar to the proposed Single-use Carryout Bag Ordinance, this alternative would prohibit all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale. However, it would not create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in Santa

Monica. It is anticipated that by prohibiting single-use plastic carryout bags, this alternative would reduce the number of single-use plastic bags within the City, while promoting a shift to the use of reusable bags by Santa Monica retail customers. However, without a Green Fee, customers may be persuaded to increase the use of single-use paper bags compared to existing conditions since there would be no monetary incentive to primarily use reusable carryout bags. It is assumed that with this alternative, the anticipated number of single-use paper bags used per year in Santa Monica would be the same as the current number of single-use carryout bags (approximately 26 million single-use paper bags).

6.2.2 Impact Analysis

a. Air Quality. Similar to the proposed ordinance, with a ban on single-use plastic bags, this alternative would reduce the air emissions associated with the manufacturing, transportation, and disposal of approximately 20 million single-use plastic bags. However, without a Green Fee on single-use paper carryout bags, this alternative may increase the use of single-use paper bags in Santa Monica as retail customers would not have a monetary incentive to use reusable bags and may simply switch from single-use plastic bags to single-use paper bags. As described in Section 4.1, *Air Quality*, since single-use paper bags have a greater per bag impact compared to a single-use plastic bag, if the number of single-use paper bags used in Santa Monica as a result of this alternative equals the existing number of single-use plastic bags (approximately 26 million), the increase in air emissions may incrementally increase air pollutant emissions compared to the proposed ordinance. Thus, impacts related to air quality as a result of the Ban on Single-use Plastic Bags, No Green Fee alternative would be incrementally increased compared to the proposed ordinance.

b. Biological Resources. Similar to the proposed project, this alternative would ban single-use plastic carryout bags, thereby incrementally reducing the amount of single-use plastic bag litter (approximately 20.8 million bags) that could enter the marine environment and affect sensitive species. Although this alternative may incrementally increase the use of single-use paper bags in Santa Monica as compared to the proposed ordinance, as described in Section 4.2, *Biological Resources*, the impacts would be less than those of single-use plastic bags. Because of the weight, biodegradability of the materials, 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, there would be less risk of entanglement if entering the marine environment compared to single-use plastic bags. Therefore, similar to the proposed ordinance, the impact to sensitive species as a result of littler entering the marine environment would be beneficial.

c. Greenhouse Gases. This alternative would be expected to increase the number of single-use paper bags (by approximately 13 million bags) as compared to the proposed ordinance since there would be no Green Fee to promote the use of reusable bags. Therefore, the overall number of carryout bags used in Santa Monica as a result of this alternative would be greater than with the proposed ordinance. This alternative would result in an increase of greenhouse gas emissions associated with an overall increase in the number of carryout bags (26.4 million single-use paper and reusable bags) compared to the proposed ordinance (approximately 13.4 million single-use paper and reusable bags). Therefore, this alternative

would result in incrementally greater greenhouse gas emissions compared to the proposed ordinance.

d. Hydrology and Water Quality. Similar to the proposed ordinance, this alternative would reduce the number of single-use plastic bags (by approximately 20.8 million bags), incrementally reducing the amount of litter and waste entering storm drains. This alternative would be expected to increase the number of single-use paper bags in Santa Monica compared to the proposed ordinance. However, as described in Section 4.4, *Hydrology and Water Quality*, because single-use paper bags are not as resistant to breakdown, single-use paper bags would be less likely to block or clog drains compared to single-use plastic bags and would therefore be less likely to result in storm drain blockage or contamination. This alternative would reduce litter compared to existing conditions, primarily associated with single-use plastic bags. Like 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 beneficial effects to water quality.

This alternative would be expected to result in the use of more single-use paper carryout bags in Santa Monica than with implementation of the proposed Single-use Carryout Bag Ordinance. However, like the proposed ordinance, single-use 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 not be significant.

e. Traffic. This alternative would be expected to increase the number of single-use paper carryout bags (by approximately 13 million bags) compared to the propose ordinance since it does not include a Green Fee that would promote a shift towards the use of reusable carryout bags. While the number of reusable carryout bags would likely increase under this alternative, without a fee on single-use paper bags, retail customers would be anticipated to choose the "free" single-use paper carryout bags. Therefore, the overall number of carryout bags (single-use plastic, paper and reusable bags) in Santa Monica resulting from this alternative (approximately 26.4 million bags) would be greater than the proposed ordinance (approximately 13.4 million bags).

Table 6-1 shows the anticipated truck trips associated with this alternative. With an overall increase in the number of carryout bags used in Santa Monica compared to the proposed ordinance, this alternative would require additional truck trips associated with the delivery of single-use paper bags to local retail stores compared to the proposed ordinance. However, as shown in Table 6-1, like the proposed ordinance, the increase in truck trips is anticipated to be less than one trip per day (approximately 0.36 new truck trips per day). Therefore, this alternative would not result in a substantial increase in the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. As with the proposed ordinance impacts traffic would not be significant.

Table 6-1
Ban Single-use Plastic, No Green Fee Alternative
Anticipated Truck Trips per Year

Bag Type	Number of Bags per Year	Number of Bags per Truck Load	Number of Truck Trips per Year	Number of Truck Trips per Workday
Single-use Plastic	0	2,080,000	0	0
Single-use Paper	26,050,000**	217,665	120	0.46
Reusable	400,000***	108,862	4	0.014
		Total	**124**	**0.5**
		Existing Truck Trips	(36)	(0.14)
		Net New Truck Trips	**88**	**0.36**

Source: City of Santa Monica Nexus Study, 2010 (Appendix C).
** Maximum pallets per truck load is 52 based on a 48" X 45" pallet. Maximum weight per truck is 80,000 lbs (total truck + cargo) – 32,000 lbs (weight of empty truck) = 48,000 lbs per load.*
*** Assumes that the same number of single-use carryout bags that are currently used in Santa Monica would exist with only singe-use paper bags.*
**** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*

6.3 BAN ON BOTH SINGLE-USE PLASTIC AND PAPER CARRYOUT BAGS

6.3.1 Description

This alternative would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic and paper carryout bags to customers at the point of sale. It is anticipated that by prohibiting both single-use plastic and paper carryout bags, the proposed ordinance would incrementally reduce the amount of single-use carryout bags within the City, while promoting a shift to the use of reusable bags by Santa Monica retail customers. By banning both single-use plastic and paper, customers would be forced to use reusable carryout bags. This may incrementally increase the number of reusable bags purchased per year in Santa Monica. This analysis assumes that the total number of reusable bags purchased per year in Santa Monica would increase by approximately 500,000 bags in order to replace the volume of groceries contained in the 26 million single-use plastic and paper bags that would be removed (assuming a reusable carryout bag would be used once per week for one year (52 times)). This alternative would result in a total of 650,000 reusable carryout bags (150,000 existing reusable bags plus 500,000 new reusable bags). Thus, the total number of carryout bags in Santa Monica would be reduced by approximately 12.75 million carryout bags under this alternative (650,000

bags) compared to the proposed ordinance (13.4 million carryout bags including single-use paper and reusable bags).

6.3.2 Impact Analysis

a. Air Quality. Similar to the proposed project, with a ban on both single-use plastic and paper carryout bags, this alternative would reduce the air emissions associated with the manufacturing, transportation and disposal of single-use carryout bags. By banning both single-use paper and plastic bags, this alternative would increase the manufacturing, transportation of reusable bags in Santa Monica as retail customers would be forced to use this type of carryout bag. However, because reusable carryout bags are intended for multiple uses and since this alternative would not allow the use of single-use plastic bags, the overall number of carryout bags in Santa Monica would be substantially reduced compared to the proposed project. Therefore, the benefits related to air quality as a result of the manufacturing, transportation and disposal of carryout bags would be greater than the proposed ordinance.

b. Biological Resources. Similar to the proposed project, this alternative would reduce the overall number carryout bags in Santa Monica, thereby reducing the amount of single-use plastic and paper bag litter that could enter the marine environment and affect sensitive species. Although this alternative may incrementally increase the use of reusable bags in Santa Monica compared to the proposed ordinance, as described in Section 4.2, *Biological Resources*, 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. In addition, since reusable bags can be used 100 times or more (Green Cities California MEA, 2010), reusable bags would be disposed of less often than single-use carryout bags. Thus, reusable bags are less likely to enter the marine environment as litter. Similar to the proposed ordinance, the impact to sensitive species as a result of litter entering the marine environment would be beneficial.

c. Greenhouse Gases. This alternative would reduce the overall number of carryout bags in Santa Monica compared to the proposed ordinance by approximately 12.75 million bags since retail customers would only be allowed to use reusable carryout bags. As such, this alternative would result in incrementally fewer greenhouse gas emissions compared to the proposed ordinance since fewer carryout bags would be manufactured, delivered by truck and disposed of. This alternative would have a beneficial effect relative to greenhouse gas emissions and would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions.

d. Hydrology and Water Quality. Similar to the proposed ordinance, this alternative would be expected to reduce the number of single-use carryout bags (both plastic and paper), thus reducing the amount of litter and waste entering storm drains. This alternative would increase the number of reusable carryout bags in Santa Monica by approximately 250,000 bags compared to the proposed ordinance. However, as described in Section 4.4, *Hydrology and Water Quality*, because of 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, this alternative would reduce litter compared to existing conditions. 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. Like the proposed ordinance, this alternative would result in generally beneficial effects to water quality as a result of reducing the amount of litter that enters storm drains and local waterways.

This alternative would result in the use of more reusable carryout bags in Santa Monica (approximately 250,000 more reusable bags) than with implementation of the proposed Single-use Carryout Bag Ordinance. However, this alternative would result in an overall reduction in the number of carryout bags in Santa Monica (reduction of approximately 12.75 million bags) compared to the proposed ordinance since reusable bags are intended for multiple uses and single-use paper bags would not be allowed for use. Like the proposed ordinance, reusable bag manufacturing facilities would also be required to adhere to NPDES Permit requirements, AB 258 and the California Health and Safety Code. Thus, impacts to water quality from altering bag processing activities would be similar to those of the proposed ordinance and would not be significant.

e. Traffic. This alternative would incrementally reduce the overall number of carryout bags in Santa Monica compared to the proposed ordinance since this alternative would ban both single-use plastic and paper bags, thus requiring retail customers to use reusable bags. While the number of reusable carryout bags would be expected to increase (by approximately 250,00 more bags) under this alternative, the overall number of carryout bags in Santa Monica resulting from this alternative would be lower than under the proposed ordinance (reduction of approximately 12.75 million single-use paper bags). Table 6-2 shows the anticipated truck trips associated with this alternative.

Table 6-2
Ban On Both Single-use Plastic and Paper Carryout Bags Alternative
Anticipated Truck Trips per Year

Bag Type	Number of Bags per Year	Number of Bags per Truck Load	Number of Truck Trips per Year	Number of Truck Trips per Workday
Single-use Plastic	0	2,080,000	0	0
Single-use Paper	0	217,665	0	0
Reusable	650,000 ***	108,862	6	0.02
		Total	**6**	**0.02**
		Existing Truck Trips	(36)	(0.14)
		Net New Truck Trips	**(30)**	**(0.12)**

Source: City of Santa Monica Nexus Study, 2010 (Appendix C).
** Maximum pallets per truck load is 52 based on a 48" X 45" pallet. Maximum weight per truck is 80,000 lbs (total truck + cargo) – 32,000 lbs (weight of empty truck) = 48,000 lbs per load.*
*** Assumes that the same number of single-use carryout bags that are currently used in Santa Monica would exist with only singe-use paper bags.*
**** Approximate estimate of reusable bags currently purchased in one year by Santa Monica retail customers.*

Since the overall number of carryout bags would reduced under this alternative and since reusable carryout bags are intended for multiple uses, this alternative would require incrementally fewer truck deliveries of carryout bags to local retail stores in comparison to the proposed ordinance . Like the proposed ordinance, the increase in truck trips is anticipated to be less than one trip per day and would not result in a substantial increase in the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. In comparison to existing conditions, this alternative is anticipated to reduce the daily trips compared to the existing conditions. Therefore, this alternative would result in beneficial impacts to traffic.

6.4 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. One alternative that was considered was rejected. This alternative involved a suggestion in a Notice of Preparation (NOP) response from SaveThePlasticBag.com that only plastic bags made with oxo-biodegradable additives and/or bags that are water soluble would be allowed for use by retail establishments (except restaurants) in Santa Monica. All other single-use plastic bags would be prohibited by retail establishments (except restaurants) in Santa Monica.

Plastic bags with oxo-biodegradable additives undergo controlled degradation when initiated by natural daylight, heat, or mechanical stress (James and Grant 2005, Hyder Consulting 2007, CIWMB 2009b). The additives include catalysts such as metal salts that are intended to speed up the degradation process compared to standard HDPE plastic bags. Water soluble bags made of polyvinyl alcohol dissolve when in contact with water.

This alternative was rejected from consideration because the environmental impacts associated with using oxo-biodegradable additives or water soluble bags are uncertain at this time. Researchers at California State University Chico Research Foundation tested the degradation of oxo-biodegradable bags in composting conditions, and found that they did not degrade (CIWMB 2007; Green Cities California MEA, 2010). Furthermore, these bags reduced 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). Water soluble bags are primarily used for film in packaging materials. The use of water soluble bags for grocery carryout bags is not widely used at this time and it is unclear if it is a viable option. Therefore it is unclear what environmental impacts may be associated with switching to plastic bags made with oxo-biodegradable additives or water soluble bags. In addition, this alternative would not achieve the City objectives of reducing litter and associated impacts to the marine environment, reducing the number of single-use plastic and paper bags distributed and used, and promoting a shift toward the use of reusable carryout bags by retail customers.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This subsection identifies the environmentally superior alternative. The Ban on Both Single-use Plastic and Paper Carryout Bags alternative would be considered environmentally superior among the alternatives, as it would have more 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, greenhouse gas emissions, hydrology/water quality and transportation/traffic. This alternative would also meet the project objectives, including:

- *Reducing the number of single-use plastic and paper bags distributed by retailers and used by customers in Santa Monica*
- *Promoting a shift toward the use of reusable carryout bags by retail customers in Santa Monica*
- *Reducing the environmental impacts related to single-use plastic and paper carryout bags such as air quality, biological resources (including marine environments), greenhouse gas emissions, water quality and traffic*
- *Avoding litter and adverse impacts to the marine environment*

It should be noted that the proposed project would not have any significant impacts; therefore, adopting the Ban on Both Single-use Plastic and Paper Carryout Bags alternative rather than the proposed project would not avoid any significant environmental effects.

Table 6-3 compares the impacts for each of the alternatives.

Table 6-3
Impact Comparison of Alternatives

Issue	Proposed Project	No Project	Ban on Single-use Plastic, No Green Fee	Ban on Both Single-use Plastic and Paper Carryout Bags
Air Quality	=	= / +	-	+
Biological Resources	=	-	=	= / +
Greenhouse Gas Emissions	=	-	-	= / +
Hydrology/Water Quality	=	-	=	= / +
Transportation/Traffic	=	= / +	=	+

+ 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
= Similar level of impact to the proposed project

7.0 REFERENCES AND REPORT PREPARERS

7.1 REFERENCES

AEA Technology. 2005. Proposed Plastic Bag Levy - Extended Impact Assessment (Scottish Report), 2005.

AEA Technology. 2009. Single Use Bag Study. Final report prepared for the Welsh Assembly Government, August 2009.

Association of Environmental Professionals (AEP). Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents. June 29, 2007.

Boustead Consulting and Associates Ltd. 2007. Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper. Prepared for the Progressive Bag Alliance.

California Air Pollution Control Officers Association (CAPCOA), January 2008. CEQA and Climate Change.

California Air Resources Board, April 2005. Air Quality and Land Use Handbook: A Community Health Perspective.

California Air Resources Board, Ambient Air Quality Standards, updated November 2008. Available online at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

California Air Resources Board. Climate Change Emission Control Fact Sheet, 2007. http://www.arb.ca.gov/cc/factsheets/cc_newfs.pdf

California Air Resources Board, 2006, 2007, & 2008 Annual Air Quality Data Summaries. Available at: http://www.arb.ca.gov

California Air Resources Board Homepage, "Health Effects of Diesel Exhaust", Accessed March 2010. Available at: http://www.arb.ca.gov

California Air Resources Board, Climate Change Emission Control Fact Sheet, 2007. http://www.arb.ca.gov/cc/factsheets/cc_newfs.pdf

California Climate Change Center. Climate Scenarios for California. 2006.

California Department of Finance. May 2009. City Population and Housing Estimates.

California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database search of RareFind3. updated March 2010. The Resource Agency, State of California, Sacramento, California.

California Department of Water Resources. Progress on Incorporating Climate Change into Management of California's Water Resources. July 2006

California Energy Commission, February 2006. Scenarios of Climate Change in California: An Overview. CEC-500-2005-186-SF

California Energy Commission. Inventory of California Greenhouse Gas Emissions and Sinks: 1990-2004. Staff Final Report. CEC-600-2006-013-SF. December 2006

California Energy Commission. Inventory Draft 2009 Biennial Report to the Governor and Legislature. Staff Draft Report. March 2009.

California Environmental Protection Agency, March 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF

California Integrated waste Management Board (CIWMB). 2009. California 2008 Statewide Waste Characterization Study. Prepared by Cascadia Consulting Group. August 2009.

California Water Resources Control Board. 2010. Preproduction Plastic Debris Program website. Available at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/plasticdebris.shtml

Cayan, D., A.L. Luers, M. Hanemann, G. Granco, and B. Croes. Scenarios of Climate Change in California: An Overview. California Climate Change Center, State of California. White Paper, CEC-500-2005-203-SF. March 2006

Cayan, D., E. Maurer, M. Dettinger, M. Tyree, K. Hayhoe, C. Bonfils, P. Duffy, and B. Santer. Climate Scenarios for California: Climate Action Team Reports to the Governor and Legislature. 2006.

City and County of San Francisco. Department of the Environment. Memo from Jack Macy, Commercial Zero Waste Coordinator. January 2010.

City of Manhattan Beach. 2008. Consideration of on Ordinance to Prohibit the Use of Plastic Carry-Out Bags in Manhattan Beach. July 2008.

City of Pasadena. 2008. Plastic Bag Reduction Program Research. Presented to Environmental Advisory Commission.

City of Palo Alto. 2009. Mitigated Negative Declaration of Plastic Bag Use Reduction Ordinance and Attachments.

City of Santa Monica, Civic Center Specific Plan Environmental Impact Report, 2000.

City of Santa Monica General Plan: Draft Land Use and Circulation Element Draft EIR, 2009.

City of Santa Monica Nexus Study, October 2009. Prepared by R3 Consulting Group, Inc.

City of Santa Monica Official Homepage, 2010.

City of Santa Monica. 2003. Sustainable City Plan.

County of Los Angeles. An Overview of Carryout Bags in Los Angeles County. August 2007.

County of Los Angeles. 2009. Ordinances to Ban Plastic Carryout Bags in Los Angeles County: Initial Study. December 2009.

Derraik, J.B., and M.R. Gregory. 2009. Environmental implications of plastic debris in marine settings- entanglement, ingestion, smotherings, hangers-on, hitchhiking, and alien invasions. Phil. Trans. R. Soc. B. 364.

Ecobilan. 2004. Environmental impact assessment of Carrefour bags. Report prepared for Carrefour by Ecobilan, February 2004.

Environment Australia. 2002. Plastic Shopping Bags – Analysis of Levies and Environmental Impacts. Prepared by NOLAN-ITU Pty. Ltd.

Environmental Paper Network. 2007. The State of the Paper Industry.

Finnish Environment Institute (SYKE). 2009. Life Cycle Comparison of Bags.

Franklin and Associates, Ltd. 1990. Resource and Environmental Profile Analysis of Polyethylene and Unbleached Paper Grocery Sacks. Franklin Associates, Prairie Village, Kansas, 1990.

Fund for Research into Industrial Development, Growth and Equity (FRIDGE). 2002. "Socio-Economic Impact of the Proposed Plastic Bag Regulations."

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

Hyder Consulting. 2007. Comparison of existing life cycle analyses of plastic bag alternatives.

Hyder Consulting. 2006. Plastic Retail carry Bag Use 2002-2005 Consumption. Prepared for the Department of the Environment and Heritage by Hyder Consulting, 25 May 2006.

Joseph, Stephen L., Letter to the City of Santa Monica: "RE: Proposed plastic bag ordinance; CEQA demand; legal objections; notice of intent to file lawsuit". January 12, 2009.

Kiparsky, Michael and Peter H. Gleick, 2003. Climate Change and California Water Resources: A Survey and Summary of the Literature. California Energy Commission Report 500-04-073

Laist, D.W. 1997. Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records. In

Marine Debris :sources, impacts and solutions (eds J.M. Coe & B.D. Rogers), pp.99-141. Berlin, Germany: Springer.

Los Angeles County Department of Public Works (LACDPW). Ballona Creek Watershed. Available online at: http://dpw.lacounty.gov/wmd/watershed/BC/

Los Angeles County "Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach" . NPDES Permit No. CAS00401, dated December 13, 2001, issued by the California Regional Water Quality Control Board – Los Angeles Region.

Ocean Conservancy. "Trash Travels: 2010 Report" International Coastal Cleanup Day. April 2010.

Parmesan, C. 2004. Ecological and Evolutionary Responses to Recent Climate Change.

Parmesan C, Galbraith H. 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew Cent. Glob. Clim. Change

The Santa Monica Bay Restoration Commission, State of the Bay Report. 2005

Santa Monica Municipal Code. Available online at: http://www.qcode.us/codes/santamonica/

South Coast Air Quality Management District. 2007 Air Quality Management Plan. June 1, 2007.

South Coast Air Quality Management District. 1993 CEQA Air Quality Handbook. 1993. Accessed March, 2010.

State Water Resources Control Board. 2010. Website: "Preproduction Plastic Debris Program." Available: http://www.waterboards.ca.gov/water_issues/programs/stormwater/plasticdebris.shtml.

State Water Resources Control Board, Ballona Creek Trash TMDL. Resolution No. : 2004-0059 Approval Date: Sep 30, 2004.

The ULS Report. 2007. Review of Life Cycle Data Relating to Disposable Compostable Biodegradable, and Reusable Grocery Bags.

United Nations Environmental Programme (UNEP). 2009. "Marine Litter: A Global Challenge." Prepared for the UNEP, by Ljubomir, J., S. Sheavly, and E. Adler, April 2009. Available at: www.unep.org/pdf/UNEP_Marine_LIterr-A_Global_Challenge.pdf.

Trash TMDL for the Los Angeles River Watershed, (September 19, 2001):17.

United Nations Framework Convention on Climate Change (www.unfccc.int), 2007.

U.S. Environmental Protection Agency (USEPA). *Region IX's Preliminary Remediation Goals (PRG) Table,* 2002. Available online at: http://www.epa.gov/region09/superfund/prg/files/04usersguide.pdf.

USEPA. 2005 Characterization of Municipal Solid Waste, Table 7, as reported in County of Los Angeles, 2007.

7.2 REPORT PREPARERS

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

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Appendix A

Initial Study
Notice of Preparation
NOP Comment Letters

City of Santa Monica

Santa Monica Single-use Carryout Bag Ordinance

Initial Study

March 2010

Santa Monica
Single-use Carryout Bag Ordinance

Initial Study

Prepared by:

City of Santa Monica
Office of Sustainability and the Environment
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Santa Monica, CA 90401-3126
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March 2010

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TABLE OF CONTENTS

Page

INITIAL STUDY

1. Project title: Santa Monica Single-use Carryout Bag Ordinance

2. Lead agency name and address:
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Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

3. Contact Person and Phone Number:
Josephine Miller, Environmental Analyst
(310) 458-4925

4. Project location: The Single-use Carryout Bag Ordinance would apply to all retail establishments (except restaurants) located throughout the City of Santa Monica's corporate limits. The City of Santa Monica is located in west Los Angeles County, approximately 10 miles west of the central business district of the City of Los Angeles, adjacent to the Pacific Ocean shoreline. Approximately 8 square miles in size, the City is bounded on the north, south and east by the City of Los Angeles and on the west by the Pacific Ocean. Regional access to the City is provided by Interstate 10 (Santa Monica Freeway), which bisects the City, and the Pacific Coast Highway (State Route 1), which traverses the western edge of the City. Figure 1 illustrates the location of Santa Monica in its regional context and Figure 2 shows an aerial of the City and the surrounding communities.

5. Project sponsor's name and address:
City of Santa Monica
Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

6. General Plan designation: Various designations located throughout the City of Santa Monica

7. Zoning designation: Various designations located throughout the City of Santa Monica

8. Description of project:

The City of Santa Monica proposes to adopt a Single-use Carryout Bag Ordinance that would: (1) prohibit all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale; and (2)

create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. Restaurants are the only retail establishment that would be exempt from the single-use plastic bag ban, allowing them to provide plastic bags for take-out food. The intent of the ordinance is to reduce the environmental impacts related to single-use plastic and paper 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 Green Fee for each paper bag distributed by retailers, the proposed ordinance would reduce the amount of single-use plastic and paper bags within the City, while promoting a shift to the use of reusable bags by Santa Monica retail customers.

Single-use plastic carryout bags are defined as bags made from petroleum or bio-based plastic (i.e., bags 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) that are less than 2.25 millimeters thick. The proposed Single-use Carryout Bag Ordinance would prohibit retailers from distributing both petroleum and bio-based single-use carryout plastic bags at the point of sale. The proposed Single-use Carryout Bag Ordinance would not prohibit the distribution of plastic "product bags" such as those distributed within a grocery store for bagging produce. The ordinance would also provide an exception for 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 Single-use Carryout Bag Ordinance would also impose a "Green Fee" on paper carryout bags at all Santa Monica grocery stores, convenience stores, mini-marts, liquor stores and pharmacies. It is anticipated that the Green Fee would be approximately $0.25 (twenty-five cents) per paper bag with approximately $0.10 (ten cents) of this amount being retained by the affected stores to offset their costs. The Green Fee is intended to provide a disincentive to customers to request paper bags when shopping at regulated stores and is intended to promote a shift toward the use of reusable bags by Santa Monica consumers. The fee would not apply to other types of retail stores such as department stores, clothing stores, and stores that sell durable goods and, as such, do not typically distribute single-use plastic carryout bags to customers in large volumes. In addition, the Green Fee would not apply to paper bags distributed by vendors at the City's Farmers' Markets.

