

# AGENDA REPORT

## City Council

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**MEETING DATE:** June 25, 2014

**PREPARED BY:** Richard Phillips,  
Deputy City Manager

**DEPT. DIRECTOR:** Glenn Pruum

**DEPARTMENT:** Public Works/  
Engineering

**CITY MANAGER:** Gus Vina

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**SUBJECT:**

**UPDATE ON DRAFT SINGLE-USE DISPOSABLE BAG REDUCTION ORDINANCE AND ENVIRONMENTAL REVIEW PROCESS**

**RECOMMENDED ACTION:**

Receive information and provide any desired direction

**STRATEGIC PLAN:**

Environmental Focus Area

**FISCAL CONSIDERATIONS:**

Fiscal impacts associated with potentially conducting an Environmental Impact Report would require an allocation to the approved budget in an amount of \$30,000.

**BACKGROUND:**

At the November 20, 2013 City Council meeting, Council received a report and presentation from the Encinitas Environmental Commission regarding single-use plastic bag reduction measures and considered the Commission's recommendation to consider development of an ordinance. At that meeting, Council provided direction to prepare a draft ordinance that would prohibit the distribution of single-use plastic carry-out bags with several elements including: (1) a phased-in approach beginning with large grocery store, retailers and pharmacies followed by other retailers and farmers markets; (2) a recycled paper bag pass-through fee retained by the retailer of not less than 10 cents; and (3) exemptions for restaurants, produce bags, product bags, bulk product bags, and non-profit organizations reusing donated plastic bags.

A draft ordinance was prepared (Attachment A) and technical analysis initiated for an initial study as part of the environmental review process required under the California Environmental Quality Act (CEQA). The City retained the environmental consulting firm, Rincon Consultants, Inc. (Rincon) to conduct technical analyses on specific environmental elements for the initial study process. Rincon is an environmental sciences, land use and environmental permitting assistance firm which has extensive experience supporting single-use bag reduction reviews for local jurisdictions throughout California. Rincon's scope of work included single-use bag estimates and impact analysis for environmental documentation requirements. The analysis estimated pre and post single-use bag usage and projected air quality, greenhouse gas emissions, water, wastewater and solid waste impacts of a potential single-use bag reduction

ordinance. The technical analysis conducted for the Encinitas project is contained in Attachment B.

### **ANALYSIS:**

The draft ordinance is consistent with components as directed by Council at the November 20, 2013 meeting and would implement restrictions on retail establishments' distribution of single-use disposable bags to consumers within the City of Encinitas. The draft ordinance is based largely on a similar ordinance, as amended, in the City of Solana Beach as well as other best practices from California cities that have implemented single use bag restrictions. Elements of the draft ordinance include:

- Phased-in prohibition on the distribution of single-use plastic carry-out bags by retail establishments with some exemptions for plastic or paper product bags such as produce bags, bulk item bags, bags to protect items from damage or contamination, and prescription medication bags;
- Requiring grocery stores, department stores, hardware stores, drug stores, convenience stores and other retail establishments, as defined in the ordinance, to provide customers only with paper bags made from at least 40% post-consumer recycled materials or make reusable bags available for purchase if customers desire a bag or do not provide their own bag;
- Requiring retail establishments to charge a pass-through cost for paper bags at a minimum amount of 10 cents for each paper bag with the fee retained by the retailer (exempts "product bags");
- Allowing affected retailers to rebate/credit customers up to 5 cents per reusable bag per transaction - a business practice of one of the major grocery stores in the region; and
- Providing exemptions for restaurants, customers participating in subsidized food programs, charitable organizations reusing or reselling donated goods, and product bags as defined in the draft ordinance.

The draft ordinance also provides a process for exemption for a period of a year for retailers who demonstrate undue economic hardship or unique circumstances to comply with the ordinance.

### **Technical Analysis:**

A technical environmental analysis was obtained to support a CEQA initial study process. Implementation of a proposed single-use disposable bag reduction ordinance is considered a project. The technical analysis estimated the quantity of bag distributions or uses and environmental related impacts to air quality, green house gas (GHG), water & wastewater utilities, and solid waste. The methodology and calculations for the various elements are conservative in nature based on current methodologies, best practices and litigation avoidance for single-use bag reduction environmental reviews conducted or being conducted throughout the State.

Most of the environmental factors evaluated in the technical analysis (water, wastewater, solid waste, and air quality) of the environmental impacts for a single-use bag reduction ordinance would be less than significant.

The manufacturing, transportation and disposal of single-use paper bags and energy utilization for washing and drying reusable bags would result in increased GHG producing emissions. The technical analysis indicated that the proposed ordinance would increase greenhouse gas emissions compared to existing conditions. It is anticipated the proposed 10 cent pass-through

cost for each paper bag distributed by retail establishments would create an incentive for consumers to utilize reusable carryout bags to avoid the pass-through cost.

The technical analysis determined that implementation of the ordinance would generate nearly 2,900 metric tons of GHG emissions on an annual basis. For significance determination purposes under CEQA, the City uses a significance threshold of 900 metric tons when conducting environmental review process for proposed development projects in Encinitas. This threshold, which the California Air Pollution Control Officers Association published for suggested use, is used by other lead agencies in California for environmental review purposes as well.

Pursuant to CEQA, an environmental impact report would be required for projects that may have a significant effect on the environment. Based on the technical analysis conducted for the proposed ordinance, the project is estimated to exceed the 900 metric tons of Carbon Dioxide Equivalent (CO<sub>2</sub>E) significance threshold. An Environmental Impact Report may be necessary for continued environmental evaluation and processing of the ordinance as currently proposed. An estimated time period for conducting an Environmental Impact Report is 6 to 12 months, dependent upon any complexity or issues identified in the EIR preparation, public review, consideration and adoption of findings process. A CEQA flowchart is contained as Attachment "C".

An estimated professional fee for assistance with an EIR for disposable bag reduction ordinance was obtained in the amount of \$25,350. A contingency of \$4,650 is recommended for any unforeseen extra scope or work requirements.

#### **State Legislation Update:**

State Senators Padilla, De León and Lara are co-sponsoring proposed legislation SB 270. SB 270 would prohibit certain retail stores from distributing single-use plastic bags and establish conditions and fees for recyclable paper bags. The proposed legislation, as currently written, would phase-in a prohibition on the distribution of single-use plastic bags and initiates a minimum charge of 10 cents for compostable paper bags beginning July 1, 2015 for grocery stores, drug stores and large retailers selling dry groceries, canned goods, perishable and non-food items. Restrictions on single-use bag distribution for convenience stores, mini-markets and other stores that sell food products, beer, wine or distilled spirits would follow, beginning July 1, 2016. The proposed legislation would not prohibit single-use plastic bag distribution by all retailers, but would impact retail stores with gross annual sales of \$2.0 million or more, stores with retail space greater than 10,000 square feet, convenience stores, food stores and other stores that have a limited line of perishable and non-perishable food goods and hold a Type 20 or Type 21 alcohol license.

The proposed legislation also contains a preemption clause that would *preempt* any city, county or other local public agency from implementing, amending or enforcing regulations related to single-use carryout bags and recycled paper bags on or after September 1, 2014 to promote uniform applicability throughout the State. SB 270 is currently pending in the Assembly's Appropriation Committee. Information and status on SB 270 can be accessed on the State Legislative Counsel website at: <http://www.leginfo.ca.gov/>.

#### **ENVIRONMENTAL CONSIDERATIONS:**

Per Section 15060 (c) (3) and 15378 of the CEQA Guidelines, this update to the City Council is not a project, but as noted above, the proposed ordinance is a project that will be subject to the environmental review process under CEQA.

#### **ATTACHMENTS:**

- A. Draft Ordinance of the City of Encinitas, California adding Chapter XXX "Disposable Bag Reduction"

- B. Encinitas Bag Ordinance: Bag Use Estimates, Air Quality, GHG and Utilities Technical Analysis, Rincon Consulting, Inc. April 29, 2014 Final Draft
- C. CEQA Process Flow Chart
- D. PowerPoint presentation

**DRAFT ORDINANCE**

**ORDINANCE NO. XXX-XX**

**AN ORDINANCE OF THE CITY OF ENCINITAS, CALIFORNIA,  
ADDING CHAPTER XXX "DISPOSABLE BAG REDUCTION" TO THE  
ENCINITAS MUNICIPAL CODE PROHIBITING RETAIL ESTABLISHMENTS  
FROM PROVIDING SINGLE-USE CARRYOUT BAGS AND REGULATING THE  
DISTRIBUTION OF PAPER CARRYOUT BAGS, AND [INSERT CEQA  
LANGUAGE]**

**WHEREAS**, the City of Encinitas, California (City) has a strong interest in encouraging the conservation of resources, reducing beach litter and marine pollution, and protecting local wildlife, all of which increase the quality of life of and promote the health and welfare of Encinitas residents and visitors; and

**WHEREAS**, an estimated 20 billion single-use bags are used annually in retail establishments in California, but less than 5 percent of those single-use bags are recycled; and

**WHEREAS**, there are approximately 300 retail establishments that have retail sales greater than \$50,000 annually in the City which may distribute single-use, disposable carryout bags to their customers; and

**WHEREAS**, it is estimated that 31.9 million single use carryout bags are distributed in the City each year; and

**WHEREAS**, many of the local commercial and retail establishments use single-use carryout bags made from plastic or other materials that do not readily decompose; and

**WHEREAS**, numerous studies have documented the prevalence of single-use, carryout bags littering the environment, blocking storm drains and fouling beaches, waterways and the ocean environment; and

**WHEREAS**, plastic bags are a significant source of marine debris and are hazardous to marine animals and birds which may often confuse single-use, plastic carryout bags as a source of food and the ingestion of these bags by wildlife can result in reduced nutrient absorption and death; and

**WHEREAS**, single-use paper bags made from renewable resources are more environmentally friendly than single-use plastic bags, yet the manufacturing, transport, recycling and/or disposal of paper bags require environmental resources; and

**WHEREAS**, from an overall environmental and economic perspective, the best alternative to single-use plastic carry-out bags is a shift to using reusable bags; and

**WHEREAS**, other jurisdictions in the state require retail establishments to impose a paper bag cost pass-through on customers that are provided paper bags, and this cost pass-through has been effective in generating a shift in consumer behavior toward the use of reusable bags and reducing single-use bag distribution and use; and

**WHEREAS**, this Ordinance allows customers to avoid this cost pass-through by using their own reusable bags; and

**WHEREAS**, the cost pass-through is not a fee subject to Proposition 26 because the monetary proceeds from the collection of the paper bag cost pass-through will be retained by the retail establishments and this Ordinance does not specify how the retailers must expend the monies collected; and

**WHEREAS**, a paper bag cost pass-through is an essential element of this Ordinance because it is intended to provide a disincentive to consumers to request paper bags when shopping at regulated stores and to encourage a shift towards the use of reusable bags; and

**WHEREAS**, there are several alternatives to single-use carryout bags available, including reusable bags produced from sustainable materials; and

**WHEREAS**, the City has prepared a [insert CEQA language] concerning the proposed Ordinance, and based upon this [insert CEQA language], the City has determined that the proposed Ordinance is an activity that [will/will not] have a significant adverse effect on the environment; and

**WHEREAS**, because the proposed Ordinance [is/is not] an activity that will have a significant adverse effect on the environment, the City has prepared a [insert CEQA language] pursuant to section [ ] of the Public Resources Code; and

**WHEREAS**, the [insert CEQA language for public review period, if warranted]

**WHEREAS**, the City Council hereby [insert CEQA language for environmental determination] pursuant to the provisions of CEQA.

**NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF ENCINITAS DOES ORDAIN AS FOLLOWS:**

**SECTION 1.** XX.XXX is hereby added to the \_\_\_\_\_Municipal Code to read as follows: CHAPTER \_\_\_\_\_ **SINGLE-USE DISPOSABLE BAG REDUCTION**

Definitions

*"Carry-out bag"* means any bag that is provided by a retail establishment at the point

of sale to a customer for use to transport or carry away purchases, such as merchandise, goods, or food, from the retail establishment. Carryout bags do not include Product Bags as defined in this chapter.

*"Grocery store"* means any retail establishment that sells groceries, fresh, packaged, canned, dry, prepared or frozen food or beverage products and similar items, and includes, without limitation, supermarkets, convenience stores, liquor stores and gasoline station stores.

*"Paper bag cost pass-through"* means the cost which may be collected by retailers from their customers when providing a Recycled paper bag.

*"Pharmacy"* means any retail establishment, where prescriptions, medications, controlled or over the counter drugs, personal care products or health supplement goods or vitamins are sold, but excluding any licensed pharmacy located within a hospital.

*"Product bag"* means any bag provided to a customer for use within a retail establishment to assist in the collection or transport of products to the point-of-sale within the Retail Establishment, or to protect a purchased item from damaging or contaminating other purchased items when placed together in a recycled paper bag or reusable bag; a bag provided by a pharmacy to a customer purchasing prescription medication.

*"Recycled paper bag"* means a paper carryout bag provided by a store to a customer at the point of sale for the purpose of transporting food and merchandise out of the store and that meets the following standards: (1) contains no old-growth fiber; (2) contains a minimum of forty percent (40%) post-consumer recycled materials; (3) is recyclable; (4) has printed in a highly visible manner on the outside of the bag the word "recyclable" and the percentage of post-consumer recycled content.

*"Recycled paper bag cost pass-through"* means the cost that this chapter requires grocery stores and pharmacies to collect from their customers whenever a *recycled* paper bag is provided to a customer.

*"Restaurant"* means any person or establishment doing business within the City of Encinitas that provides prepared food or beverages for consumption on or off its premises such as a restaurant, café, bakery, grocery or convenience store counter or delicatessen, or catering truck vehicle.

*"Retail establishment"* means any person, including a corporation, partnership, business, facility, vendor, organization or individual, that sells or provides merchandise, goods or materials, including, without limitation, clothing, food, or personal item of any kind, directly to a consumer. Retail establishment includes, without limitation, any grocery store, department store, hardware store, pharmacy, liquor store, convenience store, outdoor farmers' market, and any other retail store or vendor. Retail

establishment does not include restaurants, catering trucks, mobile food trucks, and other similar food establishments.

"Reusable bag" means a bag with handles that is specially designed and manufactured for reuse and meets all of the following requirements:

- (1) Minimum lifetime of one hundred and twenty-five (125) uses; ~~and the capability of carrying a minimum of twenty-two (22) pounds one hundred and twenty-five (125) times over a distance of at least one hundred and seventy-five (175) feet;~~
- (2) Minimum volume off fifteen (15) liters;
- (3) Machine washable or made from a material that can be cleaned or disinfected;
- (4) Printed on the bag or tag: the name of the manufacturer; location (country) where the bag is manufactured; statement that the bag is reusable;
- (5) Does not contain lead, cadmium, or any other heavy metal in toxic amounts, as defined by applicable state and federal standards and regulations for packaging or reusable bags; and
- (6) If made of plastic, is a minimum of at least 2.25 mils thick.

"Single-use, plastic carry-out bag" means any bag less than 2.25 mils thick and made predominately of plastic derived from petroleum or bio-based sources, such as corn or other plant source, and includes compostable, non-compostable, and biodegradable plastic bags. Single-use carry out bag does not include Product bag as defined in this chapter.

Section 2. Section XXXXX of the \_\_\_\_\_ Municipal Code is hereby added as follows:

### **XXXXX Prohibition on the Distribution of Single-Use Plastic Carryout Bags**

(A) No Retail Establishment in the City shall provide a single-use, plastic carryout bag to a person except as otherwise permitted by this chapter.

(B) No Retail Establishment in the City shall provide any type carry-out bag to a person at the point of sale unless it is a reusable bag or a recycled paper bag being provided pursuant to the terms of this chapter.

(C) No person shall distribute a single-use, plastic carryout bag at any City facility, City-managed concession, City-sponsored event, or City-permitted event except as otherwise else permitted by this chapter.

(D) Nothing in this chapter is intended to prohibit the distribution of product bags, including plastic carry-out bags, as may be necessary to comply with California Retail Food Code or any other state of federal law.

(E) No person shall distribute single-use plastic carryout bag at any farmers

market within the City of Encinitas.

### **XXXXX Regulation of the Distribution of Recycled Paper Carryout Bags**

(A) Subject to subsection (B) of this section, an affected Retail establishment may provide a recycled paper bag to a customer if it collects a paper bag cost pass-through from the customer for each recycled paper bag provided.