The Green Fee would charge customers for each paper carryout bag provided by the affected stores. Revenues generated from the fee would be used to offset the costs to the City for implementation and enforcement of the ordinance, and to compensate the affected stores for increased costs related to compliance with the ordinance. Stores would be required to indicate on the customer receipt the number of paper carryout bags provided and the total amount of the Green Fee charged. The stores would be required to regularly report and remit to the City the regulatory portion of the Green Fees collected.

Although not included in the proposed ordinance, as part of the Community Outreach for implementation of the Single-use Carryout Bag Ordinance, the City would purchase and distribute (at no cost) approximately 25,000 reusable bags to the public.

Santa Monica is a member of Green Cities California (GCC), which is a coalition of ten local governments that have implemented a range of environmental policies. The GCC's mission is to take collaborative action to accelerate the implementation of sustainability policies and programs. The GCC prepared a Master Environmental Assessment (MEA) on Single-Use and Reusable Bags that brings together a comprehensive collection of information about single-use carryout bags including existing regulations, life cycle analysis, potential impacts on the environment, reusable bags, and the use of fees to encourage consumers to reuse bags. The MEA has been used in the preparation of this Initial Study to assess the potential impacts of such ordinances.

9. Surrounding land uses and setting:

Santa Monica is bounded to the north, east, and south by urban districts within the City of Los Angeles and to the west by the Pacific Ocean. The City is almost entirely developed, with only 1% of its land area considered undeveloped. Santa Monica contains a variety of land uses including residential (single- and multi-family), retail, commercial, office, medical, public facilities, industrial/manufacturing, and parklands/recreation facilities. Surrounding communities in the City of Los Angeles include Pacific Palisades, Brentwood, West Los Angeles, Mar Vista, and Venice.

10. Necessary public agency approvals:

The Single-use Carryout Bag Ordinance would require an amendment to the Santa Monica Municipal Code (Section 1, Chapter 5.45) with discretionary approval by the Santa Monica City Council. The following approvals would be required:

- *Certification of the Final EIR (City Council)*
- *Adoption of Ordinance amending Municipal Code (City Council)*

No other agencies have discretionary approval authority over the proposed Single-use Carryout Bag Ordinance.

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.

☐ Aesthetics	☐ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☐ Construction Effects	☐ Cultural Resources
☐ Economics and Social Impacts	☐ Geology/Soils	☒ Greenhouse Gas Emissions
☐ Hazards & Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Neighborhood Effects	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Shadows	☒ Transportation/Traffic	☐ Utilities/Service Systems
☒ 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.

March 30, 2010

Dean Kubani
Director, Office of Sustainability and the Environment

Date

ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a-c) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The intent of the Single-use Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags, and to promote the use of reusable bags by Santa Monica retail customers.

The proposed Single-use Carryout Bag Ordinance would not include development of any physical structures or involve any construction activity. As such, the proposed Single-use Carryout Bag Ordinance would have no effect on a scenic vista, nor would it damage scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway. In addition, since the proposed Single-use Carryout Bag Ordinance would not change any existing land uses or add any physical development or new structures within the City, the ordinance would not degrade the existing visual character of Santa Monica or the surrounding area. It is anticipated that implementation of the Single-use Carryout Bag Ordinance may incrementally reduce litter in and around the City by reducing the use of single-use bags. **No impact would occur and further analysis of these issues in an EIR is not warranted.**

d) Existing sources of light within the City, which would be subject to the proposed Single-use Carryout Bag Ordinance, include street lights, light structures in surface parking areas, and security lighting on buildings; no other significant sources of light or glare are present. The proposed ordinance is intended to reduce the amount of single-use plastic and paper carryout bags and to promote the use of reusable bags by Santa Monica retail customers. The Single-use Carryout Bag 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. AGRICULTURAL RESOURCES -- 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

a-c) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The proposed Single-use Carryout Bag Ordinance would not include any physical development or change any existing land uses. No areas in the City of Santa Monica are listed as Farmland on any maps prepared by the Farmland Mapping and Monitoring Program (FMMP Los Angeles County Map, 2006). As such, the Single-use Carryout Bag Ordinance would have no effect on Prime Farmland, Unique Farmland, or Farmland of Statewide importance. In addition, no areas within Santa Monica are zoned for agricultural development, nor are any areas under a Williamson Act contract (City of Santa Monica Zoning Map, 2010 and Department of Conservation, 2006)). The proposed Single-use Carryout Bag Ordinance would not directly or indirectly result in the conversion of farmland to non-agricultural use. **No impact to agricultural resources would occur and further discussion of this issue 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?	☐	☐	☐	☒
b) Violate any air quality standard or	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY -- Would the project:				
contribute substantially to an existing or projected air quality violation?				
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)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

The project site is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency is required to monitor air pollutant levels to ensure that the air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or "nonattainment." The South Coast Air Basin is in nonattainment for both the federal and state standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$). Thus, the basin currently exceeds several state and federal ambient air quality standards and is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. This non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate pollutants from the air, and the number, type, and density of emission sources within the South Coast Air Basin. The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards.

a) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. 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 does not include the construction of residences or other physical structures, and would not otherwise induce population growth. Therefore, the proposed Single-use Carryout Bag Ordinance would not cause the existing population to exceed the population forecasts of the AQMP, and would not conflict with or obstruct implementation of the AQMP.

In sum, the proposed ordinance would have no impact on the attainment of goals identified in the local air quality management plan and further analysis of this issue in an EIR is not warranted.

b-c) The proposed Single-use Carryout Bag 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 temporary construction emissions. Although the Single-use Carryout Bag Ordinance is intended to reduce the amount of single-use plastic and paper bags and to promote a major shift towards reusable bags in Santa Monica, a potential change in the number of truck trips associated with delivering carryout bags to retailers (as described in Section XX, *Transportation/Traffic*) and distributing approximately 25,000 free reusable bags as part of the Public Outreach for implementation of the proposed ordinance could increase long-term operational emissions. 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 Los Angeles County related to bag production which may increase air emissions. **Impacts related to long-term emissions 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 Santa Monica include children who attend local schools as well as children and the elderly who reside in City neighborhoods.

As discussed above, implementation of the Single-use Carryout Bag Ordinance could result in a change in the number of truck trips associated with deliveries of carryout bags to retailers in Santa Monica. However, truck trips would be expected to primarily utilize existing major regional transportation facilities (such as the Santa Monica and San Diego freeways and Pacific Coast Highway) and major arterials in the City (such as Wilshire Boulevard and Santa Monica Boulevard). Therefore, the proposed project 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) By its nature, the proposed ordinance would not create objectionable odors affecting a substantial number of people. The Single-use Carryout Bag Ordinance is intended to promote a shift toward the use of reusable carryout bags at local retail stores in Santa Monica. The Single-use Carryout Bag Ordinance would not involve any development or construction activity and, therefore, would not create any objectionable odors. **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. BIOLOGICAL RESOURCES -- 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?	☒	☐	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Santa Monica is nearly completely urbanized, with only 1% of its land area undeveloped. The majority of Santa Monica lacks significant native vegetation that would provide a habitat for any unique, rare, or endangered plant or animal species. The only native terrestrial habitat is located along the Palisades Bluff, and this area is highly disturbed. As a consequence, vegetation resources within the City are those that are capable of surviving in urban conditions.

Important biological resources (sensitive species) are generally limited to the coastal (beach and intertidal) and marine environments.

The proposed Single-use Carryout Bag Ordinance is intended to reduce the use of single-use plastic and paper bags and to promote a shift in the use of reusable bags by Santa Monica retail customers. Although Santa Monica is urbanized and 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 Santa Monica as a result of the Single-use Carryout Bag 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 Single-use Carryout Bag Ordinance is intended to reduce the use of single-use plastic and paper bags and to promote a shift in the use of reusable bags by Santa Monica retail customers. The proposed Single-use Carryout Bag 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 Santa Monica. As such, the proposed Single-use Carryout Bag Ordinance would not have a substantial adverse effect on any riparian habitat or any federally protected wetlands. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

d) The limited wildlife that exists in the Santa Monica area has adapted to the urban environment and there are no known migratory wildlife corridors or native nursery sites. However, various trees, shrubs and bushes in the area could be considered potential roosting/nesting habitat for a variety of migratory and resident birds, such as raptors. The proposed Single-use Carryout Bag Ordinance would not include any physical development or construction activity and, therefore, would not alter or remove any existing vegetation in Santa Monica. As such, the proposed Single-use Carryout Bag 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) The Santa Monica Municipal Code, Section 7.40.160, requires guards or protectors to prevent damage to public trees during construction activities. The proposed Single-use Carryout Bag Ordinance would serve an urbanized area in the City of Santa Monica. The proposed Single-use Carryout Bag Ordinance is intended to reduce the amount of single-use plastic and paper bags and to promote a major shift towards reusable bags by Santa Monica retail customers. As such, the proposed Single-use Carryout Bag Ordinance would not involve any physical development or construction activities which would alter existing public trees. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

f) No areas within Santa Monica are included within any natural community conservation plans or other habitat conservation plans (California Department of Fish and Game Homepage "Habitat Conservation Programs", 2010). As such, the proposed Single-use Carryout Bag

Ordinance would not 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 this issue in an EIR is not warranted.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. CONSTRUCTION EFFECTS-- Would the project:				
a) Have considerable construction-period impacts due to the scope, or location of construction activities.	☐	☐	☐	☒

a) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. The proposed ordinance would not involve any physical development or construction activity. **No impact related to construction activities would occur 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
VI. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

a) Historic designation may be given to a property by National, State, or local authorities. In order for a building to qualify for listing in the National Register of Historic Places, the California Register of Historical Resources, or as a locally significant property in the City of

Santa Monica, it must meet one or more identified criteria of significance. The property must also retain sufficient architectural integrity to continue to evoke the sense of place and time with which it is historically associated.

The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. Although there are numerous historic resources located throughout Santa Monica, the proposed ordinance would not involve any demolition, destruction, relocation, or alteration of historical resources. Therefore, **there would be no impact related to a substantial adverse change in the significance of a historical resource and further analysis of this is issued in an EIR is not warranted.**

b-d) The proposed Single-use Carryout Bag Ordinance would not involve any ground-disturbing activities, such as excavation or construction activities. As such, the proposed ordinance would not cause a substantial adverse change to an archaeological resource, destroy unique paleontological or geological features, or disturb any human remains. **Therefore, the project would have no impact on archaeological resources, paleontological resources or human remains and further study of these issues in an EIR is not warranted.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VII. ECONOMIC and SOCIAL IMPACTS -- Would the project:				
a) Have economic or social effects which would result in additional physical changes (e.g. if a new shopping center located away from downtown shopping area would take business away from downtown and thereby cause business closures and eventual deterioration of the downtown)?	☐	☐	☐	☒

a) The proposed Single-use Carryout Bag Ordinance would not involve construction of any new buildings or other physical development and, therefore, would not result in any physical changes within Santa Monica. As such, the proposed ordinance would not result in economic or social effects that would result in additional physical changes. The intent of the proposed ordinance is to promote a shift toward to reusable bags rather than single-use plastic and paper carryout bags. **No adverse economic or social impacts would occur. Further discussions of this issue in an EIR are not warranted.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. GEOLOGY and SOILS – 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a(i-ii) There are no Alquist-Priolo Earthquake Fault Zones within Santa Monica (General Plan Safety Element, 1995). The City is located approximately one-quarter mile south of the South Branch Santa Monica Fault and within 10 miles of the Malibu Coast Fault, the Palos Verdes Fault, the Hollywood Fault, the Newport-Englewood Fault, the Northridge (E. Oakridge) Fault, and the Compton Thrust Fault (City of Santa Monica Geologic Hazards Map, April 2001). The potential for surface rupture in the City is considered low; however, areas within the City could potentially experience severe seismic ground shaking in the event of an earthquake on the Santa Monica fault or any of several other faults in the area. Nevertheless, the proposed Single-use

Carryout Bag Ordinance would not involve any physical development or construction activity. As such, the proposed ordinance would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture on a known earthquake fault or seismic ground shaking. **No impact would occur and further analysis of these issues in an EIR is not warranted.**

a(iii-iv) Liquefaction describes the phenomenon in which groundshaking works cohesionless soil particles into a tighter packing which induces excess pore pressure. These soils may acquire a high degree of mobility and lead to structurally damaging deformations. Liquefaction begins below the water table, but after liquefaction has developed, the groundwater table will rise and cause the overlying soil to mobilize. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand.

The geologic character of an area determines its potential for landslides. Steep slopes, the extent of erosion, and the rock composition of a hillside all contribute to the potential for slope failure and landslide events. Common triggering mechanisms of slope failure include undercutting slopes by erosion or grading, saturation of marginally stable slopes by rainfall or irrigation, and shaking of marginally stable slopes during earthquakes.

Although areas within Santa Monica are subject to liquefaction and landslides (as shown on the City of Santa Monica Geologic Hazards Map, 2001), as described above, the proposed Single-use Carryout Bag Ordinance would not involve any physical development or construction activity. As such, the proposed ordinance would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction or landslides. **Therefore, no impact related to liquefaction or landslides would occur and further analysis of these issues in an EIR is not warranted.**

b-c) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. As the Single-use Carryout Bag Ordinance would not involve any physical development or construction activity, it would not have the potential to cause substantial erosion or the loss of topsoil. In addition, the proposed ordinance would not have the potential to increase the potential for landslide, lateral spreading, subsidence, liquefaction, or collapse. **No impact would occur and further analysis of these issues in an EIR is not warranted.**

d) The proposed Single-use Carryout Bag Ordinance would not involve any construction activity and, as such, 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 to expansive soils would occur and further analysis of this issue in an EIR is not warranted.**

e) The proposed ordinance does not involve any development or construction activity. As such, the Single-use Carryout Bag Ordinance would not include a septic or other alternative wastewater disposal system. **No impact related to soil incompatibility would occur 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. GREENHOUSE GAS EMISSIONS - Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a-b) The proposed Single-use Carryout Bag 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 amount of single-use plastic and paper bags used by Santa Monica retail customers and to promote a shift toward reusable bags. 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 traffic patterns in Los Angeles County related to transport of single-use and reusable bags as well as processing activities in Los Angeles County related to bag production which may increase greenhouse gas emissions.

The EIR will analyze whether a shift toward reusable bags in Santa Monica 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
X. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-c) The proposed Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores,

convenience stores and pharmacies in the city. The intent of the ordinance is to reduce the amount of single-use plastic and paper carryout bags and to promote a major shift towards reusable bags by Santa Monica retail customers. Although hazardous materials may used in the process to manufacture single-use plastic, single-use paper and reusable bags, there are no manufacturing facilities within Santa Monica and any existing or potential manufacturing facilities that manufacture bags would be required to continue to adhere to 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, which is being addressed by the ordinance, would not be a hazardous material. As such, the Carryout Bag Ordinance would not involve the routine transport, use or disposal of hazardous substances. In addition, the proposed ordinance would not involve any type of construction or activities that would require the use of hazardous materials or that would result in the release of hazardous materials into the environment. Although there are existing schools located throughout Santa Monica, the proposed ordinance would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school. **Thus, there would be no impact and further analysis of these issues in an EIR is not warranted.**

d) Although hazardous materials sites are present within Santa Monica, the proposed ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and would create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. As such, the ordinance would not involve development or construction of any structures that would be located on a hazardous materials site. **There would be no impact related to creating a significant hazard to the public or environment as a result being located on a hazardous material site and further analysis of this issue in an EIR is not warranted.**

e, f) The Santa Monica Municipal Airport is located along the City's southeast border between S. Bundy Drive and 23rd Street (City of Santa Monica, Map Catalog, Airport Influence Area). However, the proposed Carryout Bag Ordinance would not involve any physical development or construction activities and would therefore not place residents or employees within the vicinity of the airport. As such, the proposed ordinance would not result in safety hazards related people residing or working in the vicinity of an airport land use plan or private air strip. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

g) The proposed ordinance involves prohibiting all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and creating a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The proposed Carryout Bag Ordinance does not involve any physical development or construction activities. Consequently, the 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. **There would be no impact and further analysis of this issue in an EIR is not warranted.**

h) Santa Monica and surrounding area in Los Angeles County are entirely urbanized. The proposed ordinance would not involve any physical development or construction activities. As such, the proposed ordinance would not expose persons or structures to wildfire hazard risks. **No impact would occur 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
XI. HYDROLOGY and WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
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 or 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)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. HYDROLOGY and WATER QUALITY – Would the project:				
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a, f) The proposed Single-use Carryout Bag Ordinance would not involve any physical development or construction activities, but rather is intended to reduce the use of single-use plastic and paper carryout bags used by retail customers in Santa Monica and promote the use of reusable bags. Due to the nature of the proposed ordinance, it is anticipated that the reduction of single-use plastic and paper carryout bags would incrementally reduce the amount of litter in the City that enters storm drains, thereby improving water quality. However, the promotion of reusable bags could also potentially affect water quality if reusable 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 could potentially affect water quality as a result of processing activities related to bag production. **As such, impacts related to water quality standards and waste discharge requirements will be further analyzed in an EIR.**

b) The proposed Single-use Carryout Bag Ordinance would not substantially deplete groundwater supplies or significantly reduce groundwater recharge. The City's water supply is adequate to meet water demand through 2020 (City of Santa Monica Environmental Programs Division, *2002 Water Efficiency Strategic Plan,* 2002). As discussed under Section XXI, *Utilities and Service Systems,* the proposed Single-use Carryout Bag Ordinance would not involve any buildings or other physical development and, therefore, would not increase water demand. In addition, although the proposed ordinance would be expected to lead to an increase in the number of reusable bags consumed in the City, the number of reusable bags required would be expected to be lower that the number of carryout bags (both single-use plastic and paper) that are currently used. Therefore, a reduction in the total number of bags manufactured would be expected to lead to a decrease in the amount of water required by bag manufacturing facilities. In addition, although washing reusable bags (for sanitary purposes) by customers may require some water use, the reduction of water used in the manufacturing process for single-use plastic

and paper bags would be expected to offset this amount as water used in the production of reusable bags is offset when the bag is used by a customer three times (Green Cities California MEA, 2010). As such, the promotion of reusable bags would not increase water demand. Thus, the proposed project would not significantly affect water supply. In addition, because the Single-use Carryout Bag Ordinance would not include any new uses, buildings or other physical development, the amount of onsite pervious surfaces would not change with implementation of the proposed ordinance. As such, the proposed ordinance would not contribute significantly to groundwater recharge. **Therefore, there would be no impact relating to groundwater and further analysis in an EIR is not warranted.**

c-d) The proposed Single-use Carryout Bag Ordinance would not alter the course of any stream or other drainage and would not increase the potential for flooding. Because the proposed Single-use Carryout Bag 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. In addition, no new connections to the City's storm drain system would be required to provide adequate drainage. **Therefore, there would be no impact and further analysis of these issues in an EIR is not warranted**.

e) As described above, the proposed Single-use Carryout Bag Ordinance involves prohibiting all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and creating a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The Single-use Carryout Bag Ordinance would not involve any physical development or construction activities. As such, the Single-use Carryout Bag 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. **There would be no impact and further analysis of this issue in an EIR is not warranted**.

g-h) According to the Federal Emergency Management Agency (FEMA), the entire City of Santa Monica is located within Flood Zone C, which is characterized by minimal risk of flooding (FEMA, September 2008). The proposed ordinance involves prohibiting all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale, and creating a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. As such, the proposed Single-use Carryout Bag Ordinance would not involve any new buildings or other physical development and, therefore, would not expose 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) No dams or levees are located in the vicinity of Santa Monica; thus, the potential for flooding due to dam failure is low. Santa Monica is not located near any major bodies of surface water; therefore, impacts from seiches are not expected. Although the Pacific Ocean is located adjacent to the City, on its western border, the proposed ordinance does not involve any new buildings or other physical development and, therefore, would not subject people or structures to inundation as a result of tsunami. **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
XII. LAND USE AND PLANNING - Would the proposal:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) The proposed Single-use Carryout Bag Ordinance would apply throughout the City of Santa Monica. The Single-use Carryout Bag Ordinance would not involve any new development or construction activities. As such, no new through streets are proposed and no through streets would be abandoned. The proposed ordinance would not divide an established community. **No impact with respect to division of an established community would occur. Further analysis of this issue in an EIR is not warranted.**

b) The proposed ordinance would require an amendment to the Santa Monica Municipal Code (Section 1, Chapter 5.45). The Single-use Carryout Bag Ordinance would not involve any physical development and would not change the use of any site within the City. As such, the proposed ordinance would not conflict with any land use plan or policy, including the general plan, specific plan, and zoning ordinance. **There would be no impact with respect to land use and further analysis of this issue in an EIR is not warranted.**

c) The proposed Single-use Carryout Bag Ordinance would apply to the urbanized City of Santa Monica and would not result in any land use changes in the City. In addition, as described above in Section IV, *Biological Resources*, no areas within Santa Monica are included within any natural community conservation plans or other habitat conservation plans (California Department of Fish and Game Homepage "Habitat Conservation Programs", 2010). Therefore, the project would not conflict with any habitat/natural community conservation plans. **No impact would occur 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
XIII. MINERAL RESOURCES -- 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-b) The proposed Single-use Carryout Bag Ordinance would apply throughout Santa Monica, which is a developed urban area that does not provide any mineral resource value (U.S. Geological Survey, 2010). The proposed ordinance would not alter any existing land use and would not involve any physical development. As such, the proposed ordinance would not result in the loss of the availability of a known mineral resource that would be of value locally, regionally, or to the State. **No impact to mineral resources would occur 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
XIV. NEIGHBORHOOD EFFECTS – Would the project result in:				
a) Have considerable effects on the project neighborhood?	☐	☐	☐	☒

a) The proposed Carryout Bag would not involve any change in land use or construction activity. Consequently, it would not alter the character of or otherwise affect any specific neighborhoods. **No impact would occur 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. NOISE – 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?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-d) The proposed Single-use Carryout Bag Ordinance prohibits all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale, and creates a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The proposed Single-use Carryout Bag Ordinance would apply throughout the City of Santa Monica which is a developed urban area. However, the Single-use Carryout Bag 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 Single-use Carryout Bag 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 Single-use Carryout Bag 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 City. **Therefore, there would be no impact related to noise levels and further analysis of these issues in the EIR is not warranted.**

e-f) The Santa Monica Municipal Airport is located along the city's southeast border between S. Bundy Drive and 23rd Street (City of Santa Monica, Map Catalog, Airport Influence Area). However, the proposed Single-use Carryout Bag Ordinance would not involve any development or construction activities and would not place residents or employees within the vicinity of the airport. As such, the proposed ordinance would not expose people to excessive noise as a result of residing or working in the vicinity of an airport land use plan or private air strip. **No impact would occur 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
XVI. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a-c) The proposed Single-use Carryout Bag Ordinance would apply throughout Santa Monica, which is a developed urban area. The intent of the proposed ordinance is to reduce the use of single-use plastic and paper bags in the City and to promote the use of reusable bags by Santa Monica retail customers. The Single-use Carryout Bag Ordinance would not involve any physical development, such as residential units, and would not alter any existing land uses. As such, the project 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
XVII. 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 public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

a(i) The City of Santa Monica Fire Department provides fire protection services in the City of Santa Monica and maintains an Automatic Aid Agreement with the City of Los Angeles Fire Department, as well as a Mutual Aid Agreement with other fire departments in the region.

The proposed Single-use Carryout Bag 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 City; therefore, the project would not place an additional burden on the fire department. The proposed project would not result in the need to construct new or altered fire protection facilities. **There would be no impact and further analysis of this issue in an EIR is not warranted.**

a(ii) The City of Santa Monica Police Department (SMPD) provides police protection services in the City and maintains mutual assistance programs with the Los Angeles County Sheriff's Department and the City of Los Angeles Police Department. The SMPD is located at 333 Olympic Drive. Because the proposed ordinance would not involve any new development or land use changes, it would not place an additional burden on the police department. Implementation of the Single-use Carryout Bag Ordinance would not result in the need to construct new police facilities. **There would be no impact and further analysis of this issue in an EIR is not warranted.**

a(iii) The Santa Monica-Malibu Unified School District (SMMUSD) provides primary and secondary public education services to students living in Santa Monica. In the District, there are currently 10 elementary schools, two middle schools, two high schools, one alternative school,

one continuation school, and a community day school. The District has a total enrollment (2008-2009) of about 11,591 students (California Department of Education from 2008-2009 School Year).

The proposed ordinance would not involve any new development or land use changes within the City. In addition, the Single-use Carryout Bag Ordinance would not result in an increase in population or employment; therefore, the project would not place an additional burden on existing schools in the SMMUSD. 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 City of Santa Monica contains 26 public park facilities located throughout the city providing a variety of recreational opportunities for residents and visitors (City of Santa Monica Homepage, February 2010). The proposed Single-use Carryout Bag Ordinance would not involve the construction of residences; therefore, the project would not increase the demand for parks in the City. The proposed project 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.** (See Section XVIII, *Recreation,* for further discussion of this issue.)

a(v) The proposed Single-use Carryout Bag Ordinance would not involve any physical development, construction activities or change of existing land uses. Therefore, the proposed ordinance would not contribute incrementally toward impacts to City Public Services and facilities, such as storm drain usage (discussed in Section XI, *Hydrology and Water Quality*), solid waste disposal (discussed in Section XXI, *Utilities and Service Systems*), water usage and wastewater disposal (discussed in more detail in Section XXI, *Utilities and Service Systems*). The proposed ordinance would not result in the need for new or altered public 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
XVIII. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a, b) As discussed in Section XVII, *Public Services*, Santa Monica contains 26 public park facilities located throughout the city providing a variety of recreational opportunities for

residents and visitors (City of Santa Monica Homepage, February 2010). The proposed Single-use Carryout Bag Ordinance would not involve the construction of residences. Therefore, the project 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 this issue in an EIR is not warranted**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIX. SHADOWS —				
a) Would the project produce extensive shadows affecting adjacent uses or properties?	☐	☐	☐	☒

a) The proposed Single-use Carryout Bag Ordinance would not involve any physical development or any new structures within Santa Monica. As such, the proposed ordinance would not produce shadows that could affect existing uses or properties. **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
XX. TRANSPORTATION / TRAFFIC — Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☒	☐	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, 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)?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XX. TRANSPORTATION / TRAFFIC — Would the project:				
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
h) Involve right-of-way dedication resulting in a reduced lot area?	☐	☐	☐	☒
i) Reduce access to other properties and uses?	☐	☐	☐	☒
j) Create abrupt grade differential between public and private property?	☐	☐	☐	☒

a) The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The intent of the Single-use Carryout Bag Ordinance is to reduce single-use plastic and paper carryout bags, and to promote a major shift towards reusable bags by Santa Monica retail customers. While the proposed ordinance would not involve any physical development or construction activities, the shift toward reusable bags could alter truck travel patterns associated with delivering bags from manufacturers to retailers and distributing approximately 25,000 free reusable bags as part of the Public Outreach for implementation of the proposed ordinance. As such, the proposed ordinance may generate an incremental change in regional vehicle trips. **This impact is potentially significant will be discussed further in an EIR.**

b) As described above, while the proposed ordinance does not include any physical development or construction activities, the shift toward reusable bags could alter regional truck trips associated with delivering bags to retailers. **This is a potentially significant impact and will be discussed further in an EIR.**

c) The proposed ordinance would not affect air traffic patterns. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

d) The proposed Single-use Carryout Bag Ordinance would not involve any physical development or construction activities. The Single-use Carryout Bag Ordinance is intended to reduce the use of single-use plastic and paper carryout bags used by retail customers in Santa Monica, and to promote the use of reusable bags. As such the proposed ordinance would not

include any design features that could present traffic hazards. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

e, f) The project would not result in inadequate emergency access or inadequate parking capacity because the proposed ordinance does not involve not include any new buildings or other physical development. Existing emergency access and parking capacity would not be affected by the proposed ordinance. **No impact would occur and further analysis of these issues in an EIR is not warranted.**

g) The Santa Monica Big Blue Bus lines provide public transportation throughout Santa Monica. In addition, bike routes/lanes are located throughout the City (City of Santa Monica Information Systems Division, 2007). The proposed Single-use Carryout Bag Ordinance is intended to promote the use of reusable bags and would not conflict with any programs, policies or plans supporting alternative transportation. **There would be no impact and further analysis of this issue in an EIR is not warranted**.

h) The proposed ordinance does not include a right-of-way dedication that would reduce lot area. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

i) The proposed ordinance does not involve any new buildings or other physical development. Therefore, the proposed Single-use Carryout Bag Ordinance would not adversely affect access for other properties and parcels. **No impact would occur and further analysis of this issue in an EIR is not warranted.**

j) The proposed Single-use Carryout Bag Ordinance would not involve any new buildings or other physical development. As such, the ordinance would not create a substantial grade differential between public and private property. **No impact would occur 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
XXI. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XXI. UTILITIES AND SERVICE SYSTEMS — Would the project:				
significant environmental effects?				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

a, b, e) The local sewer collection system is owned by the City of Santa Monica and is managed, operated, and maintained by the Water Resources Division of the City's Public Works Management Department. Sewer flow is treated at the City of Los Angeles' Hyperion Treatment Plant located approximately seven miles southeast of Santa Monica, along the Santa Monica Bay coastline. Wastewater in Santa Monica flows primarily by gravity in a southerly direction, and is delivered to the treatment plant via the Coastal Interceptor Sewer. The City has an agreement with the City of Los Angeles for wastewater disposal services and pays fees to Los Angeles based on monthly effluent flows to the treatment plant (City of Santa Monica Official Homepage, 2010; RAND Corporation Headquarters EIR, 2000).

The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The proposed ordinance would not involve any new buildings or other physical development and, therefore, would not cause an increase in the amount of wastewater generated. Although washing reusable bags (for sanitary purposes) by customers may generate wastewater, the increase in wastewater would be within the City's contractual entitlement (unlimited flow) for flows to the Hyperion Treatment Plant. Therefore, the proposed project would not be expected to significantly affect the City's wastewater conveyance system. **Impacts related to wastewater conveyance and treatment would be less than significant and further analysis of this issue in an EIR is not warranted.**

c) As described in Section XI, *Hydrology and Water Quality*), the proposed ordinance would not involve any physical development or construction activities. As such, the Single-use Carryout Bag Ordinance would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. 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) Water for Santa Monica is supplied from both groundwater and imported sources. Presently, the City owns and operates 11 water wells. Six wells are in the Santa Monica Subbasin, and the remaining five wells are in the Charnock Subbasin. The Metropolitan Water District (MWD) of Southern California delivers imported water from the Colorado River and State Water Project to the City (City of Santa Monica Water Efficiency Strategic Plan, 2002).

The proposed Single-use Carryout Bag Ordinance would prohibit all retail establishments (except restaurants) in Santa Monica from providing single-use plastic carryout bags to customers at the point of sale and create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the city. The intent of the Single-use Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags, and to promote the use of reusable bags by Santa Monica retail customers. Although the proposed ordinance would be expected to lead to an increase in the number of reusable bags consumed in the City, the number of reusable bags required would be expected to be significantly lower that the number of carryout bags (both single-use plastic and paper) that are currently used. Therefore, a reduction in the total number of bags manufactured would be expected to lead to a decrease in the amount of water required by bag manufacturing facilities. In addition, although washing reusable bags (for sanitary purposes) by customers may require some water use, the reduction of water used in the manufacturing process for single-use plastic and paper bags would be expected to offset this amount as water used in the production of reusable bags is offset when the bag is used by a customer three times (Green Cities California MEA, 2010). A reduction in the amount of single-use plastic and paper carryout bags and an increase in the number of reusable bags by Santa Monica retail customers would not cause an increase in the demand for water within the City. **There would be no impact to water supply would be less than significant and further analysis of this issue in an EIR is not warranted.**

f, g) The City of Santa Monica provides refuse collection service in Santa Monica. The Solid Waste Management Division of the Public Works Management Department operates the solid waste management system. Solid waste from Santa Monica is disposed at the following facilities on a regular basis: Puente Hills Landfill, Sunshine Canyon Landfill, Simi Valley Landfill, and City of Commerce's Waste to Energy Incinerator. Table 1 summarizes the permitted throughput, estimated capacity, and estimated closure date for these facilities.

The City has completed a comprehensive waste reduction and recycling plan in compliance 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, the City was recycling or otherwise diverting 68% of its solid waste, thereby complying with the standards established by AB 939 (Santa Monica Waste Stream Profile, CIWMB, 2010). The City has also set a goal of increasing the amount of solid waste diverted from landfills to 70% by the year 2010 (City of Santa Monica Sustainable City Plan, 2003).

Table 1
Solid Waste Disposal Facilities

Facility	Permitted Daily Throughput (tons/day)	Estimated Remaining Capacity (CY)*	Estimated Closure Date
Puente Hills Landfill	13,200	49,348,500	2013
Sunshine Canyon SLF County Extension	12,100	111,200,000	2037
Simi Valley Landfill and Recycling Center	3,000	23,201,173	2033
Commerce Refuse-to-Energy Facility	1,000	---	---

Source: California Integrated Waste Management Board Website, http://www.ciwmb.ca.gov/swis/Search.asp, accessed on March 2, 2010.
** Remaining capacity estimates are based on reported estimated closure date minus the annual average throughput since date of reported remaining capacity.*
cy=cubic yards

The intent of the Single-use Carryout Bag Ordinance is to reduce the amount of single-use plastic and paper carryout bags, and promote a major shift towards reusable bags by Santa Monica retail customers. The proposed ordinance does not involve any physical development or construction activities. The shift toward reusable bags would reduce the amount of single-use plastic and paper carryout bags that are sent to a local landfill. As such, the proposed Single-use Carryout Bag Ordinance would reduce the amount of solid waste generated within the City. **Impacts to the City's solid waste collection and disposal system 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
XXII. 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?	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XXII. MANDATORY FINDINGS OF SIGNIFICANCE —				
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)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) As discussed in Section VI, *Cultural Resources*, although there are numerous historic resources located throughout Santa Monica, the proposed Single-use Carryout Bag Ordinance would not involve any demolition, destruction, relocation, or alteration of historical resources. In addition, the proposed ordinance would not involve any ground-disturbing activities such as excavation or construction activities. As such, the proposed ordinance would not cause a substantial adverse change to an archaeological resource, destroy unique paleontological or geological features, or disturb any human remains. Therefore, the project would have no impact on cultural resources.

As discussed in Section IV, *Biological Resources*, Santa Monica is an urbanized area and generally lacks sensitive animal species or associated habitat. Although the Pacific Ocean is located adjacent to the city, the lack of large-scale contiguous native habitats and the ease of public access to the shoreline have resulted in little opportunity for sensitive plant and animal species to remain in the City of Santa Monica. The limited wildlife that exists in the area has adapted to the urban environment and there are no known migratory wildlife corridors. Nevertheless, by promoting a shift toward the use of reusable bags in Santa Monica, the Single-use Carryout Bag 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 (as discussed in Section IV, *Biological Resources*). The proposed ordinance's impact related to sensitive species will be further analyzed in an EIR. **Because the proposed Single-use Carryout Bag Ordinance would have the potential to affect sensitive species, the impact is potentially significant and will be further analyzed in an EIR**.

b) The proposed Single-use Carryout Bag Ordinance does have potential air quality, biological resources, greenhouse gas emissions, hydrology/water quality, and traffic impacts that could be significant and cumulatively considerable. **These potentially adverse impacts will be discussed in an EIR.**

c) The proposed Single-use Carryout Bag Ordinance has potential for adverse effects to human beings related to air quality, greenhouse gas emissions, hydrology/water quality, and traffic. **The potential for adverse effects will be explored and discussed in an EIR.**

REFERENCES

California Department of Conservation. Williamson Act Program – Report and Statistics, Los Angeles County, 2006. Accessed March 1, 2010. Available at: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Pages/Index.aspx

California Department of Conservation. Farmland Mapping and Monitoring Program, Los Angeles County, 2006. Accessed March 1, 2010. Available at: http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx

California Department of Conservation. Seismic Hazard Zones Map-Beverly Hills Quadrangle, 1999.

California Department of Education. Santa Monica-Malibu Unified School District, 2008-2009 Student Enrollment. Accessed March 1, 2010. Available at: http://www.cde.ca.gov/ds/

California Department of Fish and Game Homepage "Habitat Conservation Programs". Accessed March 1, 2010. Available at http://www.dfg.ca.gov/habcon/

California Integrated Waste Management Board, Santa Monica Jurisdiction Waste Stream Profile, Accessed February 25, 2010. Available online at: http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&JURID=474&JUR=Santa+Monica

City of Santa Monica. 1995. Safety Element EIR.

City of Santa Monica. 2003. Sustainable City Plan.

City of Santa Monica Information Systems Division. Santa Monica Bike Map, 2007. Accessed February 25, 2010. http://www01.smgov.net/isd/gis/map_catalog/index.html

City of Santa Monica Information Systems Division. Santa Monica Geologic Hazards, 2001. Accessed February 26, 2010. http://www01.smgov.net/isd/gis/map_catalog/index.html

City of Santa Monica Official Website. Airport Runway flight paths. Accessed February 24, 2010. Available online at:
http://www01.smgov.net/airport/images_ap/img_21_Dep_Map.jpg
http://www01.smgov.net/airport/images_ap/img_rwy3.jpg

City of Santa Monica Official Website. Requested Flight Paths. Accessed February 25, 2010. Available online at: http://www01.smgov.net/airport/n_flight_paths.aspx

City of Santa Monica Official Homepage, 2010.

City of Santa Monica General Plan: Land Use Element, 1984.

City of Santa Monica General Plan: Draft Land Use and Circulation Element, January 2010.

City of Santa Monica, Map Catalog, Airport Influence Area (ALUC). Accessed February 25, 2010. http://www.smgov.net/isd/gis/map_catalog/index.html

City of Santa Monica Water Efficiency Strategic Plan, 2002

City of Santa Monica 2005 Urban Water Management Plan, 2005

City of Santa Monica Zoning Ordinance

Federal Emergency Management Agency. Flood Insurance Rate Map, September 2008. Accessed March 1, 2010. Available at: http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=86124963&IFIT=1

Green Cities California, Master Environmental Assessment on Single-Use and Reusable Bags, March 2010.

RAND Corporation Headquarters EIR, 2000.

South Coast Air Quality Management District. 2007 Air Quality Management Plan. June 1, 2007.

South Coast Air Quality Management District. 1993 CEQA Air Quality Handbook. 1993. Accessed February 24, 2010.

United States Geological Survey, Mineral Resources, Updated February 9, 2010. Accessed March 1, 2010. Available at: http://mrdata.usgs.gov/mineral-resources/mrds-us.html

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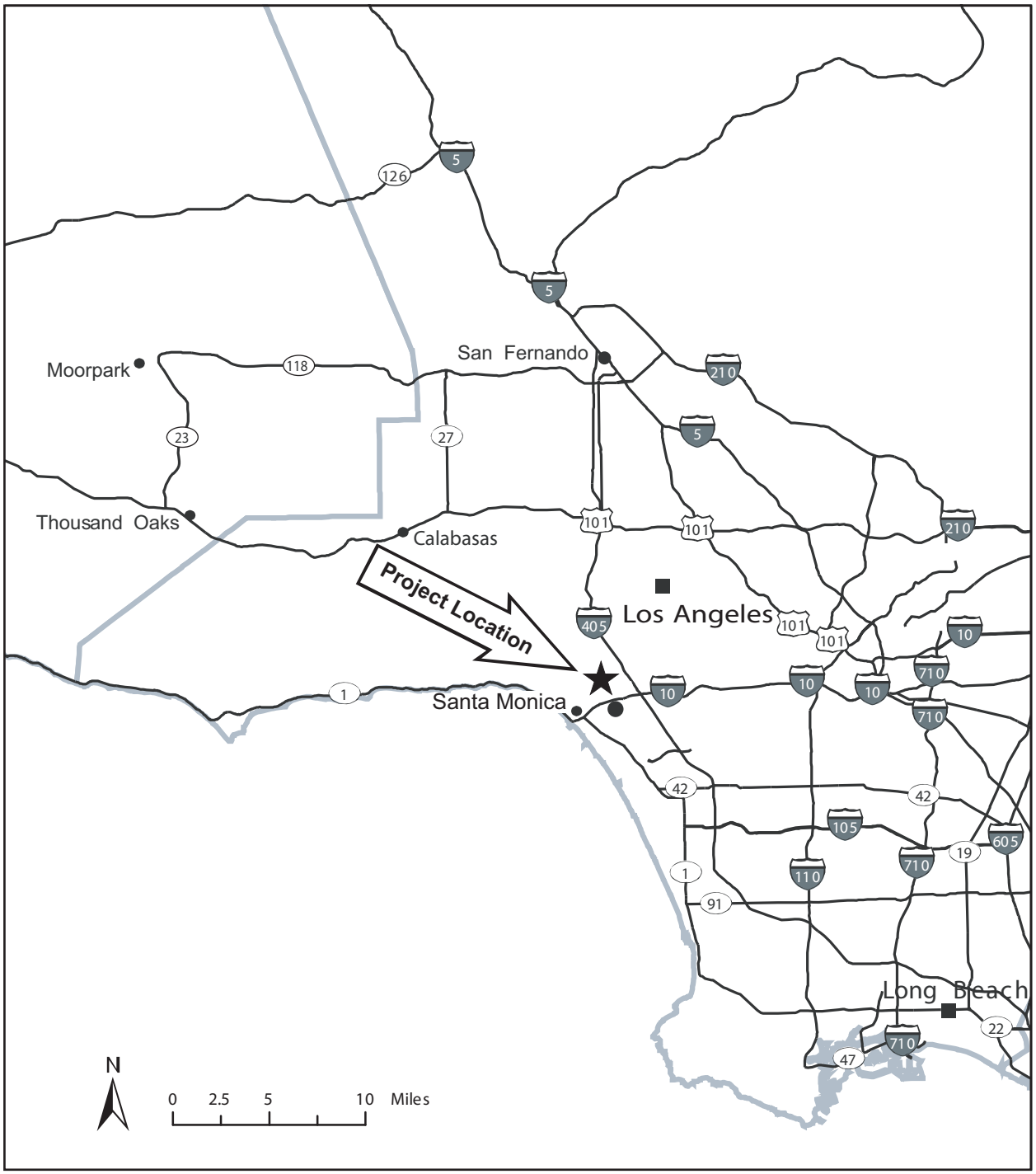
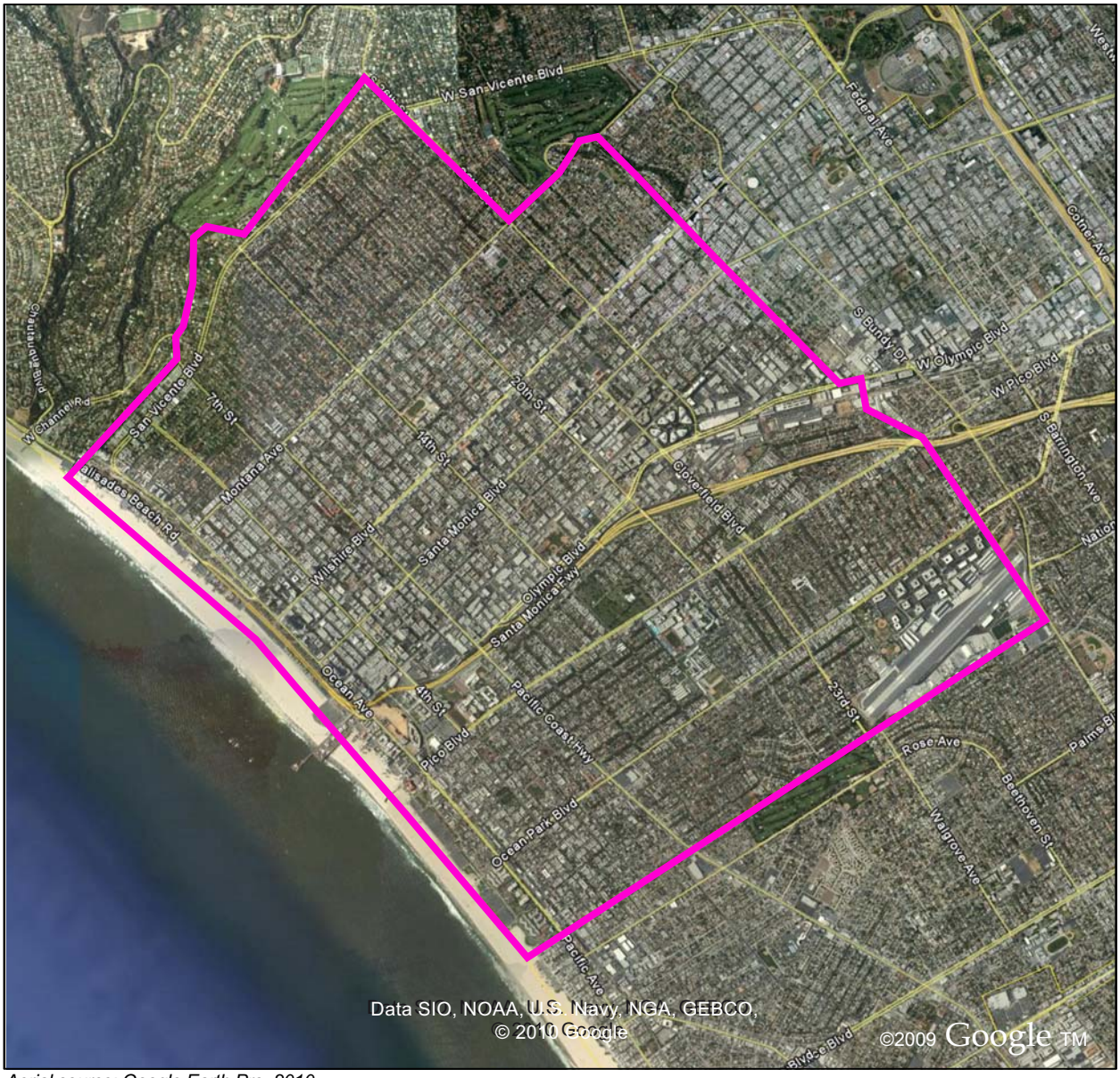
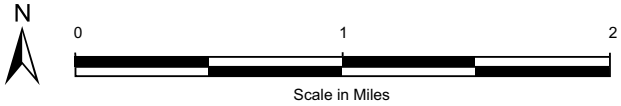
Figures



Regional Location Figure 1



Aerial source: Google Earth Pro, 2010.



Santa Monica City Boundary

City of Santa Monica Aerial

Figure 2

CITY OF SANTA MONICA
OFFICE OF SUSTAINABILITY AND THE ENVIRONMENT
200 SANTA MONICA PIER, SUITE D
SANTA MONICA, CA 90401

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT SANTA MONICA SINGLE-USE CARRYOUT BAG ORDINANCE

DATE: March 31, 2010

TO: State Clearinghouse, Responsible Agencies, Trustee Agencies, Organizations and Interested Parties

LEAD AGENCY: City of Santa Monica
1685 Main Street
Santa Monica, CA 90401
Contact: Josephine Miller, Office of Sustainability and the Environment
Phone: (310) 458-4925

The City of Santa Monica intends to prepare an Environmental Impact Report (EIR) for the Santa Monica Single-use Carryout Bag Ordinance. In accordance with Section 15082 of the State CEQA Guidelines, the City of Santa Monica 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 City has prepared the attached Project Description. The following environmental factors, identified in the initial study, that would potentially be affected by the project include:

- Air Quality
- Biological Resources
- Greenhouse Gas Emissions
- Hydrology/Water Quality
- Traffic

PROJECT SPONSOR: City of Santa Monica
Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

PROJECT LOCATIONS: The Single-use Carryout Bag Ordinance would apply to all retail establishments (except restaurants) located throughout the City of Santa Monica's corporate limits.

PROJECT DESCRIPTION: The City of Santa Monica proposes to adopt a Single-use Carryout Bag Ordinance that would: (1) prohibit all retail establishments (except restaurants) in Santa Monica from providing "single-use plastic carryout bags" to customers at the point of sale; and (2) create a Green Fee for each paper bag distributed by grocery stores, convenience stores and pharmacies in the City. Restaurants are the only retail establishment that would be exempt from the single-use plastic bag ban, allowing them to provide plastic bags for take-out food. The intent of the ordinance is to reduce the environmental impacts related to single-use plastic and paper 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 Green Fee for each paper bag distributed by retailers, the proposed ordinance would reduce the amount of single-use plastic and paper bags within the City, while promoting a shift to the use of reusable bags by Santa Monica retail customers.

Single-use plastic carryout bags are defined as bags made from petroleum or bio-based plastic (i.e., bags 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) that are less than 2.25 millimeters thick. The proposed Single-use Carryout Bag Ordinance would prohibit retailers from distributing both petroleum and bio-based single-use carryout plastic bags at the point of sale. The proposed Single-use Carryout Bag Ordinance would not prohibit the distribution of plastic "product bags" such as those distributed within a grocery store for bagging produce. The ordinance would also provide an exception for 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 Single-use Carryout Bag Ordinance would also impose a "Green Fee" on paper carryout bags at all Santa Monica grocery stores, convenience stores, mini-marts, liquor stores and pharmacies. It is anticipated that the Green Fee would be approximately $0.25 (twenty-five cents) per paper bag with approximately $0.10 (ten cents) of this amount being retained by the affected stores to offset their costs. The Green Fee is intended to provide a disincentive to customers to request paper bags when shopping at regulated stores and is intended to promote a shift toward the use of reusable bags by Santa Monica consumers. The fee would not apply to other types of retail stores such as department stores, clothing stores, and stores that sell durable goods and, as such, do not typically distribute single-use plastic carryout bags to customers in large volumes. In addition, the Green Fee would not apply to paper bags distributed by vendors at the City's Farmers' Markets.

The Green Fee would charge customers for each paper carryout bag provided by the affected stores. Revenues generated from the fee would be used to offset the costs to the City for implementation and enforcement of the ordinance, and to compensate the affected stores for increased costs related to compliance with the ordinance. Stores would be required to indicate on the customer receipt the number of paper carryout bags provided and the total amount of the Green Fee charged. The stores would be required to regularly report and remit to the City the regulatory portion of the Green Fees collected.

Although not included in the proposed ordinance, as part of the Community Outreach for implementation of the Single-use Carryout Bag Ordinance, the City would purchase and distribute (at no cost) approximately 25,000 reusable bags to the public.

REVIEW PERIOD: As specified by the State CEQA Guidelines, the Notice of Preparation will be circulated for a 30-day review period. The City of Santa Monica welcomes agency and public input during this period regarding the scope and content of environmental information related to your agency's responsibility that must be included in the Draft EIR. **Comments may be submitted, in writing, by 5:30 p.m. on April 30, 2010** and addressed to:

Josephine Miller
City of Santa Monica, Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126
310.458.4925
josephine.miller@smgov.net

Dean Kubani
Director, Office of Sustainability and the Environment

March 30, 2010
Date

Heal the Bay

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April 30, 2010

Ms. Josephine Miller, Environmental Analyst
City of Santa Monica, Office of Sustainability & the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

Sent via e-mail

RE: Comments on Santa Monica Single-Use Bag Ordinance Initial Study

Dear Ms. Miller:

On behalf of Heal the Bay and our 13,000 members, we thank you for giving us the opportunity to provide written comments on the City of Santa Monica's study ("Initial Study") for an Environmental Impact Review ("EIR") on the proposed ordinance addressing single-use bags.

As described in detail in our January 11, 2009 letter, we fully support the steps that the City of Santa Monica has taken to draft an ordinance banning the use of plastic single-use bags. A ban on plastic bags and allowing for a fee to be charged on single-use paper bags will be a major step in reducing the blight and environmental impacts that single-use bags create.

Heal the Bay believes that the proposed ordinance will not result in negative environmental impacts, as it will actually lead to an increase in the use of reusable bags that are a more sustainable alternative to single-use bags. Thus, we do not believe an EIR is necessary for this proposed ordinance. However, we understand that the City is pursuing an EIR as a result of a lower court ruling in *Save the Plastic Bag vs. City of Manhattan Beach* (2009). Please note that as of the date of this letter, the defendant's appeal was granted review by the California State Supreme Court.[1]

I. Environmental Checklist

Solid Waste Impacts & Aesthetics Impacts

The proposed Single-Use Carryout Bag Ordinance is intended to reduce the use of plastic and paper single-use bags and to promote a shift in the use of reusable bags by Santa Monica retail customers. We believe that the potential negative environmental impact of reusable bags, as discussed in Sections IV and XXII, would be negligible. All of the significant environmental impacts of the proposed ordinance are beneficial. 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

[1] *Save the Plastic Bag Coalition vs. City of Manhattan Beach.* Cal. Supreme Court, case number **S180720.**

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recycled materials. Heal the Bay does not find reusable bags during beach and inland creek cleanups. On the contrary, plastic single-use bags are ubiquitous and are one of the top five items we find during cleanups. Due to their 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.[2]

Water Quality/Hydrology Impacts

We do not agree that the proposed Ordinance would have "potentially significant" impacts in the realm of hydrology and water quality. As discussed in the Initial Study, due to the nature of the proposed ordinance, the reduction of single-use plastic and paper carryout bags would incrementally reduce the amount of litter in the City that enters storm drains, thereby improving water quality. Since reusable bags are a durable product, they are not likely to become litter and end up in our storm drain systems. Again, we do not find reusable bags in our beach cleanups. Thus they have negligible impacts on water quality and hydrology. Therefore a complete environmental analysis on water quality/hydrology is not necessary.