(B) The recycled paper bag cost pass-through shall not be less than \$0.10 unless a Retail establishment has previously submitted a full accounting to the City, signed by a responsible manager under penalty of perjury, which identifies all costs including bag purchase, shipping, handling, and storage, showing a lesser actual cost to the store for each paper carry-out bag. Any such accounting shall expire one year from the date of original submission and a new accounting must be resubmitted.

(C) An affected Retail establishment may rebate or otherwise reimburse a customer for use of a reusable bag up to \$0.05 per reusable bag per transaction.

(D) All Retail Establishments shall indicate on the customer transaction receipts the number of recycled paper bags provided and the total amount of the recycled paper bag cost pass-through.

### **XXXXX Exemptions**

Notwithstanding the requirements contained in Section XXX.XX:

(A) A Retail Establishment shall provide a customer participating in the California Special Supplemental Food Program for Women, Infants and Children pursuant to Article 2 (commencing with Section 123275) of chapter 1 of Part 2 of Division 106 of the California Health and Safety Code and a customer participating in the Supplemental Food Program pursuant to chapter 10 (commencing with Section 15500) of Part 3 of Division 9 of the California Welfare and Institutions Code with a reusable bag or a recycled paper bag at no cost at the point of sale.

(B) This chapter shall not apply to a charitable organization as defined in Section 501(c)(3) of the Internal Revenue Code of 1986, or a distinct operating unit or division of the charitable organization that reuses and recycles donated goods or materials.

(C) The provision of Product bag as defined in this chapter is not prohibited.

(D) The provision of single-use plastic carry-out bags at Restaurants as defined in this Chapter is not prohibited.

(E) The City Manager, or his or her designee, may exempt a retail establishment or nonprofit from the requirements of this chapter for up to a one-year period upon a showing by the retail establishment that the conditions of this chapter would cause

undue hardship. An undue hardship shall only be found if:

- (1) Circumstances or situations unique to the particular retail establishment are such that there are no reasonable alternatives to single-use, plastic carryout bags or a recycled paper bag cost pass-through charge; or
- (2) Circumstances or situations unique to the retail establishment are such that compliance with the requirements of this chapter would deprive a person of a legally protected right.

(D) If a retail establishment requires an exemption beyond the initial exemption period, the retail establishment must re-apply prior to the end of the exemption period and must demonstrate continued undue hardship if it wishes to have the exemption extended. Extensions may only be granted for intervals not to exceed one year.

(E) An exemption application shall include all information necessary for the City to make its decision, including, but not limited to documentation showing the factual support for the claimed exemption. The City Manager or his or her designee may require the applicant to provide additional information to permit the City to determine facts regarding the exemption application.

(F) The City Council may by resolution establish a fee for exemption applications. The application fee shall be an amount sufficient to cover the costs of processing the exemption application.

#### **XXXX Enforcement and Notice of Violation**

(A) The City Manager, or his/her designee, may establish regulations or administrative procedures to take any and all actions reasonable and necessary to further the purposes of this chapter or to obtain compliance with this chapter, including, without limitation, performing inspections in accordance with applicable law of a retail establishment's premises to verify compliance.

(B) Any violation of any of the requirements of this chapter, or of any regulation or administrative procedure authorized pursuant to this chapter shall constitute an infraction.

(C) Each violation of this chapter shall be considered a separate offense.

(D) The remedies and penalties provided in this chapter are cumulative and not exclusive, and nothing in this chapter shall preclude the City from pursuing any other remedies. The City Attorney may seek legal, injunctive, or any other relief to enforce the provisions of this chapter and any regulation or administrative procedure developed pursuant hereto.

#### **XXXXX Administrative Remedies.**

(A) Any person violating, causing or maintaining a violation of any provision of this chapter may be issued an administrative citation assessing a civil fine as provided in this section. The procedures for the imposition, enforcement, collection, and administrative review of civil fines shall be in addition to, and not in lieu of, any criminal, civil or other legal remedy established by law and available to the City to address violations of this chapter.

(B) Upon a first violation of any provision of this chapter, the City Manager or his/her designee shall issue a written warning Notice of Violation to the offending retail establishment. The warning Notice of Violation shall specify the violation(s), a date by which the violation(s) must be ceased and abated, and the penalties in the event of future violations. If, after the specified correction period following the written warning, the violation is not ceased or abated, the City Manager or his/her designee may issue an administrative citation assessing fines in accordance with this section.

(C) Each separate violation following the issuance of a warning Notice of Violation shall be subject to the following administrative fines, which shall be cumulative with each day that a violation occurs constituting a separate violation:

- (1) A fine not exceeding one hundred dollars (\$100) for the first violation following the issuance of a warning notice.
- (2) A fine not exceeding two hundred dollars (\$200) for the second violation following the issuance of a warning notice.
- (3) A fine not exceeding five hundred (\$500) for the third and any subsequent violation that occurs following the issuance of a warning notice.

(D) Each administrative citation issued for a violation of this chapter shall at a minimum contain the information specified in chapter 1.08.080 of the Encinitas Municipal Code, Administrative Citations, and any person receiving an administrative citation may contest the citation, and shall be entitled to an administrative hearing, pursuant to the procedures set forth in that chapter.

#### **XXXXX No Conflict with Federal or State Law**

Nothing in this chapter is intended to or shall be interpreted as conflicting with any federal or state law or regulation.