Sensitive Species Impacts

We disagree that there may be "potentially significant impact" on any species identified as a candidate, sensitive, or special status species. In fact, a single-use bag reduction policy will ultimately benefit the flora and fauna in Santa Monica and beyond. There are special status marine species that reside in the Los Angeles County coastal areas such as the Green sea turtle (Chelonia mydas, Federally Threatened), Leatherback sea turtle (Dermochelys coriacea, Federally Endangered), Short-tailed albatross (*Phoebastria albatrus*, Federally Endangered) Blue whale (*Balaenoptera musculus,* Federally Endangered), Humpback whale (*Megaptera novaeangliae*, Federally Endangered), Snowy plover, and California Least Tern.[3] Discarded *plastic* single-use bags travel long distances via wind or through our storm drains and urban waterways and know no boundaries. Plastic single-use bags are most likely to enter the stormdrain system and end up in the ocean as marine debris, increasing the likelihood that wildlife will be harmed through either ingestion or entanglement.[4, 5,6] One recent report found more than 50 gallons of marine debris, including 20 plastic bags, in the stomach of a dead gray whale that had stranded on

[2] Green Cities California (March 2010) "Master Environmental Impact Assessment on Single-Use and Reusable Bags" p. 23.
[3] California Department of Fish And Game, Biogeographic Data Branch. California Natural Diversity Database "State & Federally Listed Endangered & Threatened Animals of California," October 2009. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf (accessed 18 Dec 09).
[4] N. Wallace. "Debris entanglement in the marine environment: A review" (1985) pp. 259-277 in: R.S. Shomura and H.O. Yoshida (eds.), Proceedings of the Workshop on the Fate and Impact of Marine Debris, U.S. Department of Commerce, NOAA Technical Memorandum. NMFS, NOAA-TM-NMFS-SWFC-5.
[5] D.W. Laist (1997) "Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records" In Coe, J.M., Rogers, D.B. (Eds.), *Marine Debris—Sources, Impacts, and Solutions*: Springer-Verlag, New York, 99-139.
[6] Mrosovsky, N et.al "Leatherback Turtles: The Menace of Plastic. *Marine Pollution Bulletin 58 (2009): 287-289.*

the Pacific coast.[7] Again, reusable bags are a durable product and do not result in added litter that could impact these sensitive biological resources.

Greenhouse Gas Emissions and Traffic Impacts

The Initial Study states that the ordinance may increase traffic conditions in the city and increase greenhouse gas emissions, based on the assumption that more reusable bags will be transported and distributed. After the ordinance is passed the distribution of single-use plastic bags will halt, so the overall emissions due to delivery traffic in Santa Monica should see a net decrease. Also after the ordinance goes into effect, consumers will begin to bring their previously acquired reusable bags to the store so the demand for new reusable bags will decrease over time. In addition, the City intends to distribute 25,000 reusable bags to residents before the ordinance goes into effect. Some of these bags are already being manufactured locally thereby reducing the distances trucks would travel to distribute these bags to stores.[8] Reusable bag have substantially lower impacts than other single-use bags and can result in less ground level ozone formation, water use and greenhouse gas emissions.[9] For these many reasons, we believe that traffic and emission impacts will be minimal and will see a need decrease in impact.

Economic and Social Benefits

We agree with the findings in the Initial Study that the ordinance will not have a negative economic or social impact on the residents of Santa Monica. As previously mentioned, the City of Santa Monica intends to distribute 25,000 reusable bags to residents before the ordinance takes effect. A single-use bag reduction policy will also increase the demand for reusable bags and will create local green jobs through partnerships such as Green Vets LA, which employs veterans to sew reusable bags made from scrap materials.[10] There are also twenty other reusable bag manufacturers based in California.[11]

A single-use bag reduction policy will also reduce overall cleanup costs and could redirect tax dollars to other much needed services. California currently spends $25 million to collect, landfill and dispose of plastic bags.[12] The City of San Francisco estimated that to clean up, recycle, and landfill plastic bags costs the city 17 cents per bag. This figure does not include all of the energy costs associated with producing single-use bags, or the negative environmental, economic, and public health costs associated with single-use bag litter.[13]

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[7] "Garbage Found in Stomach of Dead Gray Whale in West Seattle Beach" Seattle Times (April 20, 2010); Cascadia Research Collective (www.cascadiaresearch.org/WSeattle-ER.htm).
[8] GreenVets LA, a Los Angeles-based sewing company that partners with Veterans Memorial Hospital, has supplied the City of Santa Monica with reusable bags made from scrap materials sewn by veterans.
[9] Green Cities California (March 2010). "Master Environmental Impact Assessment on Single-Use and Reusable Bags."
[10] "Veterans Heal through Sewing." Santa Monica Daily Press (Oct. 26, 2009) ; GreenVets LA (www.greenvetsla.com)
[11] Data obtained March-April 2010 by ChicoBag and Heal the Bay.
[12] CalRecycle, formerly the California Integrated Waste Management Board (Retrieved 12/31/08).
[13] City of San Francisco Department of the Environment, "Bag Cost Analysis," November 18, 2004. http://www.ci.sf.ca.us/site/sfenvironment_page.asp?id=28374 (Retrieved 1/5/09).

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II. Additional Considerations

Paper Bag Fee

As discussed the City proposes to charge a Green Fee on single-use paper bags intended to deter consumers away from these bags and toward reusable bags. There are many examples throughout the world supporting the effectiveness of point of sale fees, most notably in Ireland, where a levy (PlasTax) was charged on plastic bags and resulted in drop in plastic bag use and litter by over 90%.[14] In July 2007, the Irish government raised the PlasTax rate from 15 to 22 euro cents (equivalent to 33 U.S. cents) after noticing a slight increase in the use of plastic bags in 2006.[15] In addition, industry and consumers have adapted to the new law and reusable shopping bags have largely replaced disposable plastic bags in grocery stores.[16] One study found that when a range of fees were compared, a fee of $0.25 showed greater environmental benefit (i.e., a reduction in litter, energy use and greenhouse gas emissions) compared to lower levies, a voluntary levy, or retailers' voluntary reusable bag promotion efforts.[17] Another study found that when a ban on plastic bags is implemented without a fee or other instrument to regulate paper, it would result in a 40% shift in the use of paper.[18] But when a fee was either equally applied to both plastic and paper or used in conjunction with a ban on plastic, similar to what is being proposed in this ordinance, the resulting behavior shift favored reusable bags over all other types of bags.[19] As you know, the City of Santa Monica also completed a Nexus Study in January 2010. This study explored a green fee for paper bags and found that a $0.20 fee would be appropriate for the City based on an estimated 50% reduction in paper bags. These case studies and the Nexus Study should be considered as the City moves forward with its CEQA analysis.

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 (Green Cities

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[14] Ireland Department of the Environment, Heritage & Local Government. Available at www.environ.ie/en/Environment/Waste/PlasticBags

[15] Irish Department of the Environment, Heritage & Local Government. "Plastic Bags Levy to be increased to 22c from 1 July 07." Available at: http://www.environ.ie/en/Environment/Waste/PlasticBags

[16] Sean O'Suilleabhain, Ireland Department of Environment, Heritage & Local Government. Letter to M. Jacques Lalonde. "Effects of the Plastic Bag Levy in Ireland" (10/31/08).

[17] Australia Dept. of Environment & Heritage (Dec 2002). *Plastic Shopping bags - Analysis of Levies and Environmental Impacts.* Melbourne, Australia. Prepared by Nolan-ITU Pty Ltd, Victoria, Australia. 2002., Table 6.2.

[18] City of Seattle Public Utilities (Jan 2008) "Alternatives to Disposable Shopping Bags and Food Service Items," Prepared by Herrera Environmental Consultants, Inc., Table 6-3.

[19] Ibid.

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California, MEA 2010, p. 18).[20] It is our understanding that the proposed ordinance will allow retailers to charge a Green Fee on recyclable paper bags made of a minimum of 40% postconsumer recycled content that contain less virgin fiber. Therefore, these types of paper bags consume less material and would have fewer environmental impacts than conventional paper bags. This added environmental benefit of the proposed ordinance should also be considered when evaluating for environmental impacts.

*****

Summary

Although we do not see the need for an EIR for this proposed ordinance, we understand why the City feels compelled to move forward with this analysis. At a minimum we suggest that the City reexamine the need to analyze water quality and biological impacts further, as we disagree with the Initial Study assessment that significant impacts could occur. We urge the City to move forward as quickly as possible in completing the EIR. The urgency for local government to take action has never been greater. The ordinance process has already taken far too long. Every day that passes without an ordinance results in more harmful plastic bag litter in the Pacific Ocean. Santa Monica's proposed ordinance will be a significant step towards advancing the city's sustainability goals.

Sincerely,

Mark Gold, D. Env.
President

Kirsten James
Water Quality Director

[20] Ibid., p. 18.

SAVE THE PLASTIC BAG COALITION

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April 27, 2010

Josephine Miller
City of Santa Monica
Office of Sustainability and the Environment
200 Santa Monica Pier, Suite D
Santa Monica, CA 90401-3126

Via e-mail to: josephine.miller@smgov.net

RE: Santa Monica Single-use Carryout Bag Ordinance"; submission to City of Santa Monica in response to Notice of Preparation of draft EIR

INTRODUCTION

Save The Plastic Bag Coalition ("STPB") hereby submits these comments to the City of Santa Monica (the "City") to ensure that the EIR on the proposed carryout bag ordinance (i) makes clear and unambiguous findings on all environmental impacts and (ii) is based exclusively on substantial evidence; and (iii) describes reasonable alternatives to the project (CEQA Guidelines §15126.6).

On March 8, 2008, *The Times* of London stated in an editorial:

> 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.

www.timesonline.co.uk/tol/comment/leading_article/article3508113.ece

The above extract from *The Times* of London explains why STPB was formed. STPB's mission is (i) to provide the facts about the environmental impacts of plastic bags and the alternatives (including paper bags and reusable bags) to decision-makers and the public; and (ii) to provide corrective information in response to the myths, misinformation and exaggerations

that have been disseminated about the environmental impacts of plastic bags.

In California, people are bombarded with messages about plastic bags being bad for the environment. By now, a large number of people have formed a negative opinion about plastic bags by dint of the repetitious one-sided messaging and sound bites, particularly in Los Angeles County including the City. They believe that paper bags are better for the environment. However, very few people have more than a superficial understanding of the subject. Most people just accept what they are told.

Many people want to make the right environmental choice when they choose paper or plastic or a reusable bag. They are collectively making decisions about environmental impacts millions of times each day at the checkout. STPB believes that they have been fed a diet of myths, selective facts, misinformation and exaggerations about plastic bags. They should know, and have a right to know, the truth.

One of the most egregious examples of misinformation is the heavily publicized and widely held belief that 100,000 marine mammals and a million seabirds die each year as a result of ingesting plastic bags. That allegation has caused great consternation among decision makers and the general public. However, it is untrue. It is based upon a typographical error. The Canadian study on which the assertion is based reported that the deaths resulted from discarded fishing tackle. The study did not mention plastic bags at all. ("Series of blunders turned the plastic bag into global villain." *The Times* of London, March 8, 2008, www.timesonline.co.uk/tol/news/environment/article3508263.ece)

The media has spread the false allegation by copying and pasting it without checking the facts. It is impossible to purge it from the Internet because it is repeated thousands of times, as a Google search will show. However, when an EIR is completed and publicized, articles on the Internet pointing out that the allegation has been confirmed to be false should eventually predominate.

Another example of a myth is the idea that paper bags are better for the environment than plastic bags. They are not, especially regarding greenhouse gas emissions, as discussed herein.

Another myth is that reusable bags have no environmental impact. They do have an environmental impact. This needs to be fully disclosed to decision-makers and the public in the Santa Monica EIR.

STPB is determined to ensure that lawmakers arrive at their decisions about plastic and paper bags with the benefit of accurate and comprehensive environmental information. We hope that an EIR prepared in accordance with the strict requirements of CEQA will be seen as an authoritative document that will put an end to the myths and misinformation about plastic bags.

An EIR must be based on "substantial evidence." CEQA Guidelines §15064(f) states:

> Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial

> evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

CEQA Guidelines §15144 states:

> Drafting an EIR or preparing a Negative Declaration necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.

STPB will be vigilant in enforcing the "substantial evidence" requirement. Every statement and source cited in the EIR, without exception, will be thoroughly scrutinized by STPB. If there is any deviation from the substantial evidence standard including §15064(f), STPB will not hesitate to litigate the issue. Regrettably, we believe that we need to emphasize this point to the City because the plastic bag issue has been plagued with environmental misinformation, including by Los Angeles County. See for example: www.savetheplasticbag.com/ReadContent676.aspx

We will object to the cherry-picking of facts.

We will object to selective photographs.

We will object when context is not provided.

We will object to anything that is misleading.

We will object to vague or ambiguous statements or terminology.

We will object to sweeping statements.

We will object when sources cited in footnotes do not support statements.

We will object to bias and sensationalism.

Context is crucially important. Showing a photograph of a litter hotspot without showing adjacent clean areas is a misrepresentation to decision-makers and the public. If there is an accumulation of litter in one hotspot, photographs of clean areas should be shown too. It should be explained in the EIR that the photograph is an isolated area and not representative or typical of conditions anywhere else. Sensationalism can turn a molehill into a mountain.

We caution the City to be ultra-careful about the terms "marine debris" and "plastic debris." They do not mean plastic bags. STPB will litigate any attempt to misrepresent or cloud the facts to fit the City's predetermined objective to ban plastic bags.

We will object to any attempt to whitewash the environmental impacts of paper bags or reusable bags. We call the City's attention to the following statement of law in *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311, which is particularly important regarding

reusable bags:

> The agency [will] not be allowed to hide behind its own failure to gather relevant data.... CEQA places the burden of environmental investigation on government rather than the public. If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences.

In *People v. County of Kern* (1974) 39 Cal. App. 3d 830, 842, the court stated:

> 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.

THE INITIAL STUDY AND THE PROSPECT OF LITIGATION

STPB strongly hopes that litigation against the City regarding the EIR will not be necessary. We can avoid litigation over the EIR if the EIR is totally honest, objective, scientific, reliable, forthright, non-argumentative, non-politicized, unambiguous, comprehensive, and based only on substantial evidence and good faith. The City has nothing to gain from spinning a trumped up case against plastic bags in the EIR.

The purpose of the EIR is not to make *arguments* to support the proposed ordinance. The purpose of the EIR is to describe and disclose the environmental impacts to the City Council and the voters in an objective way and in *good faith*.

Let us be clear. We are not saying that plastic bags have no negative environmental impacts. They do, just as all manufactured products do. We *want* the actual negative environmental impacts of plastic bags to be *fully and accurately disclosed*. But we expect and demand exactly the same for paper bags and reusable bags.

We will gladly provide all the cooperation that we possibly can to make sure that the City has all of the information that it needs.

THE GREEN CITIES MASTER ENVIRONMENTAL ASSESSMENT

The City states in the Initial Study Initial Study (at page 3) that the Green Cities California Master Environmental Assessment (MEA) "has been used in the preparation of this Initial Study to assess the potential impacts of such ordinances."

STPB does not know to what extent statements or data in MEA will be incorporated in the Santa Monica EIR. Therefore, we make the following *general* comments on the MEA at this time.

1. Under CEQA, EIRs must include calculations and quantifications of greenhouse gas emissions on a cumulative basis. While such calculations do not have to be included in an MEA, cities and counties must generate and disclose such data in their EIRs.

2. The following paragraph appears in the MEA (at page 29): "The Los Angeles County Staff Report on Plastic Bags (2007) summarizes several studies conducted on plastic litter. Based on five studies, the report suggests that plastic films, which include plastic bags, account for 7-30% by weight of all litter in the Los Angeles area." STPB *strongly* disagrees with the 7-30% figure and will object if it appears in an EIR. This is discussed below in the section regarding the extent and causes of plastic bag litter.

3. As the MEA acknowledges, the plastic bag recycling figure of 5% is not based on California data generated after AB 2449 plastic bag collection bins were installed. Therefore, the figure is outdated and invalid.

4. Regarding solid waste system costs, the MEA states: "Note that the per bag costs in San Francisco are overestimated because the total costs are divided by only 50,000,000 bags, instead of the larger total number of bags distributed in the city." The Santa Monica EIR must not contain an overestimated or overstated figure.

5. Regarding marine debris, STPB is particularly concerned about the use of the term "plastic debris" which is not the same as plastic bags. There is also a lack of substantial evidence for the assertions in the MEA about marine debris. An EIR must be based on "substantial evidence." CEQA Guidelines §15064(f) states: "Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."

6. Double bagging of paper bags is a very common practice. It is not addressed or factored into the MEA.

7. Oxo-biodegradable additives are not discussed in the MEA as a potential alternative to banning plastic bags.

8. The specific environmental impacts caused by the manufacturing and transportation of reusable bags is not discussed in the MEA.

9. The MEA does not address the issue of heavy metals in reusable bags. Under the California Toxics in Packaging Act, plastic and paper bags are subject to strict limits on the amount of heavy metals they may contain. Plastic and paper bags generally do not contain heavy metals. Prior to 2008, the same law applied to reusable bags. However, under a California law authored by Assembly Member Julia Brownley (D-Santa Monica) and enacted in 2008, reusable bags may now contain unlimited amounts of lead, mercury, cadmium, and hexavalent chromium. This is an important environmental issue that must

be disclosed to decision-makers and the public in EIRs. Many reusable bags used in the United States, including the City, are manufactured in China where lead and other heavy metal content in manufactured products have been a major problem. STPB has documentation regarding the heavy metal content of reusable bags based on independent laboratory testing which is available to the City upon request.

10. The MEA does not address the recyclability of cloth, hemp, and nonwoven polypropylene reusable bags.

11. There is no data in the MEA based on import statistics and from stores indicating how many times consumers are actually using reusable bags.

STPB will respond to any specific statements in the MEA that are incorporated into the draft Santa Monica EIR during the public comment period on the draft Santa Monica EIR.

CALCULATING AND DISCLOSING GREENHOUSE GAS EMISSIONS

CEQA Guidelines §15064.4, which is retroactive (see SB 97), states:

> The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.

The Santa Monica EIR must include a *cumulative* impact analysis. It must consider the impact of the proposed City ordinance together with the following projects:

- The Los Angeles County Board of Supervisors resolution of January 22, 2008 that would ban plastic bags if reduction benchmarks are not attained.
- The San Francisco plastic bag ban ordinance adopted in 2007.
- The City of Los Angeles resolution to ban plastic bags in 2010 if no plastic bag fee bill is enacted by the state by that time.
- The City of Malibu plastic bag ban ordinance adopted in 2008.
- The City of Manhattan Beach plastic bag ban ordinance adopted in 2008 (if it is not invalidated).
- The City of San Jose proposed plastic bag ban (and probable paper bag fee).
- The Palo Alto plastic bag ban ordinance adopted in 2009.
- The proposed City of Santa Monica plastic bag ban ordinance.
- The proposed City of Berkeley plastic bag ban ordinance.
- All plastic bag ban ordinances and reduction projects that are being considered or may be or have been implemented in California and outside California.

The Weyerhaeuser pulp and paper mill
Longview, Washington State

In accordance with §15064.4, the Santa Monica City Council and the voters in Santa Monica have the right to know that the life cycle of paper bags produces *at least* 2.0 (Boustead report) to 3.3 times (Scottish report) more greenhouse gas emissions than plastic bags.

Both the Scottish report (see page 22) and the Boustead report (see page 7) are based on ***equivalent carrying capacity***. The ratio in the Boustead report (see page 7) is 1,500 plastic bags = 1,000 paper bags. In fact, the impact of paper bags is actually *even greater* than shown in the Boustead report because:

- Paper bags are frequently double bagged as they have weak glued inelastic paper handles. Double bagging means double greenhouse gas emissions.

- When there are low volumes are placed in bags, carrying capacity is irrelevant and the ratio is 1 plastic bag = 1 paper bag. For example, when there are two items in a paper bag as in the second photo below, it is replacing one plastic bag.

Despite the fact that the 1500 plastic = 1,000 paper ratio does not take into account the frequent double bagging of paper bags and the fact that carrying capacity is irrelevant when bags are not filled, we will use the 1500 plastic = 1,000 paper ratio in our calculations. (However, we believe the true ratio is closer to 1,100 plastic = 1,000 paper.)

The recycling assumptions in the Boustead report (at page 46) are 5.2% for plastic bags and 21% for paper bags.

Recycling is a major collection, transportation, washing and reprocessing operation with major environmental impacts. A 21% recycling rate for paper bags does not mean a 21% reduction in environmental impacts of paper bags. In fact, recycling may create *more* adverse environmental impacts than not recycling. It must not be assumed that recycling is environmentally benign.

Los Angeles County says that 6 billion plastic bags are used in the County each year. Replacing 6 billion plastic bags with 4 billion paper bags (i.e. 1500 plastic = 1,000 paper) would have the following results.

Based on a 2.0 times worse greenhouse gas (GHG) impact (i.e. the best case least environmentally damaging scenario in the Boustead report), the GHG equivalencies *of the increase* are as follows:

- *Increase* in GHG per 1,000 paper bags = 0.04 CO_2 equivalent tons
- 4 billion paper bags divided by 1,000 = 4 million
- 4 million x 0.04 = 160,000 added CO_2 equivalent tons

According to the U.S. Environmental Protection Agency, that is equivalent to:

- Annual CO_2 emissions from 27,753 passenger vehicles
- Annual CO_2 emissions from 16,327,284 gallons of gasoline consumed
- Annual CO_2 emissions from 337,557 barrels of oil consumed
- Annual CO_2 emissions from 1,938 tanker truck's worth of gasoline
- Annual CO_2 emissions from the *total electricity* use of 18,851 homes
- Annual CO_2 emissions from the *total energy* use of 12,948 homes

www.epa.gov/RDEE/energy-resources/calculator.html

The equivalencies *of the increase* based on the 3.3 ratio in the Scottish report are:

- *Increase* in GHG per 1,000 paper bags = 0.092 CO_2 equivalent tons
- 4 billion paper bags divided by 1,000 = 4 million
- 4 million x 0.092 = 368,000 added CO_2 equivalent tons

According to the U.S. Environmental Protection Agency, that is equivalent to:

- Annual CO_2 emissions from 63,832 passenger vehicles
- Annual CO_2 emissions from 37,552,752 gallons of gasoline consumed
- Annual CO_2 emissions from 776,381 barrels of oil consumed
- Annual CO_2 emissions from 4,458 tanker truck's worth of gasoline
- Annual CO_2 emissions from the *total electricity* use of 43,356 homes
- Annual CO_2 emissions from the *total energy* use of 29,781 homes

www.epa.gov/RDEE/energy-resources/calculator.html

The fact that plastic bags do not degrade in landfills "for a thousand years" is an environmental benefit. Why? *Because the carbon is trapped in the bags.* The U.S. Government is trying to find ways to trap carbon. Plastic does it automatically. When paper decomposes in a landfill, it emits methane which is a greenhouse gas with 23 times the global warming power of CO_2. http://en.wikipedia.org/wiki/Carbon_sequestration

CO_2 emissions have a major impact on ocean acidification and marine life, which must be stated in the EIR. The City will do far more harm than good to marine life by banning plastic bags. http://news.bbc.co.uk/2/hi/science/nature/8411135.stm.

In addition, the City must state how the banning of plastic bags will conform to the (California) Global Warming Solutions Act of 2006, the California and Federal Clean Air Acts, and California Executive Order S-3-05. An ordinance to ban plastic bags cannot be enacted or enforced if it is unlawful.

www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.html

www.arb.ca.gov/cc/cc.htm

All rights are reserved, including the right to challenge whether the City has the legal power to pass an ordinance that would significantly increase greenhouse gas emissions.

SUBJECTS THAT MUST BE ADDRESSED IN THE EIR

In order to comply with CEQA, the foregoing and following issues and questions must be addressed in the EIR in addition to the greenhouse gas emissions calculations discussed above.

Each question and issue must be the subject of a separate finding. This list is not exhaustive and no waivers are intended by any omissions. All rights are reserved.

The following definitions apply to this document:

- TYPE 1 BAGS: Plastic bags that would be banned under the proposed ordinance.
- TYPE 2 BAGS: Plastic bags of all kinds that would not be banned under the proposed ordinance. For example, produce bags, restaurant take-out bags, dry cleaning bags, newspaper bags and trash bags.
- TYPE 3 BAGS: Paper bags that would be subject to the "Green Fee" under the proposed ordinance.
- TYPE 4 BAGS: Paper bags of all kinds that would not be subject to the "Green Fee" under the proposed ordinance.

In this document, the bag type will be indicated by number in parentheses. For example, plastic bag (1,2) means type 1 and 2 bags using the above definitions.

The EIR should *always* indicate which category of plastic bags is being referred to rather than using generic and ambiguous terms such as "plastic bags" or "plastic carryout bags." Whenever possible, the EIR should provide separate statements or answers for each of the four categories of bags.

1. Benefits of the proposed ordinance

State in as much detail as possible the intended environmental purposes and anticipated environmental benefits of the proposed ordinance.

2. Number of plastic bags (1) used in the City each year

A. How many plastic bags (1) are used in the City each year?

B. How many plastic bags (2) are used in the City each year?

C. How many paper bags (3) are used in the City each year?

D. How many paper bags (4) are used in the City each year?

E. How many reusable bags (as defined in the Initial Study) are used in the City each year?

3. Extent and causes of carryout bag litter

A. Based on City and county litter surveys and audits, how much plastic bag (1,2) litter has there been and is there in the City? To the extent possible, break down the response into types of bags (types 1 or 2) and give percentages for each. Cite substantial evidence and credible verifiable sources, including but not limited to City and county litter surveys and audits.

In the Los Angeles County Initial Study (at page 1-3), the following statement is made: "It is estimated that litter from plastic carryout bags that are designed for single use accounts for as much as 25 percent of the litter stream." The following sources are cited:

- City of Los Angeles, 10 June 2004, *Waste Characterization Study*, Los Angeles CA.

- County of Los Angeles Department of Public Works, Environmental Programs Division, October 2008. *County of Los Angeles Single Use Bag Reduction and Recycling Program - Program Resource Packet*, Alhambra, CA

The October 2008 Los Angeles County program resource packet uses the 25% figure, but cites only the City of Los Angeles June 10, 2004 study as the basis for the figure, so it is not a separate source.

The City of Los Angeles June 10, 2004 study apparently determined that 19% of trash by weight and 25% by volume in *30 catch basins* along a one mile stretch of North Figueroa Street between Cypress Avenue and Avenue 43 was "plastic bags." Catch basins are not the same as roads, sidewalks, parks, and other areas.

According to another study by the City of Los Angeles, the area surveyed on June 10, 2004 is part of the central part of the city which

> contributes disproportionately more trash per unit area. The central part of the City is characterized with higher population density, has more commercial and industrial areas, and has more pedestrian traffic than other areas of the City.

Watershed Quality Compliance Master Plan For Urban Runoff, Watershed Protection Division, Bureau of Sanitation, Department of Public Works, City of Los Angeles, May 2009 at page 4-2.
www.lacitysan.org/wpd/Siteorg/download/pdfs/tech_docs/WQCMPURChapters.pdf

The term "plastic bags" is not defined in the City of Los Angeles June 10, 2004 study, so it could include produce bags, food packaging in the form of bags, restaurant take out bags, dry cleaning bags, newspaper bags, trash bags, and other plastic bags.

We have requested, but not received from Los Angeles County, Attachments A and B to the June 10, 2004 study. The attachments include photographs of the June 10, 2004 survey. We will object to any reference to the June 10, 2004 study in the Santa Monica EIR unless the attachments are produced.

The Keep America Beautiful study discussed below showed that a mere 0.9% of storm drain litter is plastic bags. It is impossible to reconcile the 25% and 0.9% figures.

The purpose of a catch basin is to catch litter. Obviously, the catch basins are *successful* at catching plastic bags, which is the true conclusion of the June 10, 2004 study.

The pictures below are tons of garbage that swept down the Los Angeles River after a storm which has been corralled by a boom in Long Beach. It is simply wrong to say that 25% of the litter in the picture is "plastic bags." *The pictures speak for themselves.*

The LA River: clearly ***not*** 25% plastic bags

Los Angeles River trash: clearly ***not*** 25% plastic bags
Source: http://www.yudulife.com/acleanlife

The Los Angeles County Initial Study §1.9 states that various studies have concluded that "plastic film (including plastic bag litter) comprises between 7% and 30% by mass and 12% to 34% of the total litter collected." The Los Angeles County Initial Study does not state how much of the "plastic film" is plastic bags, so the statement is irrelevant and misleading in a study about *plastic bags*, not plastic film. Moreover, the studies cited in support of these figures did not even mention plastic bags, except for the June 10, 2004 Waste Characterization study which surveyed 30 catch basins. Here is a table from the Los Angeles County staff report summarizing all of the cited studies:

Table 5 -- Summary of Litter Studies

	All Plastic Film		Plastic Bags	
	Weight %	Volume %	Weigh %	Volume %
Caltrans Litter Management Pilot Study (1998-2000)	7	12		
Great Los Angeles River Clean Up (4/30/04)		34		
City of Los Angeles Catch Basin Cleaning (6/10/04) (Note, plastic carryout bags listed separately; not included under All Plastic Film)	30	24	25	19
Hamilton Bowl Project-Street Sweeping (2006)	20			
Hamilton Bowl Project-Trash Capture Devices (Feb. 2007)	30			

STPB will object to the citation of those studies for any proposition regarding plastic bags, other than the City of Los Angeles June 10, 2004 study, and that study is only potentially the basis for an assertion about 30 catch basins in a particular location. Further, STPB will object to any references or reliance upon the study as the photographs that are part of the study are not available.

In the San Francisco litter audit conducted in 2007, before plastic bags (1) at large stores were banned in that city, plastic bags of all kinds were just 0.6% of total litter. (Audit at page 29.) www.sfenvironment.org/downloads/library/rolitterstudy12june07final.pdf

Reports by the Washington State Department of Ecology found that plastic bags accounted for a much smaller percentage of urban and rural litter than we are often led to believe.
http://www.ecy.wa.gov/pubs/0007023.pdf
http://www.ecy.wa.gov/pubs/0507029.pdf

The Florida Litter Study 2001 shows plastic retail bags in 32nd place among littered items, constituting just 0.72% of litter.

www.hinkleycenter.com/publications/Litter2001.pdf.

The Toronto Litter Survey shows plastic retail bags in 25th places among littered items, constituting just 1% of all litter.
www.cpia.ca/anti-litter/pdf/Litter%20Survey-final.pdf

One of the alternatives that must be addressed in the EIR is the alternative of the City banning items higher up on the Florida and Toronto lists.

This is a compilation of the Washington State reports results regarding *all* plastic bags *and film* by weight:

Source	1999	2000-1	2004-5
All Roadways	4.5%	3.4%	2.9%
Interstates	NR	1.8%	1.9%
Interchanges (Urban)	3.9%	3.0%	3.1%
State and County Parks	NR	2.9%	NR
Fish wildlife and DNR Sites	NR	1.9%	NR
Rest areas	NR	3.0%	NR

Keep America Beautiful has also conducted a litter survey. Keep America Beautiful, *National Litter Study 2009*. "Plastic bags" are defined in the study as follows: "Plastic trash bags, and plastic grocery, and other merchandise shopping bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase (including dry cleaning bags). This category includes full bags; bags will not be opened for the study." The following charts and tables are extracted from the study:
www.kab.org/site/DocServer/Final_KAB_Report_9-18-09.pdf?docID=4561

Figure 3-27 Plastic and Other Materials at Storm Drains

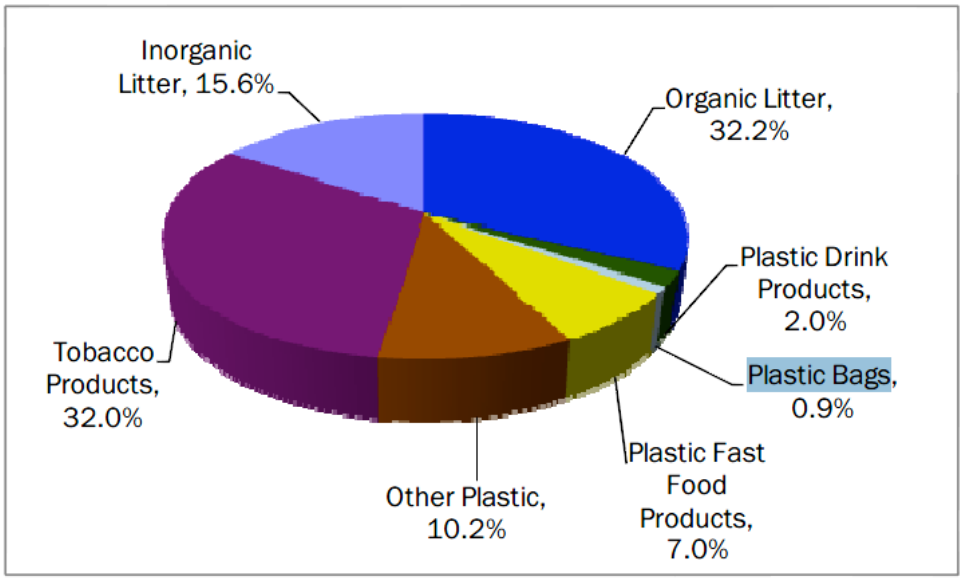

Figure 3-30 Top 10 Most Common Litter Items at Retail Areas (Items/1,000 sq ft)

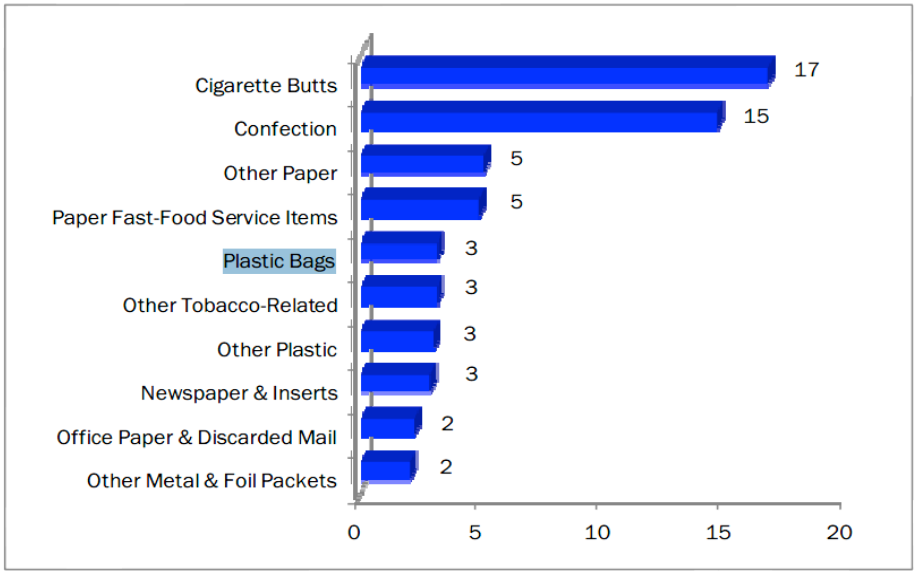

Table ES-3 Top 5 Most Common Litter Items at Non-Roadway Sites (Items/1,000 sq ft)

Ranking	Transition Points	Loading Docks	Storm Drains	Retail Areas	Recreational Areas	Construction Sites
1	Confection Litter	Cig. Butts	Cig. Butts	Cig. Butts	Cig. Butts	Cig. Butts
2	Cig. Butts	Other Metal and Foil	Confection Litter	Confection Litter	Confection Litter	Other Paper
3	Vehicle Debris	Wooden Pallets	Other Paper	Other Paper	Other Paper	Other Plastic
4	Broken Glass or Ceramic	Other Plastic	Broken Glass or Ceramic	Paper Fast Food Service	Food Waste	Confection Litter
5	Other Paper	Other Paper	Other plastic	Plastic Bags	Other Plastic	Other Metal and Foil

Table 6. Type and Frequency of Disposed Objects

	Proper	Improper	% Littered
Cigarette Butt	146	194	57%
Combo/Mixed Trash	325	12	4%
Paper	251	20	7%
Beverage Cup	180	5	3%
Napkin/Tissue	110	9	8%
Beverage Bottle: Plastic	100	5	5%
Food Remnants	65	16	20%
Food Wrapper	85	14	14%
Beverage Can	59	8	12%
Food Container	57	1	2%
Plastic Bag	38	2	5%
Beverage Bottle: Glass	11	0	0%
Unknown	116	10	8%
Other	77	46	37%
TOTAL	**1,620**	**342**	**17%**

The June 10, 2004 study is not substantial evidence for the assertion that 25% of the entire litter stream in all parts of the County consists of plastic bags. The assertion is totally inconsistent and irreconcilable with all litter characterization studies. The figure is also absurd on its face. Anyone can see that plastic bags do not comprise one-fourth of all litter. This is exactly the kind of misinformation that gets copied and pasted into other reports and websites and misleads decision-makers and the public.

B. Based on City and county litter surveys and audits, how much paper bag (3,4) litter has there been and is there in and near to the City? To the extent possible, break down the response into types of paper bags (types 3 or 4) and give percentages for each. Cite substantial evidence and credible verifiable sources, including but not limited to City and county litter surveys and audits.

C. What are the exact locations of the highest concentrations or "hotspots" of plastic bag (1,2) and paper bag (3,4) litter in and near to the City? Cite substantial evidence and credible verifiable sources. STPB plans to visit the locations, so precise locations and addresses are requested including but not limited to specific spots along the beach.

D. Other than "hotspots," what other locations in and near to the City tend to accumulate concentrations of plastic bag (1,2) and paper bag (3,4) litter? Cite substantial evidence and credible verifiable sources.

E. To what extent is plastic bag (1,2) and paper bag (3,4) litter caused by such bags flying off the back of trucks, including but not limited to garbage and recycling haulage trucks? Quantify. Cite substantial evidence and credible verifiable sources. What steps can be taken to address this problem, including equipment changes or additions?

   According to Caltrans research, a significant amount of trash ends up on highways by "flying out" the back of pickup trucks, either from loads that are not tied down or from the occasional piece of trash in the truck bed that becomes airborne when the truck travels on the highway. www.dot.ca.gov/hq/paffairs/news/pressrel/06pr6.htm.

F. To what extent are plastic bags (1,2) being carried by the wind as a result of refuse collection and transportation practices? Quantify. Cite substantial evidence and credible verifiable sources. Can improvements be made to refuse collection practices and vehicles to address this problem?

G. What are the sources and causes of plastic bag (1,2) and paper bag (3,4) litter in the City? Cite substantial evidence and credible verifiable sources, including City and county litter audits.

H. To what extent are plastic bags (1,2) and paper bags (3,4) blocking or entering the City's storm drains? Quantify. Once in the storm drains, where do the bags go?

I. What regulatory requirements (including stormwater permitting) does the City have to comply with as a result of plastic bags (1,2) and paper bags (3,4) being provided to consumers in the City?

J. What are the alternative solutions to the plastic bag (1) litter issue other than the proposed ordinance?

4. <u>Environmental impacts of plastic bags on the marine environment</u>

If, and only if, there is substantial evidence that plastic bags (1) from the City reach the Pacific Ocean, then the issue of the impact of such bags on the marine environment must be addressed. This issue has been the subject of egregious myths, misinformation, speculation, and exaggeration.

The following questions must be addressed:

A. Is there a concentration or island of plastic debris in the North Pacific Gyre? Cite substantial evidence and credible verifiable sources.

Note that the Project Kaisei log states as follows:

> And what we are discovering through all of our tests is that the Ocean's surface is covered in these minute particles of broken down plastic. I came out thinking we would find an island, but instead what we found could be potentially worse, bits of broken down plastic that covers the surface of the ocean, just like plastic soup.

http://newhorizonprojectkaisei.wordpress.com/

> We have just passed through the convergence zone, leaving the gyre, after two weeks in only one area of a large water mass, known as the North Pacific Gyre. Our findings made believers out of doubters, if there were any before we set out. We found bits of plastic debris, consistently, in over 100 sample nets, towed on the surface, over 900 miles of water. These samples were random in their location, but scheduled in their intervals.
>
> I too was surprised. I knew we would not find an "island" out here, but I also didn't expect to find the mass-existence of so much smaller debris. Now the question is "how deep does it go?" How fast does the material break down into this small, "confetti" state, after being at sea in the form of a large object from the beginning of its journey to the gyre?
>
> We only scratched the surface. That is sad, because there is a lot of ocean that we did not survey, and the water characteristics in the gyre suggest that there is much more than what we witnessed in just a two-week period.

http://newhorizonprojectkaisei.wordpress.com/

B. What is the quantity and concentration of plastic "confetti" in the North Pacific Gyre? Cite substantial evidence and credible verifiable sources.

The "Junk" voyage is discussed at www.savetheplasticbag.com/ReadContent684.aspx. It appears that the amount of plastic debris gathered during a 24 hour trawl over about 50 miles in the Gyre is insignificant. This should be addressed in the EIR. We have provided evidence on the cited webpage that one of the videos contains a clip from another time and place and is therefore doctored.

C. What are the sizes of the plastic "confetti" pieces in the North Pacific Gyre? Cite substantial evidence and credible verifiable sources.

D. Is there any substantial evidence that the "confetti" consists of plastic bag fragments?

We have inspected fragments collected from the Gyre. All of them appear to be too thick to be from plastic carryout bags. They appear to be hard plastic fragments.

E. Is there plastic debris below the surface of the water in the North Pacific Gyre? Is so, how far below the surface and in what quantities and concentrations? Cite substantial evidence and credible verifiable sources.

F. Are there any intact plastic bags (1) in the North Pacific Gyre? Quantify. Cite substantial evidence and credible verifiable sources.

G. What is the debris in the North Pacific Gyre composed of? Provide details and percentages. Cite substantial evidence and credible verifiable sources, including analysis of samples collected from the ocean.

The following article appeared in the *Seattle Times*:

> I figured if anyone would jump for joy at Seattle's crusade against plastic bags, it would be the flotsam guy.
>
> Maybe you've heard of Curt Ebbesmeyer. He's considered one of the world's leading oceanic garbologists (though, as he jokes, how many can there be?). From his basement in Ravenna, he uses beachcomber reports to track the comings and goings of floating sea trash. Like dozens of rat-poison canisters that washed onto Washington shores this spring. Or computer monitors, which "always float screen up, eyes peering out of the waves."
>
> An oceanographer, he also named the Earth's most shameful man-made feature, the "great Eastern garbage patch." That's a Texas-sized soup of plastic junk, swirling in floating clouds across the Pacific between us and Hawaii.
>
> It's such a huge and indestructible soiling of the sea that Ebbesmeyer feels bad he dubbed it only a "patch."

“It’s trash that will never go away, stretching across the water farther than you can see,” Ebbesmeyer says. “It would absolutely horrify you to see it.”

So when I asked him what he thought of Seattle's plan to crack down on disposable grocery bags, I was surprised when he sort of shrugged.

“It's OK, but plastic bags are not the real problem,” he said. “It's one little battle out of a million. Go look at what the ocean carries in on a given day. You'll see what I mean.”

Last month, Ebbesmeyer held a “Dash for Trash” in Ocean Shores. In two hours, 50 people collected an astonishing 2,000 pounds of junk from the beach. Almost all of it was plastic -- from fishing floats to shotgun shells to dolls from Japan. Yet very little of it was the plastic bags targeted by Seattle.

I did my own garbology “dig” at low tide in Seattle's Myrtle Edwards Park. In half an hour poking along 300 yards of shoreline, I found a demoralizing 173 pieces of trash.

Take out the wood (paintbrush), the metal (beer cans, foil wrappers) and the miscellaneous (earplugs, nicotine patches, ropes, a corncob, an orange traffic cone), and I was left with 137 pieces of plastic.

Top item, by far: Plastic bottles. Followed by plastic bottle caps. Then plastic lids and plastic cups. Plus a slew of plastic food packaging.

Number of plastic grocery or drugstore bags? One.

The plan is to levy a 20-cent-per-bag fee on both plastic and paper bags, in hopes we'll all stop using them. That’s fine, Ebbesmeyer told me. But it's such a tiny slice of the global plastic problem it’s scarcely worth commenting on.

“If the mayor really wants to get on the stick, he should go after plastic bottles. Or plastic wrapping of food products. Or how about a tax or a ban on petroleum-based plastic, period?”

Now some of you have written to say the mayor, for proposing even this mild intrusion into our lives, is an eco-fascist who'll pry your bags only from your cold, dead fingers.

But take it from the flotsam guy. He has seen a seabird with 700 bits of plastic in its stomach. He has sampled seawater in which plastic particles outnumber plankton six to one. He has gazed into the planet's plasticizing heart of darkness.

From out there, this bag flap is a drop in the ocean.

http://seattletimes.nwsource.com/html/dannywestneat/2004336327_danny09.html

H. Do plastic bags (1) break down in the North Pacific Gyre? If so, to what extent do they break down? What causes them to break down? How long does it take for them to break down? Cite substantial evidence and credible verifiable sources.

I. If it is believed that any of the plastic debris in the North Pacific Gyre is from plastic bags (1) distributed or used in the City, describe in detail the basis for this belief, including testing of samples collected from the North Pacific Gyre. Cite substantial evidence and credible verifiable sources.

J. What percentage of any plastic bag (1) debris in the North Pacific Gyre comes from Asia or other Pacific Rim countries such as China, Australia and New Zealand? Cite substantial evidence and credible verifiable sources.

K. Are inadequate litter cleanup practices in other Pacific Rim countries, including along beaches, the source of some, most or all of the (alleged) plastic bags (1) in the Pacific Ocean, including but not limited to the North Pacific Gyre? Quantify with percentages. Cite substantial evidence and credible verifiable sources.

L. Are ships vessels the source of some of the plastic bag (1) debris in the Pacific Ocean? Quantify with percentages. Cite substantial evidence and credible verifiable sources.

M. If it is asserted that marine mammals, marine animals, and seabirds in the Pacific Ocean (including but not limited to the North Pacific Gyre) ingest or become entangled in plastic bags (1) and die as a result, state in detail the basis for the belief. Quantify annual ingestion and deaths per species. Cite substantial evidence and credible verifiable sources.

The Los Angeles County Initial Study (at page 1-6) states: "Plastic carryout bags … have other adverse effects on marine wildlife" (Citing UNEP study at: www.unep.org/regionalseas/marinelitter/publications/docs/Marine_Litter_A_Global_Challenge.pdf and CIWMB June 12, 2007 Board Meeting Agenda item 14, and County staff report.)

The UNEP study does not include any surveys of the Pacific Gyre or anywhere that would be affected by a City or Los Angeles County plastic bag (1) ban. At page 199 of the study, it is stated that 71.9% of total entanglements were accounted for by fishing line, ropes and nets. In the table on the same page, the ***global*** results for marine entanglements by plastic bags were as follows:

Invertebrates	2 plastic bags
Fishes	3 plastic bags
Reptiles	0 plastic bags
Birds	12 plastic bags
Mammals	5 plastic bags
Amphibian	0 plastic bags

There must be no reference to the UNEP report in the EIR without disclosing the numbers in the table above, the fact that the Pacific Gyre was not surveyed, and that there is no indication in the study where in the world the entanglements occurred.

This is an extract from *The Times* of London article entitled "Series of blunders turned the plastic bag into global villain."
www.timesonline.co.uk/tol/news/environment/article3508263.ece

> Scientists and environmentalists have attacked a global campaign to ban plastic bags which they say is based on flawed science and exaggerated claims.
>
> The widely stated accusation that the bags kill 100,000 animals and a million seabirds every year are false, experts have told The Times. They pose only a minimal threat to most marine species, including seals, whales, dolphins and seabirds….
>
> 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."
>
> 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. 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…."

A 1968 study of albatross carcasses found that 90 per cent contained some form of plastic but only two birds had ingested part of a plastic bag.

Professor Geoff Boxshall, a marine biologist at the Natural History Museum, said: "I've never seen a bird killed by a plastic bag. Other forms of plastic in the ocean are much more damaging. Only a very small proportion is caused by bags…."

The Australian Government's correction of the typographical error is at: www.environment.gov.au/settlements/publications/waste/plastic-bags/analysis.html.

This is a table from the Ocean Conservancy 2009 report on marine debris on a *worldwide* basis:

MARINE WILDLIFE FOUND ENTANGLED IN MARINE DEBRIS

	BALLOONS	BEVERAGE BOTTLES	BEVERAGE CANS	BUILDING MATERIALS	CRAB, LOBSTER, FISH TRAPS	FISHING HOOKS	FISHING LINE	FISHING NETS	PLASTIC BAGS	RIBBONS/STRINGS	ROPE	SIX-PACK RINGS	TIRES	WIRES	TOTAL WILDLIFE
Amphibians	0	1	0	0	0	0	0	2	1	0	1	1	1	0	7
Birds	1	4	1	0	0	3	57	4	9	5	13	1	0	1	99
Fish	0	16	10	0	21	4	70	33	24	2	9	4	1	3	197
Invertebrates	0	12	4	1	35	1	12	24	11	4	9	3	4	2	122
Mammals	0	2	0	0	0	0	2	2	0	1	1	0	0	0	8
Reptiles	0	0	0	0	0	0	2	2	2	0	3	1	0	0	10
Total Debris Items	1	35	15	1	56	8	143	67	47	12	36	10	6	6	443

Source: Ocean Conservancy/2008 International Coastal Cleanup

Source: www.oceanconservancy.org/pdf/A_Rising_Tide_full_hires.pdf.

N. What are the environmental impacts of plastic bags (1) in the Pacific Ocean to the extent not addressed above? Quantify. Cite substantial evidence and credible verifiable sources.

5. <u>Costs of the plastic and paper bag issues</u>

A. What is the annual cost to the City of cleaning up plastic bag (1,2) and paper bag (3,4) litter? What would be the annual cost to the City of maximizing the cleanup of all plastic bag (1,2) and (paper bag (3,4) litter by dedicating more manpower and resources for this purpose? Provide a complete detailed breakdown of all costs and expenditures, including man-hours. Make a reasonable allocation of cost between bag types 1, 2, 3 and 4 and state the basis for the allocation. Include and identify any funding received from the state. Cite substantial evidence and credible verifiable sources.

B. What is the annual cost to the City of all of the environmental problems that plastic bags (1,2) and paper bags (3,4) cause (including but not limited to litter, storm drain issues, and storm water permitting and other regulatory requirements)? Provide a detailed and complete breakdown and explanation of the costs. Make a reasonable allocation of cost between bag types 1, 2, 3 and 4 and state the basis for the allocation. Include and identify any funding received from the state or state agencies. Cite substantial evidence and credible verifiable sources.

C. As an alternative to a ban, if plastic bag (1) manufacturers or suppliers were to be asked to pay money to the City each year to solve the environmental problems caused by plastic bags (1) (including but not limited to litter, storm drain issues, and storm water permitting

and other regulatory requirements), how much money would that be? Provide a detailed and complete breakdown of the basis and justification for the figure. Make a reasonable allocation between bag types 1 and 2 and state the basis for the allocation. Cite substantial evidence and credible verifiable sources.

D. As an alternative to the proposed ordinance, if plastic bag (1) manufacturers or suppliers were to be asked to pay money to a statewide fund each year to solve the environmental problems caused by plastic bags (1) statewide (including but not limited to litter, storm drain issues, and storm water permitting and other regulatory requirements), how much of that money would the City need to solve those problems? Provide a detailed and complete breakdown of the basis and justification for the figure. Cite substantial evidence and credible verifiable sources.

E. If the proposed ordinance is adopted, would the City save any money as a result of the solving of any environmental problems (including but not limited to litter, storm drain issues, and storm water permitting and other regulatory requirements)? If the answer is yes, provide a detailed and complete breakdown and explanation of the savings. Cite substantial evidence and credible verifiable sources.

F. What changes and improvements can be made to prevent plastic bags (1) from blocking or entering the City's storm drains? For example, storm drain screens or "Gross Pollutant Traps." What is the cost of such changes and improvements? Provide a detailed and complete breakdown of such costs. Cite substantial evidence and credible verifiable sources. See:

www.wordconstructions.com/articles/technical/gpt.html

www.hydro-international.biz/us/stormwater_us/nettech.php

www.lbpost.com/ryan/7415

The City of Los Angeles determined in a pilot study that catch basin screen covers would achieve an 86% effectiveness rate.

www.san.lacity.org/wpd/Siteorg/program/poll_abate/PilotStudyCovers.pdf

The possibility of installing storm drain screens such as these must be addressed in the EIR.