**SECTION 3. Severability.** If any section, subsection, subdivision, paragraph, sentence, clause, phrase or portion of this Ordinance is, for any reason, held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, paragraph, sentence, clause, phrase and portion of this

Ordinance irrespective of the fact that one or more, sections, subsections, subdivisions, paragraphs, sentences, clauses, phrases or portions thereof may be declared invalid or unconstitutional To this end, the provisions of this Ordinance are declared severable.

**SECTION 4: Effective Date.**

(A) This Ordinance shall become effective and operative as to: Grocery stores, Pharmacies and City facilities six (6) months after its adoption by the City Council, and 2) all remaining affected Retail Establishments and Farmers' Markets, within twelve (12) months after its adoption by the City Council.

(B) Within fifteen (15) days of the date of adoption of this Ordinance, the City Clerk shall post a copy of said Ordinance in places designated for such posting and shall certify to the same. The City Clerk shall certify the passage of this Ordinance and shall cause the same to be published as required by law.

INTRODUCTED AND FIRST READ at a regular meeting of the City Council of the City of Encinitas, California, on the \_\_\_\_\_ day of \_\_\_\_\_, 201X.

AYES:  
NOES:  
ABSTAIN  
ABSENT:

\_\_\_\_\_  
Mayor

APPROVED AS TO FORM:

ATTEST:

\_\_\_\_\_

\_\_\_\_\_



## Attachment B

### Rincon Consultants, Inc.

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www.rinconconsultants.com

April 29, 2014  
Job No. 13-01649

Richard Phillips, Deputy City Manager  
City of Encinitas  
505 S. Vulcan Ave.  
Encinitas, CA 92024  
[Rphillip@encinitasca.gov](mailto:Rphillip@encinitasca.gov)

**Subject: Encinitas Bag Ordinance: Bag Use Estimates, Air Quality, GHG and Utilities Technical Analysis**

Dear Mr. Phillips:

Rincon Consultants, Inc. is pleased to submit this memorandum that includes bag use estimates and technical analysis to support the CEQA documentation to be prepared by the City that will examine the City of Encinitas' proposed Disposable Bag Reduction Ordinance. This memo includes bag use estimates (both existing and proposed) for the Project Description and the technical impact analysis related to air quality, GHG/climate change, and utilities including the quantification of emissions, water/wastewater, and solid waste. Rincon's spreadsheets and modeling results are also provided in the appendix in a format such that the city will be able include all relevant documentation as part of the appendix of the CEQA document. The following also provides a summary of the results and our methodology for each impact.

### **Technical Analysis**

#### ***Bag Use Estimates***

Existing Bag Use. Statewide, almost 20 billion single-use plastic bags (or approximately 527 bags per person) are consumed annually in California (City of Sacramento Bag Ordinance Draft EIR, March 2014; San Mateo County Final EIR, October 2012; Green Cities California MEA, 2010; and CIWMB, 2007). Based on this per capita bag, retail customers within the City of Encinitas currently use about 31.87 million single-use plastic bags per year (see Table 1).

The customer base of retailers located within Encinitas may include residents of communities located within or outside of the City (i.e., visitors who live outside Encinitas, but travel to shop within the City). Likewise, Encinitas residents may shop outside of the City. In order to estimate the current number of single-use plastic bags used per year in Encinitas, the CEQA document applies the rate discussed above (527 single-use plastic



bags used per person/per year) to the number of residents in the City. This estimate is considered reasonable and conservative for the purposes of this analysis.

**Table 1**  
**Estimated Single-Use Plastic Bag Use in Encinitas**

Area	Population <sup>1</sup>	Number of single-use plastic bags Used per Person <sup>2</sup>	Total Bags Used Annually
Encinitas	60,482	527	31,874,014

<sup>1</sup> SANDAG 2013 Demographic & Socio Economic Estimates

<sup>2</sup> Based on annual statewide estimates of plastic bag use from the CIWMB (2007) - 527 bags per person = 20 billion bags used statewide per year (CIWMB, 2007) / 37,966,000 people statewide (California's current population according to the State Department of Finance, 2013).

**Proposed Bag Use.** The analysis in this CEQA document assumes that as a result of the Proposed Ordinance, which would require a \$0.10 fee on recycled paper bags and encourage the use of reusable bags, approximately 95% of the volume of single-use plastic bags currently used in Encinitas (31,874,014 single-use plastic bags per year) would be replaced by recycled paper bags (approximately 30%) and reusable bags (approximately 65%), as shown in Table 2. It is assumed that the number of single-use plastic bags used in the City annually would be 5% of the number of single-use plastic bags currently used as the Proposed Ordinance does not apply to some retailers who distribute single-use plastic bags (e.g., restaurants).

It is also assumed that approximately 9,562,204 recycled paper bags would replace approximately 30% of the single-use plastic bags currently used in Encinitas. This 1:1 replacement ratio is considered conservative, because the volume of recycled paper bags (20.48 liters) is generally equal to approximately 150% of the volume of a single-use plastic bag (14 liters), such that fewer recycled paper bags would ultimately be needed to carry the same number of items.

In order to estimate the number of reusable bags that would replace 20,718,100 single-use plastic bags (65% of the existing number of single-use plastic bags used annually in Encinitas), it is assumed that a reusable bag would be used by a customer once per week for one year (52 times) before the bag is either thrown away or recycled (if it is made from recyclable materials). According to the March 2010 Master Environmental Assessment [MEA] on Single-use and Reusable Bags (Green Cities California, March 2010), a reusable bag may be used 100 times or more; therefore, the estimate of 52 uses for reusable bags is conservative. For Encinitas, 20,718,100 single-use plastic bags currently used in the city would be removed as a result of the Proposed Ordinance and would be replaced by 398,425 reusable bags that are assumed to be used 52 times. This amounts to an estimated 6.6 reusable bags per person per year based on an Encinitas population of 60,482. This analysis assumes that the approximately 31.87 million single-use plastic bags, currently used in Encinitas annually, would be reduced to approximately 24.3 million total bags as a result of the Proposed Ordinance.