G. Is the City receiving or has it requested funding for storm drain improvements such as that received by the City of Long Beach as described in the following article?

www.lbpost.com/ryan/7415

6. <u>Taking into account the fact that the amount of the Green Fee is unknown</u>

According to the Notice of Preparation, it is "anticipated" that the Green Fee would be "approximately" 25 cents. The City is making no commitment as to the level of the Green Fee. The figure in the ordinance could be much lower, in theory as little as one cent or even zero. Therefore, the EIR must base its analysis on the assumption that the fee may be as low as one cent or zero. This would result in a significant increase in the number of paper bags (3,4) distributed by stores and retailers in the City.

Use-less-stuff.com ("ULS") conducted a survey on the effect of the plastic bag (1) ban in San Francisco on paper carryout bag usage. ULS found that paper bag (3,4) use increased significantly. There is no fee on paper carryout bags in San Francisco.
http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf

Further, the higher the fee, the more likely it is that stores and retailers will endeavor to turn paper bags into a profit center. The City has not made a commitment as to how much of the proposed Green Fee would be retained by retailers.

7. <u>Acknowledging and quantifying the increase in the number of paper bags if the Green Fee is not applied to all stores and retailers at which plastic bags would be banned</u>

According to the Notice of Preparation, the Green Fee would not apply to retail stores

and retailers at which plastic bags would be banned such as department stores, clothing stores, stores that sell durable goods, and the City's Farmers' Markets. (This is referred to herein as the "Exemption.")

A. How many plastic bags (1,2) and paper bags (3,4) are provided to consumers by stores and retailers in the City annually? Break down the figures into bag types (types 1, 2, 3 and 4). Cite substantial evidence and credible verifiable sources.

B. Quantify the number of stores and retailers that would be subject to the Exemption. Cite substantial evidence and credible verifiable sources.

C. Quantify the number of stores and retailers that would not be subject to the Exemption. Cite substantial evidence and credible verifiable sources.

D. Identify all of the stores and retailers that would be subject to the Exemption.

E. Identify all of the stores and retailers that would not be subject to the Exemption.

F. Quantify the number of plastic bags (1) and paper bags (4) presently distributed by Exempt stores and retailers.

G. Would the Exemption result in an increase in the number of paper bags in the City? Cite substantial evidence and credible verifiable sources.

H. Quantify the increase in paper bags that would result from the exemption from the Green Fee. Cite substantial evidence and credible verifiable sources.

8. <u>Environmental impacts of plastic versus paper bags.</u>

Would an increase in the number of paper bags provided to customers in the City result in significant negative environmental impacts? Describe all of those impacts in detail, including but not limited to impacts in other parts of the United States, Canada and other countries. Cite substantial evidence and credible verifiable sources.

Paper comes from trees. The process to get that paper bag to the grocery store is long and exacts a heavy environmental toll. First, the trees are felled in a process that often involves clear-cutting, resulting in massive habitat destruction and long-term ecological damage.

Large machinery comes in to remove the logs from what used to be forest, either by logging trucks or even helicopters in more remote areas. This machinery requires fossil fuel to operate and roads to drive on, and, when done unsustainably, logging even a small area has a large impact on the entire ecological chain in surrounding areas.

Once the trees are collected, they must dry at least three years before they can be used. More machinery is used to strip the bark, which is then chipped into one-inch squares and cooked under tremendous heat and pressure. This wood stew is then "digested," with a

chemical mixture of limestone and acid, and after several hours of cooking, what was once wood becomes pulp. It takes approximately three tons of wood chips to make one ton of pulp.

The pulp is then washed and bleached; both stages require thousands of gallons of clean water. Coloring is added to more water, and is then combined in a ratio of 1 part pulp to 400 parts water, to make paper. The pulp/water mixture is dumped into a web of bronze wires, and the water showers through, leaving the pulp, which, in turn, is rolled into paper.

Chlorine and compounds of chlorine are used in the bleaching of wood pulp, especially chemical pulps produced by the kraft process or sulfite process. Plants using elemental chlorine produce significant quantities of dioxins. Dioxins are persistent organic pollutants that are generally recognized among the most toxic human-released pollutants in existence. Elemental chlorine has largely been replaced by chlorine dioxide in some and dioxin production. However, as of 2005, only 5-6% of kraft pulp is bleached without chlorine chemicals.

The used process water from a pulp mill contains a lot of organic material such as lignin and other organic material from the trees (including chlorinated organic material) resulting in high biological oxygen demand (BOD) and dissolved organic carbon (DOC). It also contains alcohols, and chelating agents and inorganic materials like chlorates and transition metal compounds. Recycling the effluent and burning it, using bioremediation ponds and employing less damaging agents in the pulping and bleaching processes can help reduce water pollution.

Sulfur-based compounds are used in both the kraft process and the sulfite process for making wood pulp. Sulfur is generally recovered, with the exception of ammonia-based sulfite processes, but some is released as sulfur dioxide during combustion of black liquor, a byproduct of the kraft process, or “red liquor” from the sulfite process. Sulfur dioxide is of particular concern because it is water soluble and is a major cause of acid rain.

Air emissions of hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, and other volatile sulfur compounds are the cause of the odor characteristic of pulp mills utilizing the kraft process. Other chemicals that are released into the air and water from most paper mills include the following: carbon dioxide, carbon monoxide, ammonia, nitrogen oxide, mercury, nitrates, methanol, and benzene.

This all requires huge energy inputs and create air and water pollution.

To recycle paper bags, the paper must first be re-pulped, which usually requires a chemical process involving compounds like hydrogen peroxide, sodium silicate and sodium hydroxide, which bleach and separate the pulp fibers. The fibers are then cleaned and screened to be sure they are free of anything that would contaminate the paper-making process, and are then washed to remove any leftover ink before being pressed and

rolled into paper, as before.

The City must consider the following reports:

The 1990 Franklin report: This 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 bags based on 10,000 uses.

The 2005 Scottish report: www.scotland.gov.uk/Resource/Doc/57346/0016899.pdf. This report was published by the Scottish Government. It is an environmental impact assessment of the effects of a proposed plastic bag (1) levy in Scotland. The report (at page 22) takes into account the fact that a paper carryout bag holds more than a plastic bag (1) 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: Paper carryout bags result in:
  - 1.1 times more consumption of nonrenewable primary energy than plastic bags (1).
  - 4.0 times more consumption of water than plastic bags (1).
  - 3.3 times more emissions of greenhouse gases than plastic bags (1).
  - 1.9 times more acid rain (atmospheric acidification) than plastic bags (1).
  - 1.3 times more negative air quality (ground level ozone formation) than plastic bags (1).
  - 14.0 times more water body eutrophication than plastic bags (1).
  - 2.7 times more solid waste production than plastic bags (1).

The 2007 Boustead report:
www.americanchemistry.com/s_plastics/doc.asp?CID=1106&DID=7212
This report is an extremely thorough and detailed life cycle assessment of the environmental impacts of plastic bags and paper bags in the United States. It is packed with data. It studied the types of plastic 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.

The Boustead report (at page 4) includes the following findings *based on carrying capacity equivalent to 1000 paper bags*:

- Total energy use: Paper bags = 2622 megajoules. Plastic bags = 763 megajoules.
- Fossil fuel use: Paper bags = 23.2 kilograms. Plastic bags = 14.9 kilograms.
- Municipal solid waste: Paper bags = 33.9 kilograms. Plastic bags = 7.0 kilograms.
- Greenhouse gas emissions: Paper bags = 0.08 CO_2 equivalent tons. Plastic bags = 0.04 CO_2 equivalent tons.
- Fresh water usage: Paper carryout bags = 1004 gallons. Plastic bags (1) = 58 gallons.

The Boustead report studied paper bags with 30% post consumer recycled content. The Initial Study (at page 1-6) defines a "Recyclable Paper Bag" as having 40% post-consumer recycled content. Recycling is a collection, transportation, washing and industrial operation with environmental impacts, so an extra 10% of recycled content

would not result in a 10% improvement in environmental impacts. (Obviously, a paper carryout bag with 100% post consumer recycled content would not have zero environmental impacts.) However, if we take optimism to the extreme and assume that an extra 10% of recycled content would decrease all environmental impacts of paper carryout bags by 10%, paper carryout bags are still far worse than plastic bags (1) in every environmental category. For example, instead of consuming 2622 megajoules of total energy, 1000 paper carryout bags would consume 2360 megajoules. Plastic bags (1) with the same carrying capacity consume 763 megajoules.

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 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 March 2008 ULS report:
http://use-less-stuff.com/Paper-and-Plastic-Grocery-Bag-LCA-Summary-3-28-08.pdf
This report addresses the impact of San Francisco's ordinance banning plastic bags (1) 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 contains the following findings (at pages 3-4):

- 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 March 2008 ULS report concludes as follows (at page 5):

> 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.

The evidence is *unanimous* that paper carryout bags are worse for the environment than plastic bags (1).

The Initial Study (at pages 3.3-2 and 3.7-3) states:

> However, any increases [in negative environmental impacts of paper bags] would be offset to some extent due to the fact that paper bags can contain a larger volume of groceries than plastic bags. In addition, a net increase in the use of reusable bags would be expected and would further reduce the potential for increased use of paper carryout bags utilized.

(See also Initial Study at page 3.7-7.)

The Franklin report, the Scottish report, and the Boustead report, all of which are discussed in the next section of this paper, *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.

All of the reports show, *based on equivalent carrying capacity*, that paper bags have much worse environmental impacts than plastic bags.

The EIR must describe and quantify all of the environmental impacts of increased paper carryout bag usage wherever they occur, not just in and around the City. Climate change and the other impacts of paper bags are *global*.

In *Massachusetts v. EPA*, 549 U.S. 497 (2007), the U.S. Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act. The U.S. Environmental Protection Agency has made a finding under the Clean Air Act that carbon dioxide (CO_2) and methane (CH_4) (and other greenhouse gases) in the atmosphere "threaten the public health and welfare of current and future generations."
http://epa.gov/climatechange/endangerment.html

There is one report that the City must *not* rely upon in determining whether paper carryout bags are worse for the environment than plastic bags (1). That is the CIT Ekologik report issued in 2000 that was prepared on behalf of European paper bag

producers Eurosac and CEPI Eurokraft. The Cities of Manhattan Beach and Berkeley have inappropriately referred to this report as support for the proposition that paper carryout bags are better for the environment than plastic bags (1). However, the CIT Ekologic report studied *55 lb capacity animal feed distribution sacks*. STPB will strongly object to any reference in the EIR to this totally irrelevant report. It is not substantial evidence for the proposition that paper carryout bags are better for the environment than plastic bags (1) and its inclusion in the EIR would be misleading to the Santa Monica City Council and the public.

9. <u>The effect of CO_2 emissions on the marine environment</u>

The issue of the effect of CO_2 emissions on the oceans must be considered and addressed in the EIR, because paper carryout bags create significantly more CO_2 emissions than plastic bags (1). See:

www.nytimes.com/2009/11/14/science/earth/14turtles.html

www.timesonline.co.uk/tol/news/uk/article4092822.ece

http://news.bbc.co.uk/2/hi/science/nature/7498502.stm

http://news.bbc.co.uk/2/hi/science/nature/8411135.stm

10. <u>Biodegradability of plastic bags</u>

A. Will plastic bags (1) degrade or biodegrade in certain conditions such as when exposed to oxygen and sunlight? Cite substantial evidence and credible verifiable sources.

B. There are different additives available that will make plastic bags (1) biodegrade or degrade in different environments and various conditions, including but not limited to the ocean and marine environment? Are such additives effective? Cite substantial evidence and credible verifiable sources.

C. In what ways do such additives lessen the negative environmental impacts of plastic (1) bags, including but not limited to in the ocean and marine environment? Cite substantial evidence and credible verifiable sources.

D. Should such additives be required as an alternative to banning plastic bags (1)? Cite substantial evidence and credible verifiable sources.

There are two types of "biodegradable" bags:

- "Compostable" bags designed to turn into compost in an industrial composting facility; and
- "Biodegradable" bags, that is plastic bags that have a biodegrading additive added. (There are two kinds of additive: the kind produced by ECM and the kind

produced by Symphony. See below.)

"Biodegradable" bags are designed to biodegrade in the open environment, not in a composting facility. Biodegradation in the environment is not the same thing as composting. Industrial composting is an artificial process operated to a much shorter timescale than the processes of nature.

ASTM D6400 is designed for compostable plastics and is not applicable to plastics with an additive that are designed to self-destruct if they get into the environment. (Section 1.1 of ASTM D6400 states: "This specification covers plastics and products made from plastics that are designed to be composted in municipal and industrial aerobic composting facilities.")

The authors of the EIR are requested to contact the following two companies that have additives available that will effectively cause plastic bags to biodegrade. *The companies provide different types of additives so both should be contacted.* The representatives of those companies have agreed to provide information for the EIR. As the EIR must address all available alternatives, these two companies must be contacted as they are ready with the information, including the results of research and scientific papers. Of course, any other companies providing biodegradability additives may be contacted too.

ECM BIOFILMS, INC.
1 Victoria Square, Suite 304, Painesville, OH 44077.
Phone: (440) 350-1400. Fax: (440) 350-1444.
Website: www.ecmbiofilms.com.
Contact persons:
Alan Poje alan.poje@ecmbiofilms.com
Robert Sinclair robert.sinclair@ecmbiofilms.com.

The ECM MasterBatch technology is delivered in the form of a pellet that may be added to many conventional plastic resins. The pellet is blended into the resin at a loading of not less than one percent. Bags can be produced from the resin with little or no process changes and the physical/structural properties of the resultant bags are virtually unchanged.

Biodegradation of plastic bags (1) produced with the ECM MasterBatch technology is initiated when the bag is exposed to other organic materials that are biodegrading. The components of the additive allow for the creation of communities, or biofilms, composed of microorganisms such as bacteria, fungi and algae. As these communities grow, acids, enzymes and other compounds, capable of breaking the polymer chemical bonds, are created. As the microbes consume the polymer, bonds are broken and more organics are available for food, strengthening the community and the process continues. Since the microorganisms exist in aerobic, anaerobic and marine conditions, the bags produced with ECM technology will biodegrade above ground, underground and in marine environments.

ECM's additive is fully available today and is being used in plastic bags (1).

SYMPHONY ENVIRONMENTAL TECHNOLOGIES
Elstree House, Elstree Way, Borehamwood, Herts, WD6 1LE, England.
Phone: Tel: +44 20 8207 5900. Fax: +44 20 8207 5960.
Website: www.symphonyplastics.com.
Contact persons:
Michael Laurier. michael.laurier@d2w.net, michael@symphonyplastics.com.
Michael Stephen: michael.stephen@degradable.net and kkrkyz@gmail.com.

Oxo-biodegradation is degradation resulting from oxidative and cell-mediated phenomena, either simultaneously or successively. Symphony's oxo-biodegradation additive breaks the molecular chains within the polymer and makes it degrade and then biodegrade in the presence of air, on land or at sea, in the light or the dark, in heat or cold, leaving no methane, no toxic dust, and no other harmful residues. Oxo-bio can be tested according to American Standard 6954. Plastics with Symphony's additive can be recycled and made from recyclate, and there is little or no additional cost.
See www.biodeg.org/position-papers/recycling/?domain=biodeg.org.

Symphony's d2w additive has been independently tested to prove degradation, biodegradation and non eco-toxicity. and is certified safe for food-contact.

Symphony's additive is fully available today and is being used in plastic bags (1) around the world.

11. Superfast oxo-biodegradable bags

Are superfast oxo-biodegradable bags a viable alternative to the proposed ordinance? Cite substantial evidence and credible verifiable sources.

Superfast oxo-biodegradable bags degrade and disappear very quickly. The bags are vacuum packed so that they will not biodegrade before they are handed out by stores. The bags will biodegrade in a few days or a few weeks. The speed of biodegradation can be controlled by the manufacturer by changing the amount of the biodegrading additive and anti-oxidants and making other adjustments.

Upon exposure to the environment the molecular weight is be rapidly reduced by an oxidative process and the bag disintegrates into small pieces. Because the pieces are no longer composed of long entangled molecular-chains, they are no longer a plastic and they are bioassimilated by naturally-occurring micro-organisms. They leave no fragments, no methane, and no harmful residues.

The bags will be *very conspicuously* marked so that consumers will know that the bags will disappear very quickly.

The bags will not be a litter problem because they will vanish in the open air and in water within a very short period of time.

Contact SYMPHONY ENVIRONMENTAL TECHNOLOGIES for samples and further information.

12. <u>Water soluble bags</u>

Are water soluble bags a viable alternative to the proposed ordinance? Cite substantial evidence and credible verifiable sources.

Water soluble bags made of polyvinyl alcohol dissolve and disappear very quickly when they come into contact with water. The bags would be *very conspicuously* marked so that consumers would know that the bags should not come into contact with water as they will dissolve. The bags will not be a problem in storm drains, the LA River or the oceans.

STPB has such bags available to demonstrate to the County. The demonstration consists of placing the bag in tap water or seawater. The Bag disappears in about 30 seconds without leaving any particles.

The bags can be made more or less soluble and more or less rapidly soluble.

Bags can also be made that will dissolve only in hot water.

In Santa Monica's dry summer climate, the bags would be completely practical. They simply have to withstand the journey from the store to the home, most of which would be in a car or on public transportation. The only time not to use them is when it is raining. When it rains, plastic or paper carryout bags or reusable bags can be used.

Contact SYMPHONY ENVIRONMENTAL TECHNOLOGIES for samples and further information.

13. <u>Biodegradability of paper bags</u>

A. Do paper bags (3,4) biodegrade in landfills, the open air, or in water? Cite substantial evidence and credible verifiable sources.

B. Over what period of time do paper carryout bags fully degrade? Cite substantial evidence and credible verifiable sources.

C. What chemicals, particles or residues remain after such full biodegradation? Cite substantial evidence and credible verifiable sources.

D. Do such particles or residues absorb or serve as a vehicles for PCB, DDT, and other toxic substances in the ocean or elsewhere? Cite substantial evidence and credible verifiable sources.

Polyethylene consists of two elements of carbon and hydrogen. These two elements are strongly bonded together, which means that they cannot bond with molecules of PCBs, DDT or any other chemicals in the ocean at ocean temperatures. Consequently, the

allegation that is frequently heard that PCBs, DDT and other chemicals in the ocean bond with plastic bag debris is physically impossible and false. Such chemicals will simply wash off plastic film in the water.

Organic materials such as paper contain oxygen, nitrogen, sulfur and phosphorus. These are elements that have a weaker bond with carbon and/or each other and therefore can easily bond with chemicals such as DDT and PCBs.

14. <u>Verification and environmental impacts of recycled content in paper bags</u>

On the *assumption* that the City may require that paper bags (3) contained recycled content, then this section applies.

A. How will the City verify that paper bags (3,4) actually contain 40% or another level of post-consumer recycled content, including but not limited to in imported bags? Cite substantial evidence and credible verifiable sources.

B. If paper bags (3,4) are not permitted to contain old growth fibers, how will that be verified, including but not limited to in imported bags? Cite substantial evidence and credible verifiable sources.

C. To what extent does the inclusion of post-industrial scrap reduce the environmental impacts of paper bags (3,4)? Quantify. Cite substantial evidence and credible verifiable sources.

D. To what extent does the inclusion of post-consumer recycled content reduce the environmental impacts of paper bags (3,4)? Quantify. Cite substantial evidence and credible verifiable sources.

The EIR must make no assumptions regarding the "green" nature of paper carryout bags with "recycled" content. Paper carryout bag recycling is an operation that involves collection, transportation, washing, and reprocessing. This all needs to be taken into account and addressed in the EIR.

The following article appeared in the Sacramento Bee on November 9, 2009: http://www.sacbee.com/capitolandcalifornia/story/2314229.html.

Bee exclusive: State's recycled paper trail not so green for climate

Near Mark Oldfield's desk at the California Department of Conservation sits a ream of copy paper that is more than a routine office commodity.

Made in part from recycled fiber, it is a symbol of the state's green spirit, one ream among thousands backing the department's claim that it is a champion of the environment -- and complies with state law requiring it to buy recycled paper.

There is a dark side to those sheets of bright, white paper: the part that isn't recycled comes from trees logged in the biologically rich but endangered forests of Indonesia.

Oldfield, a public affairs officer, was not aware of the connection until contacted by The Bee. Now that he knows, Oldfield said his office will not buy anymore and may try to return the unused reams.

"We're required to buy this type of paper," he said. "And that's what we did."

California has a worldwide reputation as a leader in global warming, more so than any other state. But an ongoing Bee investigation has found some of the state's choices -- such as failing to evaluate environmental costs of printer ink cartridge recycling and allowing its employees to travel on the dime of energy companies -- raise questions about the effectiveness of its efforts.

The state law requiring agencies to buy large quantities of paper with a minimum of 30 percent recycled content is another seemingly green choice that may be backfiring on the climate.

Over the past two decades, that mandate has helped achieve one of the bedrock missions of the environmental movement: keeping as much scrap paper from piling up in landfills as possible. But the state makes no effort to track the carbon footprint of its policies.

In fact, records obtained by The Bee through the California Public Records Act indicate the state -- which purchases about 6 million pages of office copy paper a day and recycles much of it – actually knows little about the full impact of recycled paper.

"There is on-going controversy regarding…post-consumer recycled content in paper products," says a June 24 Department of General Services memo. "We do not understand the process…or its environmental impact."

Wisdom of mandate argued

Like offices everywhere, the state consumes a blizzard of copy paper. About 3.2 million reams, each containing 500 sheets – 1.6 billion in all -- were bought last year, state officials estimate. Lay those pages end-to-end and they would reach around the world 11 times.

One of the largest worries is that relying on recycled paper without reducing consumption will hasten climate change because the paper is shipped in from distant locations, increasing greenhouse gas pollution. Nearly all of the paper the state recycles, in turn, is shipped back out again, generating still more greenhouse gas.

"The world is going to fry because we want to buy recycled fiber from the wrong sources around the world and ignore the transportation impacts," said Stan Rhodes, president of Scientific Certification Systems, a Bay Area company that verifies green standards for Starbucks, Home Depot and other companies.

Yalmaz Siddiqui, director of environmental strategy for Office Depot, a major supplier of recycled paper to California from sources in the southern United States and Wisconsin, has urged the state to be skeptical about Rhodes' concerns.

"It's very dangerous to open up the notion that 'recycled is not good' to the marketplace," Siddiqui wrote in an April 27 e-mail to the Department of General Services.

"Yes, Stan will be able to find specific examples where recycling loops cause additional carbon," Siddiqui added. "We need to be very careful that these examples do not confuse the marketplace and force people to simply give up buying green altogether because they don't know what the right 'green' thing to do is."

Currently, about $7 out of every $10 state agencies spend on paper buys paper with 30 percent or higher recycled content -- exceeding the legal requirement that half of such spending be for recycled paper. Some agencies -- including California Environmental Protection Agency, the state Integrated Waste Management Board

and the Department of General Services -- even buy 100 percent recycled-content paper.

Conservation focus shifting

California's State Agency Buy Recycled Campaign grew out of legislation passed in 1989, when times were simpler. Garbage was the enemy. Almost no one talked about global warming.

Now that the state is a leader in the war against climate change and seeking to shrink its carbon footprint, some say it's time to adapt and measure the effort's climate impact.

“You can't automatically assume recycled content is good,” said Robert Tetz, former manager of the state's environmentally preferable purchasing program at a conference this spring.

“You have to be careful about the energy and environmental impacts we incur in the process of recycling,” he continued. "When we talk about what's green, a lot of the 100 percent-recycled paper we're buying in California is not green.”

Chris Peck, director of the office of public affairs at the California Integrated Waste Management Board, which oversees the Buy Recycled campaign, said agency staffers are interested but must remain focused on their legislative mission.

“Because of our statutory responsibility, which is to keep material out of the landfill, we have to filter what we see and learn through that lens,” Peck said.

Tetz convened a June meeting on the subject with paper specialists.

“There is growing debate regarding the wisdom of our many choices,” he said in an April e-mail invitation.

At the meeting, Rhodes -- the green certification specialist - displayed slides and data suggesting the state's carbon footprint actually grows larger when it buys recycled paper from distant mills.

“Is the (recycled content) law counterproductive for global warming?” Rhodes asked in an interview. “Yes. It's insane. … It has ignored the fact we're in a climate crisis. And stubbornly the

state of California refuses to deal with it."

Others challenge his assertions. "Some of the information doesn't make sense," said Susan Kinsella, executive director of Conservatree, a nonprofit that promotes the purchase of recycled-content paper.

"When you produce recycled paper, you're reducing the amount of energy overall that's used; you reduce what goes into landfills," said Kinsella, who attended the June meeting. "If paper goes into landfills, it produces methane, which is 25 times the strength of carbon dioxide."

Minutes of the June session show that interest was high: "Scott Harvey, DGS chief deputy director…commented on the importance of the topic of discussion and expressed strong support for our efforts from the Director all the way to the Governor's office."

The minutes also note that Tetz hoped that in-depth study – known as a life-cycle impact analysis – would grow from the meeting, to sort out competing claims and scrutinize all of the environmental impacts of recycled paper.

Instead, Tetz was transferred to another job in September after complaining that a state printer ink cartridge recycling program was less eco-friendly than refilling and re-using them. At the time, his boss said the transfer was not related to his criticism.

"I did not have the necessary support here at the Department of General Services," he wrote in an e-mail to meeting participants apologizing for the lack of action. "At least we tried."

Jeffrey Young, deputy director for public affairs at General Services, said officials would like to have an in-depth paper study done -- and actually solicited bids for one earlier this year -- but were unable to proceed because of the state's budget crisis.

Conserving and recycling

There is a far more certain way for state employees to help forests, landfills and climate, according to Rhodes: Don't hit the print button.

"Don't use paper," he said. "Only use paper when you want to

archive."

Indeed, some e-mails sent by state employees now contain a green logo that says: "Please consider the environment before printing."

Nonetheless, thousands of tons of scrap paper find their way every month from state recycling bins and loading docks to a 3-acre industrial site in south Sacramento, where it is sorted and bundled for shipment to China on fossil fuel-powered ocean tankers.

What happens once it gets to China is not clear, but paper industry officials say little comes back to California as recycled office paper. Instead, they said, much of it is made into cardboard, tissue paper and paper plates, at paper mills powered by polluting coal-fired power plants.

Dave Kuhnen, general manager of the Sacramento facility, Recycling Industries, recently walked through gigantic mounds and bales of paper speckled with state trash, from a Department of Fish and Game manual on waterfowl and upland game hunting regulations to unused Department of Motor Vehicles change of address forms.

"Recycling is always better," said Kuhnen. "Anytime you can reduce the demand for the Earth's resources, and keep material out of the landfill, I think we are better off."

It is not a panacea, however. Some pulp from trees always will be a necessary part of the paper-making process because the microscopic fibers that bind it together eventually break down.

"One hundred percent post-consumer recycled content paper isn't sustainable," said Andrew Hurst, a waste management specialist at the California Integrated Waste Management Board. "If everybody did it…we wouldn't have paper.

"A piece of fiber is only good for about seven turns," Hurst said. "And then it is so short, it comes out in the wash and is part of the sludge."

Paper's sources questioned

Dwelling on the recycled content of paper overlooks other critical issues, according to Jim Butler, director of procurement at the Department of General Services.

“There is nothing inherently wrong with 100 percent, or 30 percent,” Butler said. “We have to get beyond what percent recycled it is (to) where the source is, and what are the feed stocks that are contributing to this.”

Interviews and records obtained by The Bee show that the state buys recycled paper from at least two companies that environmentalists say are logging in destructive ways.

One is International Paper, which operates across the American South. Last year, dozens of state agencies, departments and other jurisdictions, from the California Conservation Corps to the Governor's Office, bought at least 20,000 reams of paper -- or 10 million pages -- made in IP mills.

“IP is known for some of the most egregious practices in the region, including large-scale clear-cutting and conversion of natural forests to plantations,” said Scott Quaranda, campaign director for the Dogwood Alliance, a North Carolina environmental group.

Kathleen Bark, an IP spokeswoman, disputed that. “International Paper has a long history of responsible forest practices,” she said in an e-mail. “When we owned forest lands, we continually balanced the growing and harvesting of trees with protecting biodiversity. … Although we no longer own forest lands, we have continued our commitment to sustainable forestry.”

The other company targeted by environmentalists is Asia Pulp and Paper, which has extensive operations in Indonesia and manufactures the 30 percent recycled content paper called Exceedo purchased in June by the Department of Conservation.

When those five boxes of paper – containing 50 reams – arrived in the state office wrapped in greenish paper with a leafy motif, they certainly looked eco-friendly.

But Lafcadio Cortesi, forest campaign director for the Rain Forest Action Network in San Francisco, said the company's logging practices are so harmful that his organization and others have persuaded major U.S. retailers to stop selling its paper.

“It's some of the worst forest destruction in the world,” said Cortesi, who has visited Indonesia several times. Because carbon-rich peat lands are logged and converted to plantations – releasing

> greenhouse gases into the atmosphere in the process – it is bad for global warming, too, he said.
>
> Asked about the state's purchase, Cortesi said: "They need to do their due diligence. If you do any homework at all, Indonesia pops up with a big red flag."
>
> Oldfield, the Department of Conservation spokesman, said his office was focusing instead on recycled content.
>
> "We were consuming a paper with certain guidelines -- 30 percent recycled content -- without knowing the background of the manufacturer," he said. "It's not something we would typically look into."
>
> They also were focusing on price. Each case cost the department $32.98 -- the lowest of four bids solicited.
>
> Now, Oldfield said, the office is debating what to do with the 30 or so reams of paper that remain.
>
> "We are going to see if we can return it," he said.
>
> That would mean contacting Burkett's Office Supplies on Younger Creek Drive in Sacramento where owner Randy Mael said he also sold some of the paper to the Department of Health Services.
>
> Mael said he was not aware of any problem with it.
>
> "We buy 50,000 different products," Mael said. "We are a company with 30 people. Unfortunately, we just don't have the time to research all the products that we buy."
>
> But, he added, "I don't have any interest in harming the environment. … If it was found that this was something that -- according to reliable standards -- was harming the environment, we wouldn't sell it."

In addition, there has been a recycled paper fraud scandal in Japan. See: http://wildsingaporenews.blogspot.com/2008/01/recycled-paper-scandal-in-japan.html

The City is on notice that there are serious issues regarding the accuracy of claims that paper contains recycled content. There is no certification program to verify recycled content in paper bags. This must be addressed in the EIR.

15. Environmental impacts of cockroach infestation or prevention

Would an increase in the number of paper bags (4) result in a greater number of cockroaches in the City, including increased infestation of apartment blocks? Will such infestation result in the need for increased spraying of harmful insecticides in homes and workplaces? Cite substantial evidence and credible verifiable sources.

Here is an extract from a commercial website regarding cockroach infestation:

> The German cockroach loves grocery bags. This roach will infest a stack of paper grocery bags at the grocery store and then sneak home in between the flaps in the bottom of the bag. You will not even know that the roaches are there until the bag is put away or used. The roach may stay hidden until it is dark and then come out to infest your home. The best way to prevent this type of intrusion is to keep your paper grocery bags stored outside or in a sealed container.

www.gettingridofroaches.net/How-To-Prevent-Roaches-In-Cardboard-and-Paper-Grocery-Bags.html

Orkin advises as follows: "Disposing of cardboard boxes and paper grocery bags, which provide shelter sites for cockroaches." www.orkin.com/press-room/article-1059

Terminix gives similar advice: "In homes, do not store paper bags under the sink or elsewhere in the kitchen." [Click on the "Tips for Control" tab on the Terminix website.] www.terminix.com/Information/Pest-Identification/Cockroaches/Brown_Banded_Cockroach/

The U.S. Environmental Protection Agency states advises that in order to prevent roach infestation: "Get rid of stacks of newspapers, paper bags, and cardboard boxes." www.epa.gov/opp00001/kids/roaches/english/keepthem/index.html

http://www.acsh.org/healthissues/newsID.1692/healthissue_detail.asp

16. Environmental impact of the loss of plastic bag recycling bins at stores.

What is the impact of banning plastic bags (1) on the AB 2449 plastic bag recycling infrastructure?

Plastic bags are 100% recyclable. However, in the City, plastic bags may not be placed in curbside recycling bins.

Consequently, the *only* plastic bag (1,2) recycling infrastructure in the City is the plastic bag (1,2) recycling bins required by Pub. Res. Code §42251(a) and §42252(b).

All stores that are (i) supermarkets or (ii) occupy over 10,000 square feet and have a

licensed pharmacy are required to install those bins and arrange for the recycling of the contents, if the store "provides plastic carryout bags." Pub. Res. Code §42250(e). If the store does not "provide plastic carryout bags" it is not required to install a plastic bag recycling bin.

The effect of banning plastic bags (1) is that stores will be free to remove every single plastic bag recycling bin in the City. The City is not permitted to require the stores to retain the bins because Pub. Res. Code §42254b)(1) states that cities and counties may not "require a store that is in compliance with this chapter to collect, transport, or recycle plastic carryout bags." Therefore, one of the environmental impacts of the proposed ordinance will be the destruction of the City's only plastic bag recycling infrastructure.

It is not just plastic grocery bags that are deposited in the bins. *Newspaper bags, dry cleaning bags, and plastic film are deposited in the bins and recycled. Such bags and film would not be banned under the proposed ordinance but would lose their recycling infrastructure.* Therefore all such bags and film would be sent to landfills.

Virtually every plastic bag (1,2) and the plastic film deposited in store recycling bins is recycled. The major recycling customers for the contents of the bins are Trex and AERT, which use them instead of wood for plastic and composite lumber. They buy the contents of the bags from stores, sometimes for 25 cents per lb or more.

Many plastic bags contain recycled post-industrial and post-consumer material, but that fact has not been well advertised. The paper industry has done a far better job of marketing its products as "recycled." For example, the largest manufacturer of plastic bags (1), Hilex Poly, picks up used plastic bags (1), transports them to its recycling facility, and turn them into new bags. Hilex is in the process of doubling its recycling capacity. See:

http://hilexpoly.com/going-green/bag-2-bag.html.

http://hilexpoly.com/going-green/recycling-plant.html

http://hilexpoly.com/news/single/article/hilex-poly-announces-plan-to-double-recycling-capacity-37//nbp/194.html

17. <u>Environmental impacts on landfills.</u>

A. Would an increase in the number of paper bags as a result of the proposed ordinance result in a greater volume and weight of paper carryout bags in landfills? Would this cost the County more in tipping fees (which are determined by weight)? Cite substantial evidence and credible verifiable sources.

We often hear in the media and from anti-plastic bag activists that plastic bags (1,2) "clog up" landfills. However, in a Statewide Waste Characterization Study conducted in 2004 for the California Integrated Waste Management Board, it was determined that plastic

bags (1,2) constitute a mere 0.4% of the content of landfills. Paper carryout bags constitute 1.0%. The tonnage is about the same despite the facts that retailers provide far more plastic bags (1) than paper carryout bags. Paper carryout bags are bigger, thicker and heavier. Tipping fees are based on weight.
http://www.ciwmb.ca.gov/Publications/LocalAsst/Extracts/34004005/ExecSummary.pdf

The City must calculate and disclose in the EIR the increase in the amount of municipal solid waste that will go to landfills as a result of the proposed ordinance. The Boustead Report (at page 4) compares the amount of municipal solid waste from plastic and paper bags having a carrying capacity of 1,000 paper bags as follows:

Paper carryout bags = 33.9 kilograms.

Plastic bags = 7.0 kilograms.

B. What are the environmental impacts of increasing the number of paper bags in the landfills used by the City? Cite substantial evidence and credible verifiable sources.

This is discussed in an Environmental Paper Network ("EPN") report: "The State of the Paper Industry." www.environmentalpaper.org/stateofthepaperindustry/confirm.htm. The EPN report states (at page v):

> 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 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.

An article in the *Ecocycle Times* states:

> Methane is produced in a landfill when the organic materials like paper, yard debris, wood, and food waste undergo anaerobic decomposition—a process that shouldn't be confused with the oxygen-dependent aerobic process that breaks downs the fruit rinds and leaves in your backyard composter. As a result of anaerobic decomposition, the methane gas seeps to the surface, enters the lower atmosphere, and in concert with carbon dioxide and other gases, creates a warming blanket that retains solar infrared radiation and warms the earth.

http://www.ecocycle.org/TimesSpring2002/NewEvidence.cfm

18. <u>Environmental impacts of reusable bags.</u>

What would be the environmental impacts of an increased number of reusable bags? Cite substantial evidence and credible verifiable sources.

Like any other manufactured product, reusable bags have a negative environmental impact. The following information and metrics must be addressed in the EIR:

- Metrics of consumption of nonrenewable energy to produce reusable bags. (An article in the *Wall Street Journal* ("An Inconvenient Bag," Sep 26, 2008, states: "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 times as much as a paper sack, according to Mr. Sterling, of Natural Capitalism Solutions."
  http://online.wsj.com/article/SB122238422541876879.html
  (The *Wall Street Journal* website requires a password. STPB will provide a copy of the article if requested.)

- Metrics on emissions of greenhouse gases in the production of reusable bags.

- Metrics on consumption of water to produce reusable bags.

- Metrics on creation of acid rain (atmospheric acidification) in the production of reusable bags.

- Metrics on creation of negative air quality in the production of reusable bags

- Metrics on water pollution or eutrophication in the production of reusable bags.

- Metrics on the consumption of nonrenewable energy to transport reusable bags. (Most reusable bags are made in China and have to be shipped to the United States and then transported by truck. Reusable bags are more voluminous and heavier than plastic bags, thereby requiring more diesel fuel to transport.)

- Recyclability of reusable bags. (Most reusable bags are made from nonwoven polypropylene, which is not recyclable.)

- Metrics on solid waste production caused by disposal of reusable bags.

- Metrics on the extent to which reusable bags are actually reused. (The above-mentioned *Wall Street Journal* article states: "Earlier this year, KPIX in San Francisco polled 500 of its television viewers and found that more than half -- 58% -- said they almost never take reusable cloth shopping bags to the grocery store."

We can't always anticipate what we will need.
Sometimes we need carryout bags as well as reusable bags.

19. <u>Environmental impacts of lead and other toxics in reusable bags</u>

A. To what extents are lead and heavy metals present in reusable bags? Cite substantial evidence and credible verifiable sources.

B. What is the environmental impact of the presence of such amounts of lead and heavy metals in reusable bags, including but not limited to the impact in landfills? Cite substantial evidence and credible verifiable sources.

C. Has the County determined whether any of the reusable bags that it has been providing to the public contain lead or heavy metals?

20. <u>Hygiene of reusable bags</u>

A. To what extent are reusable bags actual or potential carriers of dangerous or unhealthy bacteria? Cite substantial evidence and credible verifiable sources.

www.cpia.ca/epic/media/default.php?ID=2054

www.cpia.ca/files/files/A_Microbiological_Study_of_Reusable_Grocery_Bags_May20_09.pdf

http://network.nationalpost.com/np/blogs/theappetizer/archive/2009/05/20/back-to-plastic-reusable-grocery-bags-may-pose-public-health-risk.aspx

B. There is substantial evidence that some reusable bags are manufactured in grossly unhygienic conditions, including an eyewitness report with photographs in the Scottish Sunday Express on February 10, 2008. This must be addressed in the EIR. What steps will the City take to prevent such bags from being distributed, sold or used in the City? See:

http://www.google.com/url?sa=t&source=web&ct=res&cd=2&ved=0CBMQFjAB&url=http%3A%2F%2Fwww.carrierbagtax.com%2Fdownloads%2FSunday%2520Express%252010%2520feb.pdf&ei=KNMrS7KPFouMswPJ5oHXAw&usg=AFQjCNHGZR6R2PgPA-1msv30-xKmo3-ZMA&sig2=4z2ove15MZSTeVZaFealDw

C. Plastic bag (1) manufacturers have obtained "No Objection Letters" from the U.S. Food and Drug Administration, permitting plastic bags (1) including supermarket/grocery checkout bags to come into contact with food. To what extent have reusable bag manufacturers complied with FDA regulations and standards regarding food contact? Cite substantial evidence and credible verifiable sources.

www.fda.gov/Food/FoodIngredientsPackaging/FoodContactSubstancesFCS/default.htm

Hygiene of reusable bags is an important issue
that must be addressed in the EIR.

21. <u>The reusability and reuse of plastic bags.</u>

A. STPB objects to the use of the term "single-use" plastic bags. Plastic bags (1) are reused for many purposes such as bin liners and animal waste pickup. The metrics of plastic bag (1) and paper carryout bag reuse must be factored into all aspects of the EIR. Cite substantial evidence and credible verifiable sources.

B. If plastic bags (1) are not available for reuse, will consumers buy plastic bags to replace them for bin liners and other uses? This would reduce any environmental benefits from banning plastic bags. Cite substantial evidence and credible verifiable sources. See: http://archives.tcm.ie/irishexaminer/2003/01/29/story651891687.asp

22. <u>The disposal of reusable plastic bags.</u>

A. How will reusable bags be disposed of in the City?

B. What will be the environmental impacts of such disposal?

See:

http://www.theage.com.au/national/bag-the-bag-a-new-green-monster-is-on-the-rise-20100123-mrqo.html

23. <u>The alternative of improving plastic bag litter prevention and cleanup</u>

A. As an alternative to banning plastic bags (1), what changes can the City make to improve plastic bag (1) litter *abatement* in the City?

B. As an alternative to banning plastic bags (1), what changes can the City make to improve plastic bag (1) litter *cleanup* in the City?

C. As an alternative to banning plastic bags (1), what changes can the City make to improve plastic bag (1) litter cleanup at the *litter hotspots* in the City?

24. <u>The Santa Monica "Plastic Litter Patrol" would make banning plastic bags unnecessary</u>

In 2001, STPB's counsel Stephen Joseph and a colleague developed a "Green Patrol" concept in San Francisco. The sole purpose of the Green Patrol was to clean up litter and graffiti in North Beach. The San Francisco Department of Public Works hired personally for the Green Patrol and Mayor Brown launched the program in 2001. The program was successful and proved the concept, but ultimately it was the victim of budget cuts. Stephen Joseph received a commendation from the Board of Supervisors.

The Green Patrol consisted of two full time San Francisco Department of Public Works employees with special T-shirts and baseball caps and a dedicated van with the Green Patrol logo. The principle was that they would become familiar with the area and take

pride in keeping it clean. They would also be accountable. North Beach went from litter and graffiti-strewn to litter and graffiti-free virtually overnight and remained that way as long as the Green Patrol existed.

STPB is *considering* creating a Santa Monica Plastic Litter Patrol ("PLP") along the lines of the San Francisco Green Patrol. PLP will be a separate entity. The PLP will manage the operation and employ its own personnel. Plastic bag, film and other plastic product manufacturers and retailers will make direct payments to the PLP. No government funds or personnel will be used.

The PLP will employ full-time personnel to patrol the City on a regular basis looking for littered plastic bags (1,2), plastic film, plastic packaging and (possibly) plastic bottles. The search locations will include the coast and beaches, streets, highways, stormwater drains, creeks, rivers, landfills, and trees, etc. They will clean the cleanable bags and film (and possibly bottles) and deposit them in store plastic bag recycling bins or deliver them directly to recyclers such as Trex, AERT, Hilex and TieTek.

The frequency of visits will be reviewed after determining the rate of the accumulation of such litter. The objective will be to keep the areas clean of all plastic bags (1,2), plastic film, plastic packaging, and possibly plastic bottles. The PLP will perform special cleanups of storm drains, creek and rivers following storms.

The PLP will maintain a website at www.plasticlitterpatrol.com. Photographs of "before and after" cleanups will be posted. Anyone noticing plastic bags or film caught in tree or at any other location will be able to report them by e-mail to the PLP and personnel will be sent to remove them.

The PLP will work in conjunction with the City and county "adopt-a" programs and the CalTrans adopt-a-highway program.

http://adopt-a-highway.dot.ca.gov.

The PLP will submit its cleanup plan to the City for comments. The PLP is not dependent on the City's cooperation.

It is easy to keep the City free of plastic bag (1,2) litter without banning bags. All that is required is to stop talking about the problem and actually do something about it. Banning a product to prevent litter is an absurd overkill solution to an easily solvable problem.

The EIR must take the PLP into account in determining the environmental impacts of the proposed ordinance. If the City is truly incapable of cleaning up plastic bags as it claims, the industry will take matters into its own hands.

San Francisco Mayor Willie Brown cuts the ribbon launching the Green Patrol in 2001.

The tarnished Italian flags on the North Beach lamp posts were eventually restored by the Green Patrol.

The first San Francisco Green Patrol. Note the tarnished Italian flag painted on the North Beach lamp post. The Green Patrol kept the area 100% litter free on a daily basis.

25. <u>The alternative of legislating mandatory best practices for stores.</u>

What would be the environmental benefits of legislating the following program instead of the proposed ordinance?

- Store cashiers or baggers would be *required by law* to ask customers purchasing a single item whether they need a carryout bag. Note that Pub. Res. Code §42252(e) requires stores (as defined) to make reusable bags (as defined) available to customers.

- Double bagging of plastic bags (1) and paper carryout bags would be *prohibited by law*.

- Store cashiers or baggers would be *required by law* to ask all customers to return plastic bags (1,2) to the store for recycling and point out the location of plastic bag recycling bins. This should result in a huge increase in the number of plastic bags (1,2) deposited in bins by consumers. Note that Pub. Res. Code §42252(b) requires stores (as defined) to make plastic bag recycling bins available to customers.

- Uniform signage and a logo would be *required by law* for all plastic bag recycling bins.

- Encourage stores to fill the maximum item count or weight per carryout bag.

- Encourage stores not to give carryout bags to customers to hold a single item, subject to appropriate exceptions.

- Encourage stores to ensure that the required plastic bag recycling bins are placed in highly visible locations and clearly marked with a uniform logo.

- Encourage stores to print their logo and commercial messages on only one side of plastic bags (1) and use the opposite side only for prominent messages to request and encourage customers to use the plastic bag recycling bins.

- Encourage stores to ask customers to bring *clean* plastic (1,2) and paper carryout bags back to the store for future shopping rather than asking for new bags. Plastic bags (1,2) can be reused many times and can fit into a glove compartment when not in use.

The major British stores achieved a 48% reduction of plastic carryout bags in three years based on best practices. (There is some disagreement about how the calculation of the percentage but the raw numbers speak for themselves: 870 million plastic bags in May 2006; 418 million plastic bags in May 2009.) American stores can achieve similar results.www.retail-week.com/in-business/responsible-retail/grocers-slash-plastic-bag-usage-by-48/5004605.article.

26. <u>The alternative of legislating mandatory percentage reductions for stores.</u>

As an alternative to the ordinance, what would be the environmental benefits of legislating mandatory percentage reductions of the number of plastic bags (1) and paper bags (3,4) provided by stores? For example, stores as defined in Pub. Res. Code §42250(e) might be required to reduce such bags by x% using 2011 as the baseline and 2013 as the goal. The goal could be enforced by sanctions.

Under Pub. Res. Code §42252(d) and California Integrated Waste Management Board regulations, stores (as defined) are required to report plastic bag (1) usage. See: www.ciwmb.ca.gov/RuleArchive/2008/PlasticBags/default.htm. The collected data is being made available to Los Angeles County. The City could legislate a similar reporting requirement for paper carryout bags at stores as defined in Pub. Res. Code §42250(e).

27. <u>Cumulative environmental impacts.</u>

What are the cumulative environmental impacts of the proposed ordinance? Quantify. Cite substantial evidence and credible verifiable sources.

CEQA Guidelines §15130(a) states that an EIR "shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3).

CEQA Guidelines §15065(3) states that an EIR must be prepared if "the project has possible environmental effects that are individually limited but cumulatively considerable." CEQA Guidelines §15065(3) states that "cumulatively considerable" means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

CEQA Guidelines §15355 defines "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." CEQA Guidelines §15355(b) states that "[c]umulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

In *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, the court stated:

> <u>At 114:</u> Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. [Footnote] One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.

> At 118: From *Kings County* and *Los Angeles Unified*, the guiding criterion on the subject of cumulative impact is whether *any* additional effect caused by the proposed project should be considered significant given the existing cumulative effect. (Emphasis added.)
>
> At 119: However, under CEQA section 21083, under the Guidelines section 15355 definition of cumulative impacts, and under the *Kings County/Los Angeles Unified* approach, the need for an EIR turns on the impacts of *both* the project under review and the relevant past, present and future projects. [Emphasis by court.]

Based on the foregoing, the EIR must consider the impact of the proposed County ordinance together with the following projects:

- The Los Angeles County Board of Supervisors resolution of January 22, 2008 that would ban plastic bags if reduction benchmarks are not attained.
- The San Francisco plastic bag (1) ban ordinance adopted in 2007.
- The City of Los Angeles resolution to ban plastic bags (1) in 2010 if no plastic bag fee bill is enacted by the state by that time.
- The City of Malibu plastic bag (1) ban ordinance adopted in 2008.
- The City of Manhattan Beach plastic bag (1) ban ordinance adopted in 2008 (if it is not invalidated).
- The City of San Jose proposed plastic bag ban (and probable paper bag fee).
- The Palo Alto plastic bag (1) ban ordinance adopted in 2009.
- The proposed City of Santa Monica plastic bag (1) ban ordinance.
- The proposed City of Berkeley plastic bag (1) ban ordinance.
- All plastic bag (1) ban ordinances and reduction projects that are being considered or may be or have been implemented in California and outside California.

In *San Franciscans for Reasonable Growth v. City and County of San Francisco*, (1984) 151 Cal.App.3d 61, 75, the court stated:

> [W]e must reject the argument that, because some of the projects under review might never be built, it was reasonable for the Commission not to consider any of them in its cumulative analyses. Such argument is without merit. The fact that the EIR's subject project itself might be built, rather than the fact that it might not be built, creates the need for an EIR. Similarly, the fact that other projects being reviewed are as close to being built as the subject project makes it reasonable to consider them in the cumulative analyses.

REQUEST FOR NOTICES

I request that you send me by e-mail and regular mail any future public notices regarding the proposed ordinance and the EIR.

E-mail address: savetheplasticbag@earthlink.net

Mailing address: 350 Bay Street, Suite 100-328, San Francisco, CA 94133

CONTACT PERSON

I am the designated contact person for the Save The Plastic Bag Coalition.

CONCLUSION

STPB is available to provide information, documents, contacts, and research regarding the EIR. We want to help in every possible way to ensure the whole truth is described and disclosed to the City Council and the voters.

Nothing is waived by any statement or omission herein. Strict compliance with all the applicable provisions of CEQA is hereby demanded.

Dated: April 27, 2010

STEPHEN L. JOSEPH
Counsel, Save The Plastic Bag Coalition

Appendix B

Air Quality: URBEMIS Spreadsheet Results

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Single-use Carryout Bag Ordinance

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.02	0.25	0.10	0.00	0.03	0.01	38.03

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.02	0.25	0.10	0.00	0.03	0.01	38.03

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name:

Project Name: Single-use Carryout Bag Ordinance

Project Location: South Coast AQMD

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)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single-use Plastic Bag Ordinance	0.02	0.25	0.10	0.00	0.03	0.01	38.03
TOTALS (lbs/day, unmitigated)	0.02	0.25	0.10	0.00	0.03	0.01	38.03

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 80 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
Single-use Plastic Bag Ordinance		1.00	acres	1.00	1.00	8.97
					1.00	8.97

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.8	99.0	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	2.7	94.6	2.7
Light Truck 3751-5750 lbs	0.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	0.0	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	81.2	18.8
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	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	100.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	64.3	35.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Single-use Plastic Bag Ordinance				2.0	1.0	97.0

Operational Changes to Defaults

Appendix C

City of Santa Monica Nexus Study

City of Santa Monica
Nexus Study

Submitted to:

City of Santa Monica

October 2009

R3 Consulting Group, Inc.
Resources, Respect, Responsibility

Table of Contents

Tables

R3

Table of Contents

Appendices

Santa Monica Nexus Study

Background

The City of Santa Monica ("City") recently passed an ordinance "Prohibiting Retail Establishments from Providing Single Use Plastic Carryout Bags and Regulating the Use of Paper Carryout Bags." The City's single use carryout bag ordinance ("Ordinance") contains the following key provisions:

- It defines the entities, commercial and retail establishments, that are to be regulated under the ordinance;
- It defines plastic, paper and reusable bags;
- It prohibits the distribution of single use carryout plastic bags;
- It establishes a "green fee" for each paper carryout bag provided, with the fee to be visible on the customer's receipt;
- The green fee will have two (2) portions: (1) the City's portion, which will be used to fund implementation of the ordinance, and (2) the store's portion, which is meant to compensate the stores for their costs of complying with the ordinance; and
- It contains an exemption provision for undue hardship (to be determined by the City).