Furthermore, it is estimated that 40% of existing single-use plastic bags are reused once for uses such as, but not limited to, picking up after pets or as garbage bags for small



garbage bins like those found in bathrooms (“Life cycle assessment of supermarket carrier bags,” United Kingdom Environment Agency, 2011). Thus, this analysis assumes a 40% replacement rate for single-use plastic bags. Though some replacement bags may be smaller than single-use plastic bags (i.e., pet waste bags) and some replacement bags may be larger than single-use plastic bags (i.e., garbage bin liners), this analysis assumes a 1:1 replacement ratio. Therefore, the purchase of new bags to replace secondary plastic bag uses is estimated to result in an additional 12,749,606 single-use plastic bags being purchased. In total, it is assumed that 14,343,307 single-use plastic bags (1,593,701 remaining bags + 12,749,606 replacement bags) would continue to be used annually within Encinitas after implementation of the Proposed Ordinance, as shown in Table 2.

**Table 2**  
**Bag Use Post-Ordinance and Replacement Assumptions**

Type of Bag	Replacement Assumption	Explanation	Bags Used Post-Ordinance Adoption
Single-Use Plastic	5% remaining <sup>1</sup>	Because the Proposed Ordinance does not apply to all retailers (e.g. restaurants), some single-use plastic bags would remain in circulation.	1,593,701
Recycled Paper	30% <sup>2</sup>	Although the volume of a recycled paper bag is generally 150% of the volume of a single-use plastic bag, such that fewer recycled paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.	9,562,204
Reusable	65% <sup>2</sup>	Although a reusable bag is designed to be used up to hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.	398,425
Replacement Bags for Secondary Plastic Bag Uses	40% of initial plastic bag use <sup>3</sup>	Because some single-use plastic bags do get reused another time for garbage bags or other uses, individuals may purchase new plastic bags for this purpose.	12,749,606
<b>Total Bag Use After Ordinance</b>			<b>24,303,936</b>
<b>Total Single-Use Plastic Bag Use After Ordinance</b>			<b>14,343,307</b>
<i>Total Reduction in Single-use Plastic Bags</i>			<i>17,530,708</i>
<i>% Reduction in Single-use Plastic Bags</i>			<i>55%</i>
<i>Total reduction in Carryout Bags</i>			<i>7,570,078</i>
<i>% Reduction in Carryout Bags</i>			<i>24%</i>

<sup>1</sup> Rate utilized in the City of Huntington Beach Draft EIR, Draft EIR, SCH # 2011111053, February 2012

<sup>2</sup> Rates utilized in the City of Santa Monica Nexus Study, March 2010.

<sup>3</sup> Rate determined by United Kingdom Environment Agency Study “Lifecycle assessment of supermarket carrier bags: review of the bags available in 2006”.



### Utilities and Service Systems

Water Use. The Proposed Ordinance would increase the use of recycled paper bags and reusable bags as a result of prohibiting the distribution of single-use plastic bags by retailers and requiring a mandatory charge for recycled paper bags. No known manufacturers of carryout bags are located within the City of Encinitas. Therefore, manufacturing facilities would not utilize the water supplies of the City.

In addition to water use from the manufacture of recycled paper and reusable bags, the Proposed Ordinance may result in increased water use as reusable bags would be machine washable or made from a material that can be cleaned or disinfected, as required by the Proposed Ordinance. Periodic washing of reusable bags for hygienic purposes would be the responsibility of the individual customers. It is assumed that individuals would generally continue to practice good hygiene and would wash reusable bags on a regular basis. Washing reusable bags used within Encinitas would utilize local water supplies. It is anticipated that most reusable bag users would simply include the bags in wash loads that would occur with or without the bags. Nevertheless, in order to provide a conservative estimate the Proposed Ordinance’s impact with respect to water demand, this analysis assumes that reusable bags would be washed separately. This analysis assumes that all reusable bags would be machine washed. Assuming that all new reusable bags require monthly cleaning in a washing machine, the total increase in water demand (as shown in Table 3) would be approximately 17.8 acre-feet per year (AFY). Based on the existing water supplies (excess supplies of 5,395 AFY) (Email communication, Blair Knoll, San Dieguito Water District, April 21, 2014), the increase in water use associated with the Proposed Ordinance would not exceed the city’s existing water supplies requiring the need for expanded facilities or new water entitlements.

**Table 3**  
**Water Use From Reusable Bag Cleaning**

Washing Method	# of Additional Reusable Bags from Proposed Ordinance that Require Washing	# of Loads per Year	Gallons of Water per Wash Load	Total Water Use (gallons per year)	Total Water Use (AFY)	Total Water Use (gallons per day)
Machine Washed <sup>1</sup>	199,213	125,818 <sup>2</sup>	27 <sup>3</sup>	3,397,099	10.4	9,307
Hand Washed <sup>1</sup>	199,213	-	1 <sup>4</sup>	2,390,551	7.3	6,549
<b>TOTAL</b>				<b>5,787,650</b>	<b>17.8</b>	<b>15,857</b>

<sup>1</sup> Assumes half of reusable bags are machine washed and half hand washed. Assumes bags washed monthly.

<sup>2</sup> Assumes 19 bags per wash load (based on average washer capacity of 8 pounds per load and 6.8 ounces per reusable bag as measured on 8/10/2010 by Rincon Consultants, Inc.)

<sup>3</sup> Source: California Energy Commission: Consumer Energy Center, 2014, <http://www.consumerenergycenter.org/residential/appliances/washers.html>

<sup>4</sup> Assumes one gallon of water used to hand wash one bag

Similarly, other adopted and pending ordinances in the region could incrementally increase water use associated with washing of reusable bags for hygienic purposes. Other agencies including the cities of Solana Beach and San Diego have either adopted or are considering such ordinances. However, based on the incremental water use associated with the Proposed Ordinance (increase of approximately 17.8 AFY in



Encinitas), the other ordinances are not expected to generate an increase in water that would exceed water supplies in their respective regions. Moreover, ordinances within individual communities would not have additive effects in conjunction with ordinances within different watersheds and reliant on different water supplies. Therefore, cumulative water impacts would not be significant.

Wastewater. Although the Proposed Ordinance would not result in additional sewer connections or an increase in the Encinitas population, it may incrementally increase water use associated with washing of reusable bags as described above and, therefore, may incrementally increase wastewater generation.

The manufacture of all types of carryout bags produces wastewater; however, because no known manufacturing facilities are located within the City of Encinitas, the use of single-use plastic bags does not currently affect wastewater conveyance or treatment facilities serving Encinitas and the projected increased use of recycled paper bags and reusable bags as a result of the Proposed Ordinance would not affect wastewater conveyance facilities or local wastewater treatment plants.

The use of reusable bags within Encinitas would, however, require periodic washing of bags for hygienic purposes. Assuming that 100% of the water used to wash reusable bags would become wastewater, approximately 15,857 gallons per day would enter the sewer system and require treatment at either the Encina Wastewater Authority in Carlsbad or the San Elijo Water Reclamation Facility in Cardiff. These facilities have a remaining capacity of 0.75 million gallons per day (mgd) and 1.15 mgd respectively (Email communication, Bill Wilson, April 16, 2014). The increase of wastewater associated with the Proposed Ordinance (approximately 15,857 gallons per day) would not exceed the remaining capacity at these facilities.

Similar to the Proposed Ordinance, other adopted and pending carryout bag ordinances in the region could incrementally increase wastewater associated with washing of reusable bags. Other agencies including the cities of Solana Beach and San Diego have either adopted or are considering such ordinances. However, based on the incremental increase in wastewater associated with the Proposed Ordinance (approximately 15,857 gallons per day), the other ordinances are not expected to generate an increase in wastewater that would exceed the capacity of a wastewater treatment plant or require new or expanded facilities within the region. Moreover, ordinances within individual communities would not have additive effects in conjunction with ordinances in other communities that are served by different wastewater collection and treatment systems. Therefore, cumulative wastewater impacts would not be significant.

Solid Waste. Various studies have estimated solid waste rates related to the different types of bags (single-use plastic, recycled paper or reusable bags) to determine a per bag solid waste rate. Assuming 7.10% of single-use plastic bags are recycled in the United States and 37.6% of recycled paper bags are recycled (EPA, 2012) and using the Ecobilan data, it was estimated that a single-use plastic bag would generate 0.0069 kilograms (kg) of solid waste per bag, while a recycled paper bag would generate 0.0172 kg of waste per bag. In terms of reusable bags, cotton bags are assumed to be the



heaviest type of reusable bags. Based on data from the EPA (2012) a reusable cotton bag would generate 0.2 kg of waste per bag. Similarly, using the Boustead data and assuming the EPA recycling rates discussed above (EPA, 2012), it is estimated that single-use plastic bags would produce 0.0044 kg waste per bag, while a recycled paper bag would generate 0.0212 kg of waste per bag. The Boustead data does not estimate the solid waste from reusable bags, however, in order to incorporate reusable bags in this solid waste estimate, the same assumptions for reusable bags under the Ecobilan data above is used for the Boustead data (assumed that a reusable cotton bag would generate 0.2 kg of waste per bag).

Tables 4 and 5 estimate the anticipated change in solid waste generation that would result from the Proposed Ordinance using the Ecobilan (Table 4) and the Boustead (5) data.

As shown in Table 4, based on the Ecobilan data and using an assumption that all reusable bags are made of cotton and would be sent to a landfill, the Proposed Ordinance would result in a net increase of approximately 137 tons of solid waste per year. As shown in Table 5, based on the Boustead data and assuming that all reusable bags are made of cotton and would be disposed of each year, there would be an increase of approximately 227 tons of solid waste per year. The Boustead study shows single-use plastic bag waste as lower in weight and recycled paper bag waste as higher in weight than the Ecobilan data, thus resulting in a higher net increase in solid waste generation.

**Table 4**  
**Solid Waste Generation - Ecobilan**

	Existing Plastic Bag Use	Proposed Plastic Bag Use	Proposed Paper Bag Use	Proposed Reusable Bag Use	Proposed Replacement Bag Use
kg waste per 9000 liters groceries (with recycling)	4.42	4.42	7.58	--	4.42
kg waste per bag per day	0.0069	0.0069	0.0172	0.2	0.0069
kg waste in Encinitas per day	600.69	30.03	451.60	218.32	240.28
Tons per day	0.66	0.03	0.50	0.24	0.26
Tons per year	241.68	12.08	181.70	87.84	96.67
<b>Total Increase from Ordinance (tons/day)</b>					<b>1.04</b>
<b>Total Increase from Ordinance (tons/year)</b>					<b>378.29</b>
<b>Net increase from Ordinance (tons/day)</b>					<b>0.37</b>
<b>Net Increase from Ordinance (tons/year)</b>					<b>136.61</b>

Source: Ecobilan, February 2004

Note: A conservative assumption that all reusable bags would be made of cotton and would be disposed in a landfill after one year is included in this analysis.