The City now wishes to determine the amount of the regulatory portion of the green fee through a nexus study.

Number and Type of Stores to be Regulated under Ordinance

The City's ordinance indicates that there are 1,718 commercial and retail establishments in the City. These retail establishments fall into two (2) categories for the purposes of complying with the ordinance, as follows:

All Retail Establishments

The Ordinance requires the following: "No retail establishment in the City of Santa Monica shall provide a Single Use Plastic Carryout Bag to a customer except as permitted in this Chapter".

Grocery Stores and Pharmacies

The Ordinance requires both of the following:

- "No grocery store or pharmacy in the City of Santa Monica shall provide to any customer at the point of sale any bag except a Reusable Bag or Paper Carryout Bag"; and
- "No grocery store or pharmacy may provide a Paper Carryout Bag to a customer without charging a Green Fee to the customer for each Paper Carryout Bag provided."

The City's Ordinance defines grocery stores to include retail establishments that sell food, such as supermarkets, convenience stores, liquor stores and gasoline stations.

Table 1 below provides a summary of the number of stores to be regulated under the Ordinance:

Table 1	
Type of Business and Ordinance Requirements	**Number of Businesses**
Businesses subject to the green fee include: ▪ 48 grocery stores, convenience stores and mini-marts. ▪ 21 liquor stores. ▪ 24 drug stores (8) and pharmacies (16). ▪ Eight (8) gas station mini-marts.	101
Businesses that must ban plastic bags, but are not necessarily subject to the green fee.	979
Food vendors that would likely be exempt from the Ordinance, and must file exemption application.	638
Total number of vendors subject to the Ordinance requirements.	**1,718**

Methodology

R3 completed the following tasks for this study:

- Reviewed the City's Ordinance on "Prohibiting Retail Establishments from Providing Single Use Plastic Carryout Bags and Regulating the Use of Paper Carryout Bags."

- Requested and received data from the City regarding the cost of Ordinance implementation, the City's estimates of the number of stores to be regulated, the number of bags currently generated in the City, and other related information.

- Reviewed proposed legislation, ordinances and studies that had been conducted in other jurisdictions, including the following:

  - City of Fairfax ban on plastic bags;

  - Proposed state law, AB 87, which would place a $0.25 fee on plastic carryout bags statewide, and would allow retailers to retain $0.07 of the fee to recover their own costs of implementation;

  - City of Los Angeles web site on the "It's Our L.A.! Keep It Clean" program to recycle plastic bags;

  - County of Los Angeles study, "An Overview of Carryout Bags in Los Angeles County";

  - Information on the City of San José's consideration of placing a $0.25 fee on plastic carryout bags; and

  - City of Seattle web site information on the city's proposed $0.20 green fee on disposable shopping bags.

- Surveyed grocery stores both within and outside of the City regarding their bag costs, and any experience the store may have had with encouraging customers to reduce their bag use or of placing fees on bags. A summary of contacts with retailers is contained later in this study.

Costs to City for Program Implementation

The City's Office of Sustainability and the Environment (OSE) will complete the following activities related to the Ordinance, and will add one (1) full-time Environmental Analyst to perform these activities:

- Outreach to affected retailers to make them aware of the Ordinance and requirements (includes arranging meetings, preparation and distribution of letters, staff assistance to answer questions, and training and education for staff of affected retailers);

- Outreach to the public to promote the use of renewable bags (preparation of press releases, preparation of advertisements and mailers, outreach events, distribution of reusable bags, preparation of FAQ sheets and website information, and preparation of City TV news items);

- City administration – collection and processing of data and fees from stores required to collect green fees; and

- Enforcement – field inspections and spot checks of stores to ensure compliance; investigation of customer complaints; processing of enforcement paperwork and distribution of notices of violation.

The City's Finance Department will develop a reporting form for businesses to use to report and pay their green fees each quarter. The Finance Department estimates that they will need the equivalent of one-quarter of a full-time Administrative Assistant to process exemption applications and monthly fee payments.

The City has estimated the total cost of these implementation activities to be $263,307 per year ($393,307 in the first year), as shown in Table 2 below:

Table 2

Cost Item	Annual Cost	One-Time Cost
Finance Admin Assist (25% time)	$ 17,770	
OSE Admin Assist (25% time)	$ 17,770	
OSE Analyst (1-FTE)	$ 100,343	
Advertising	$ 50,000	
Code Compliance Officers	$ 77,424	
Cost to establish fee remittance to City		$ 15,000
Other one-time costs (signs, attorney review, etc.)		$ 15,000
Bag Purchase and Community Outreach (25,000@ $4.00/each)		$ 100,000
TOTAL COST	**$ 263,307**	**$ 130,000**
TOTAL FIRST YEAR COST	**$ 393,307**	

Baseline Number of Bags, Before Reductions, Due to Outreach and Fees

The California Integrated Waste Management Board has estimated the total usage of plastic bags at 600 per person per year.[1] However, that figure refers to use of all bags, and this Ordinance will only apply a green fee to bags distributed from grocery stores (as defined to include retail establishments that sell food, such as supermarkets, convenience stores, liquor stores and gasoline stations).

The City conducted a survey of retail stores that would be required to comply with the Ordinance, and asked those stores to provide data on the number of carryout bags used each month. The summary of that survey is included as Appendix A. Table 3 below provides the estimated current annual number of single use bags in Santa Monica, for stores that will be subject to the green fee only (i.e., the number of bags that would be subject to the green fee).

Table 3 (in millions)		
Low Estimate	**High Estimate**	**Average of Low and High Estimates**
17.80	34.30	26.05

Bag Reduction Experiences

R3 researched and surveyed grocery stores within and outside the City for their experiences in single use carryout bag reduction. The research revealed that several stores have put different kinds of incentives in place to reduce usage of single use bags and encourage consumers to use reusable bags. Each of the stores listed below sell reusable bags, and promote their use. The anecdotal experiences of the stores R3 interviewed for this study include the following:

- The United Kingdom grocery and general merchandise chain, Marks and Spencer, began charging five (5) pence

[1] "An Overview of Carryout Bags in Los Angeles County, A Staff Report to the Los Angeles County Board of Supervisors, August 2007, prepared by the County of Los Angeles' Department of Public Works.

for single use carryout bags in 2008. The store also conducted an extensive public education campaign. A year later, their customers are using 83 percent fewer bags.[2]

- Whole Foods in Santa Monica refunds five (5) cents per bag to customers who bring their own reusable bags. The stores do not use plastic bags, and do use 100 percent recycled paper bags. Whole Foods estimates that 33 percent of customers use reusable bags.[3]

- The 99 Cents Only store in Santa Monica began charging three (3) cents per bag for single use bags, and within approximately two (2) months of the launch of the program, customers reduced bag use by approximately half.

- The Trader Joe's grocery chain promotes the use of reusable bags, sells reusable bags, and enters names of customers into a lottery to thank them for using reusable bags. The grocery chain estimates that at least five (5) percent of customers use reusable bags.[4]

- "On March 15, 2007, to reduce plastic carryout bag consumption, IKEA became the first major retailer in the United States to voluntarily no longer offer a 'free' plastic bag to customers. Instead, customers are given a choice of purchasing a plastic carryout bag for five (5) cents each (all proceeds in the first year would go towards American Forests to plant trees), or purchasing a 'big blue' reusable bag for 59 cents (down from 99 cents). After IKEA introduced a similar program in the United Kingdom last year (2006), IKEA's plastic carryout bag consumption dropped by 95 percent."[5] The IKEA store in Burbank reported that bag use at that store was reduced by 50 percent in the first year of implementing a bag fee.

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[2] www.environmentalleader.com, June 5, 2009.

[3] Personal communication, John Jurey, store manager, Whole Foods Santa Monica, May 22, 2009.

[4] Personal communication, Kent Smatherse, manager of Trader Joe's Santa Monica, May 29, 2009.

[5] "An Overview of Carryout Bags in Los Angeles County," A Staff Report to the Los Angeles County Board of Supervisors, August 2007.

Estimate of Single Use Bag Reduction after Implementation of Ordinance

Of the various examples listed above, three (3) stores used a fee approach, Marks and Spencer, 99 Cents Only, and IKEA. Those three (3) companies saw bag use decline by 83 percent, 50 percent and 50 percent, respectively.

R3 cannot predict exactly the number of bags that will be reduced as a result of implementing the City's Ordinance. There are no other programs that are exactly comparable. Factors that would influence the reduction in bag use include, but are not limited to, the following:

- Types of stores, such as grocery versus convenience store, and discount versus premium brand. Many trips to the grocery store are planned in advance, and customers may find it easier to remember to bring their reusable bags. In contrast, trips to convenience stores and gas stations may be unplanned, and so customers may need to purchase bags more frequently at these stores.

- Business and tourist population. While Santa Monica has only 85,000 residents, there are 300,000 people who work in Santa Monica, and the City receives 500,000 visitors each weekend. Santa Monica's tourist population may not know about the City's Ordinance, and may not be as prepared to use reusable bags as Santa Monica residents.

- Clientele – certain stores may have customers that are more motivated than others to reduce bag use as a result of the green fee.

- Reduction in bag use that has already occurred – Santa Monica has several stores that have already implemented bag reduction programs, so the additional reductions from the implementation of this new program may be less than they would have been otherwise.

Table 4 below provides estimates of the number of bags based on varying levels of assumed bag use reductions:

Table 4 (all figures in millions)			
	Low Estimate	**High Estimate**	**Average of Low and High Estimates**
Number of Bags Before Implementation of Ordinance	17.80	34.30	26.05
Number of Bags with 30% Reduction	12.46	24.00	18.23
Number of Bags with 50% Reduction	8.9	17.15	13.03
Number of Bags with 80% Reduction	3.56	6.86	5.21

City's Portion of Green Fee

The estimate of the City's portion of the green fee is straightforward; it is the total cost of the City's annual regulatory program divided by the number of bags that will be subject to the green fee (as provided in Table 4 above).

- As described in Table 2, the City's annual regulatory costs are anticipated to be $263,307 per year to implement the Ordinance, with a first year cost of $393,307.
- The number of bags that would be subject to the green fee, after reductions in bag use by consumers, could be estimated as low as 3.56 million bags to as high as 24 million bags, or higher. (These estimates are based on the "low" initial estimate of bags assuming bag use is reduced 80 percent and the "high" initial estimate of bags assuming bag use is reduced by 30 percent.)
- Therefore, using the low end of the range 3.56 million bag estimate, the City's portion of the green fee would be eleven (11.0) cents per bag ($393,307 / 3,560,000 bags). This estimate uses the "low" initial estimate of bags, and assumes that bag use is reduced 80 percent.
- Using the high end of the range, the figure of 24 million bags, the City's portion of the green fee would be one and

six tenths of a cent (1.6) per bag ($393,307 / 24,000,000 bags). This estimate uses the "high" initial estimate of bags, and assumes that bag use is reduced 30 percent.

- Using the average estimate of 13 million bags as a conservative middle of the road approach, the City's portion of the green fee would be three (3.0) cents per bag ($393,307 / 13,000,000 bags). This estimate uses the "average" initial estimate of bags, and assumes that bag use is reduced fifty percent.

Estimate of Costs to Retailers

Identification of Types and Amounts of Costs for Retailers

During the preliminary research, R3 identified the following types of potential costs to the retailers from implementing the Ordinance:

- Cost differential between purchasing paper bags and purchasing plastic bags. Some retailers currently use plastic carryout bags, and the Ordinance would require them to use paper bags instead;
- New costs related to the storage and transportation of paper bags, due to their larger size;
- Administrative costs of complying with the Ordinance (completing paperwork, etc.);
- Decreases in costs of purchasing bags, as consumers reduce their use of single use carryout bags;
- Public education costs, such as providing signage, to inform customers of the new Ordinance;
- Labor costs related to training employees to implement the Ordinance, such as maximizing the number of items per bag in order to reduce customers' bag fees; and
- Operational costs of implementing the Ordinance, such as reprogramming cash registers to account for purchases of single use carryout bags, if any.

R3 interviewed the following retailers regarding potential costs list above (a summary of interview results can be found in Appendix B attached to this study):

- Vons, a large supermarket in Santa Monica;
- Co-Opportunity, a local grocery store;
- Marks and Spencer in the United Kingdom;

- Whole Foods in Santa Monica;
- 99 Cents Only store in Santa Monica;
- Trader Joe's in Santa Monica; and
- The Farms, a neighborhood food store.

Estimate of Costs to Retailers in Other Cities

- The City of Seattle recently proposed a $0.20 green fee on carryout bags. The City has posted a "Disposable Bag Green Fee and Foam Food Container Ban Overview and Transition Plan" on its web site. In this document, the City indicates that its plan is for merchants to retain five (5) cents of the green fee per bag for "taxes and administrative costs."

- Proposed California State law, AB 87, would place a $0.25 fee on plastic carryout bags statewide, and would allow retailers to retain $0.07 of the fee to recover their own costs of implementation.

- A proposal in the City of San José would place a $0.25 fee on all types of bags (i.e., paper, plastic, etc.), and would allow retailers to retain a portion of the fee for program administration and cost recovery purposes of $0.05 per regular bag and $0.10 for each bag meeting specified "green bag" criteria.

Estimates of Costs to Retailers for Storage, Advertising and Implementation

During R3's interviews with retailers, they generally indicated that there would ***not*** be any additional costs of implementing the Ordinance due to:

- Changes in bag storage when changing from paper to plastic. None of the stores that were interviewed in the City thought that this would cause a significant change to their operations. Marks and Spencer ("M&S"), in the U.K., however, described their specific operational experience with paper bags. M&S indicated that a pallet of paper bags contains about one-fifth (1/5) the number of bags as a pallet of plastic bags (7,875 paper bags versus 40,000 plastic bags), for the same amount of floor space. M&S indicated that similar storage issues occur at the cash register. If paper bags are used and the cash register storage space holds fewer paper bags than plastic, then the store employees will have to re-stock the paper bags at the cash register more frequently than for plastic bags.

- Changes to cash register programming to accommodate the new "green fee" on bags. Each of the stores that were interviewed indicated that cash register re-programming occurs frequently, and that this would not be a significant cost to the stores.

- Training of store employees regarding the "green fee" and use of paper bags. Each of the stores that were interviewed indicated that employee training occurs frequently, and that this would not be a significant cost to the stores.

- Public education costs regarding changes to bag policy. Stores expressed that costs for public education about the bag policy are folded in to other activities to communicate with their customers, and were generally not able to be to be distinguished from other public education costs.

Bag Costs

City of Santa Monica Bag Cost Estimates

The City of Santa Monica conducted research in September, 2008, regarding the costs of various types of carryout bags.[6] The results are as follows:

Plastic bags:	One half (0.5) to nine (9) cents per bag;
Paper bags:	Four and a half (4.5) to 25 cents per bag;
Biodegradable bags:	Eight (8) to 22 cents per bag;
Reusable bags:	70 cents to ten (10) dollars per bag.

County of Los Angeles Bag Cost Estimates

The County of Los Angeles Department of Public Works also estimated bag costs in 2007, and those costs are shown in Table 5 below[7]:

[6] For "City of Santa Monica Task Force on the Environment, Meeting on Discussion and Recommendations Regarding Plastic Bags," September 15, 2008.

[7] Staff Report to the Los Angeles County Board of Supervisors "An Overview of Carryout Bags in Los Angeles County" August 2007.

Table 5	
Type of Carryout Bag	**Average Cost per Bag**
Plastic Bag	3 cents (ranges between 3 cents and 5 cents
Paper Bag	10 cents (ranges between 5 and 23 cents)

Overall Green Fee Calculation

There are a wide variety of operations and cost structures for different types of retailers (e.g., small convenience stores, "big box" stores, grocery stores, etc.) R3's estimates of the costs related to implementing the Ordinance are industry-wide estimates, and do not reflect the costs of any individual retailer or of any particular category of retailer. Furthermore, R3's approach did not include gathering cost data from enough entities to be considered a statistically valid survey.

For the purposes of this study, the overall green fee is based on the calculated costs of the City and retailer portions (Tables 2 and 5). These costs are added together for a total green fee. Calculated green fees are also based on the estimates for the annual number of plastic bags at the City's identified retailers. An average is provided for between the "High" and "Low" range estimates (Table 4). The "High", "Low" and "Average" estimates are each decreased by an assumed reduction factor. This study provides analysis of three (3) assumed reduction factors, 30 percent, 50 percent and 80 percent.

Table 6 below shows the calculation of the green fee under the assumption of a 30 percent reduction in bag usage (note that the calculated green fees are based on the first year City costs which include $130,000 in one-time costs):

Table 6			
	High Range	**Low Range**	**Average**
Estimated # of Bags	34,300,000	17,800,000	26,050,000
30% Bag Reduction Factor	(10,300,000)	(5,340,000)	(7,820,000)
Total Bags less Reduction	**24,000,000**	**12,460,000**	**18,230,000**
City Budget	$ 393,307	$ 393,307	$ 393,307
City Portion per Bag	**$ 0.016**	**$ 0.032**	**$ 0.022**
Retailer Portion per Bag	**$ 0.030**	**$ 0.030**	**$ 0.030**
Total Green Fee	**$ 0.046**	**$ 0.062**	**$ 0.052**

Under the assumption of a 30 percent reduction in bag usage, the green fee should be set to five and two tenths (5.2) cents[8], two and two tenths (2.2) cents of which will be distributed to the City.

Table 7 below shows the calculation of the green fee under the assumption of a 50 percent reduction in bag usage:

Table 7			
	High Range	**Low Range**	**Average**
Estimated # of Bags	34,300,000	17,800,000	26,050,000
50% Bag Reduction Factor	(17,150,000)	(8,900,000)	(13,025,000)
Total Bags less Reduction	**17,150,000**	**8,900,000**	**13,025,000**
City Budget	$ 393,307	$ 393,307	$ 393,307
City Portion per Bag	**$ 0.023**	**$ 0.044**	**$ 0.030**
Retailer Portion per Bag	**$ 0.030**	**$ 0.030**	**$ 0.030**
Total Green Fee	**$ 0.053**	**$ 0.074**	**$ 0.060**

Under the assumption of a 50 percent reduction in bag usage, the green fee should be set to six (6.0) cents, three (3.0) cents of which will be distributed to the City.

Table 8 below shows the calculation of the green fee under the assumption of an 80 percent reduction in bag usage:

Table 8			
	High Range	**Low Range**	**Average**
Estimated # of Bags	34,300,000	17,800,000	26,050,000
80% Bag Reduction Factor	(27,440,000)	(14,240,000)	(20,840,000)
Total Bags less Reduction	**6,860,000**	**3,560,000**	**5,210,000**
City Budget	$ 393,307	$ 393,307	$ 393,307
City Portion per Bag	**$ 0.057**	**$ 0.110**	**$ 0.075**
Retailer Portion per Bag	**$ 0.030**	**$ 0.030**	**$ 0.030**
Total Green Fee	**$ 0.087**	**$ 0.140**	**$ 0.105**

[8] Since a retailer will not be able to collect fractions of a penny from individual customers, an agreement of proper rounding is necessary between the City and the retailers collecting the green fee.

Under the assumption of an 80 percent reduction in bag usage, the green fee should be set to ten and five tenths (10.5) cents, seven and five tenths (7.5) cents of which will be distributed to the City.

Recommendations

Based on the analysis in this study, R3 believes that by taking a conservative approach, the City will limit the margin of error in the range predictions. For that reason, R3 recommends the following:

- The City use the average bag estimate with a 50 percent bag reduction assumption for the calculation of the green fee (see Table 7 above). R3 believes that this is the most conservative approach the City can take. Doing so results in a total green fee of six (6.0) cents, three (3.0) cents of which will be distributed to the City for every plastic bag distributed to a customer from a major retailer;

- The City base the "City Portion per Bag" green fee calculation on the first year budget of $393,307 for full cost recovery; and

- The City adjust the "City Portion per Bag" in following years to match the City's budget. The elimination or adjustment of one-time costs of $130,000 in the first year will have an impact on the calculation of the green fee.

Additional Recommendation

R3 also suggests that the City track the actual numbers of bags and costs of administering the program in the first year. After the program has been in place for the first year, the City may wish to adjust the green fee based on actual reported bags used or sold from the stores, as well as the anticipated adjustments in the City's cost, including whether the City will purchase additional bags (i.e., one-time costs), or if additional public education efforts are needed to support the program.

Appendix A

City of Santa Monica Carryout Bag Survey

Appendix A

Estimated Annual Number of Single Use Bags in Santa Monica
June 17, 2009

Estimates are based on phone surveys of 22 grocery stores, mini marts, liquor stores, gas station mini marts, drug stores and pharmacies conducted during August 2008 and May/June 2009. Total number of stores are based on business license records. Sizes of stores are based on staff estimates.

Grocery Stores – 48 total

- Large Grocery: 1.5 million to 2.2 million bags/yr x 8 stores = **12 million to 17.6 million**
- Medium Grocery: 300,000 to 750,000 bags/yr x 4 stores = **1.2 million to 3 million**
- Small Grocery/Mini-mart: 30,000 – 150,000 bags/yr x 36 stores = **1.08 million to 5.4 million**

Liquor Stores – 21 total

- Same as Small Grocery/Mini-mart: 30,000 – 150,000 bags/yr x 21 stores = **630,000 to 3.15 million**

Gas Station Mini-marts – 8 total

- 10,000 to 75,000 bags/yr x 8 stores = **80,000 to 600,000**

Drug Stores and Pharmacies – 24 total

- Large Drug stores: 350,000 to 550,000 bags/yr x 8 stores = **2.8 million to 4.4 million**
- Small pharmacies: 3000 to 10,000 bags/yr x 16 stores = **48,000 to 160,000**

Estimated total annual number of single use bags currently distributed by Santa Monica stores that would be subject to the green fee = 17.8 million to 34.3 million (This represents the sum of all of the low range numbers and the sum of all of the high range numbers. The actual total is likely somewhere in the middle of these two figures.)

Prepared by the City of Santa Monica, Office of Sustainability and the Environment

Appendix B

R3 Store Interviews Summary

Appendix B

Store Name	Types of Bags Used at Store	Cost of Bags	What is the extra cost for storage of paper bags?	Has store initiated a campaign to reduce bag use?	What reduction in bags has the store experienced?	How long did it take to achieve this decrease?	Does store give refund for using reusable bags?	Any additional costs for counting bags and entering in cash register?	What are public education costs for signage, etc.?
Vons	Plastic, paper and reusables.	Plastic costs $.005 and paper between $.05 and $.09.	Requires 7 trucks for same # of paper bags as one truck of plastic.	Yes, they have resuable bags for sale at checkstand. No verbal offer. Bags cost between $1-3.	Very small.	Program has been in place several years.	No.	Yes, incremental cost of time. All about efficiency. Reusable bags slow down line.	None.
Co-Opportunity	Heavy Plastic bags. Paper bags (standard grocery bag size, 100% recycled content, 40% post-consumer).	$0.14 $0.10	Not an issue for this store.	Yes, store clerks prompt customers to use reusable bags, also store signage, and display of bags.	Store has no data.	No data.	Yes, $0.05 refund per bag.	None.	No separate costs; costs are folded in to other activities to communicate with their customers.
Marks & Spencer, UK	They use different types of bags across the different product lines of their stores (clothing vs. food, for example.) The new plastic bags are thicker, so they can be reused, and they have 100% recycled content.	On average, paper bags are 10-30% more expensive than plastic for equivalent size and quantity.	For the same size pallet, they can either store 40,000 plastic bags or 7,875 paper bags. Shipping cost are also higher for paper, due to weight and size.	Yes, the store began with public education, and then added a 5 cent fee per bag (UK pound.)	They achieved an 84% reduction in bag use after a year, with the majority of the reduction (over 70%) occuring in the first month.	Major reductions occurred in the first month, with additional reductions over the first year.	No.	None. They have on-going training of store clerks, and this is part of on-going training.	M&S did a lot of public education, including signage, magazine, direct face-to-face communication with customers, web site information, messages on the bags, signs on tables in their cafes, and give-aways of organic cotton shoppping bags with program information printed on them.
Whole Foods	Now: paper bags only; no plastic bags. Whole foods used to use plastic bags - they were premium, thicker bags.	Case price is $27.50. Case price was $20.50.	The store doesn't see the storage issue or shipping as an additional cost.	Yes, store banned plastic bag and reminds/encourages customers to use their own reusable bags. They believe the cessation of plastic bag use brought more attention to the issue, and had an educational affect.	Chain has seen a tripling in use of reusable bags. The store estimates that 33% of customers use reusable bags.	One year.	Refund of either 5 cents or 10 cents per reusable bag, depending on store location. Santa Monica store gives a refund of $0.05 per bag for use of reusable bags.	No cost. Reprogramming occurs routinely.	Public education activities include the refund, reminders by clerks, advertising, sales of bags, displays, promotions, celebrity bags, etc. No cost data.
99 Cents Only	Stores use standard plastic grocery bags, and sell reusable bags.	Reusables offered at 99.99 cents each.	Not an issue for this store.	Yes, stores have added a $0.03 fee on their disposable plastic bags. They also sell reusable bags for 99 cents.	These stores have experienced a 50% reduction in the use of disposable bags.	The decrease occurred within appriximately 2 months of the launch of the program.	No.	None.	No significant public education costs.
Trader Joe's	Store uses both standard plastic grocery bags and standard paper grocery bags.	Trader Joe's elected not to provide any data.	Trader Joe's elected not to provide any data.	Customers who use reuseable bags are given a slip to enter their name into a lottery each time they use reuseable bags. Stores have reminder signs in parking lots and inside stores. They sell reuseable bags in stores, and directly communicate with customers.	They have seen at least a 5% reduction in bags due to reuseables.	This program has been in place for several years.	No refund, just lottery chances.	No additional costs foreseen. Cash register programming changes are made by corporate and downloaded from the main server.	They incorporate the reuseable bag message into current public education at stores, and do not know the costs of bag education.
The Farms	They use both paper and plastic bags, and sell reusable bags.	Their plastic bags cost half a cent each, and their paper bags cost $0.13 each.	There are no extra storage costs, because the store purchases a weekly supply of bags.	Yes, store offers reusable bags for sale, and reminds customers to use them through direct communication with customers.	No estimate. Many people forget their bags.	No data.	No refund.	No additional costs foreseen. Reprogramming is a 5-10 minute task.	Store has no additional costs for public education, and relies on the City to educate the public.