**Table 5  
Solid Waste Generation - Boustead**

	Existing Plastic Bag Use	Proposed Plastic Bag Use	Proposed Paper Bag Use	Proposed Reusable Bag Use	Proposed Replacement Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.54	6.54	21.15	--	6.54
kg waste per bag per day	0.0044	0.0044	0.0212	0.2	0.0044
kg waste in Encinitas per day	380.75	19.04	554.18	218.32	152.30
Tons per day	0.42	0.02	0.61	0.24	0.17
Tons per year	153.19	7.66	222.97	87.84	61.28
<b>Total Increase from Ordinance (tons/day)</b>					<b>1.04</b>
<b>Total Increase from Ordinance (tons/year)</b>					<b>379.74</b>
<b>Net Increase from Ordinance (tons/day)</b>					<b>0.62</b>
<b>Net Increase from Ordinance (tons/year)</b>					<b>226.55</b>

*Source: Boustead Consulting and Associates Ltd. 2007. Note: Boustead data does not estimate solid waste from reusable bags.*

*Note: Since Boustead does not estimate solid waste from reusable bags, a conservative assumption that all reusable carryout bags would be made of cotton is included in this analysis.*

The above estimates represent a conservative scenario that assumes approximately 62% of all recycled paper bags would be deposited in a landfill even though Encinitas has a higher recycling rate of 56% (CalRecycle, 2013) than the EPA rate of 37.6%. In addition, this analysis conservatively assumes that all reusable bags would be cotton bags (the heaviest bag available) and that each reusable bag purchased per year would be deposited in a landfill within that year. In reality, Encinitas residents would likely recycle paper bags at a higher rate than the 37.6% assumed in this analysis based on the City's high diversion rate and would use various types of reusable bags, many of which weigh less than cotton bags. Finally, because the Proposed Ordinance includes requirement that reusable bags be designed for a minimum of 125 uses, it is likely that many reusable bags would be utilized for more than one year so would not be disposed of annually. Nevertheless, based on these conservative scenarios, the increase in solid waste would range from an estimated 0.375 to 0.62 tons per day. The Sycamore Canyon Landfill, which serves Encinitas, has a remaining daily capacity of approximately 765 to 965 tons per day (Email communication, Neil Mohr, General Manager, Sycamore Landfill, April 17, 2014). Thus the increase in solid waste associated with the Proposed Ordinance (up to 0.62 tons per day) would not exceed the daily capacity of any of the landfills in the region.

Similar to the Proposed Ordinance, other adopted and pending ordinances in the region could incrementally increase solid waste associated with the use of bags. Other agencies including the cities of Solana Beach and San Diego have either adopted or are considering such ordinances. An incremental increase in regional solid waste generation could occur. Based on the increase in solid waste associated with the Proposed Ordinance (estimated at between 0.375 and 0.62 tons per day), other ordinances are not expected to generate an increase in solid waste that would exceed



the capacity of a regional landfill or require new or expanded facilities within the region. Moreover, ordinances within individual communities would not have additive effects in conjunction with ordinances in other communities that are served by different solid waste disposal facilities. Therefore, cumulative solid waste impacts would not be significant.

### ***Air Quality***

*Setting.* Carryout bags can affect air quality in two ways: through emissions associated with manufacturing processes and through emissions associated with truck trips for the delivery of carryout bags to retailers. Each is summarized below.

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

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

The above statistics use the LDPE carryout bag as a representation of reusable bags in evaluating air quality impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential air pollutant emissions within the United States. However, the overall emissions from all types of reusable bags are expected to be lower than plastic and recycled paper carryout bags because reusable bags are used multiple times. This analysis assumes a total of 52 uses based on one use per week and a one-year lifespan.

Table 6 estimates the existing and post-Ordinance air pollutant emissions from bag manufacture and transport that contribute to the development of ground level ozone and



atmospheric acidification. The shift away from single-use plastic bags and toward use of recycled paper and reusable bags within Encinitas would reduce emissions that contribute to ground level ozone by approximately 104 kg per year, but would increase emissions that contribute to atmospheric acidification by approximately 1,991 kg per year. This increase related to atmospheric acidification is primarily related to the increased number of recycled paper bags and replacement bags for secondary plastic bag uses that is anticipated to result from the Proposed Ordinance.

**Table 6**  
**Proposed Air Pollution Emissions by Bag Type**

Carryout Bag Type	Proposed # of Bags Used per Year	Ozone Emissions (kg) per 1,000 bags <sup>1,2</sup>	AA Emissions (kg) per 1,000 bags <sup>1,3</sup>	Proposed Ozone Emissions per year (kg) <sup>4</sup>	Proposed AA Emissions per year (kg) <sup>4</sup>
Single-Use Plastic	1,593,701	0.023	1.084	37	1,728
Recycled Paper	9,562,204	0.03	2.06	287	19,698
Reusable	398,425	0.032	3.252	13	1,296
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	0.023	1.084	293	13,821
<b>Total Proposed Emissions in Encinitas</b>				<b>630</b>	<b>36,542</b>
<b>Existing Emissions in Encinitas</b>				<b>733</b>	<b>34,551</b>
<b>Net Change (Total minus Existing)</b>				<b>(104)</b>	<b>1,991</b>
<b>% Change</b>				<b>(14%)</b>	<b>6%</b>

( ) denotes subtraction

<sup>1</sup> Impact rate per bag as stated in Stephen L. Joseph, 2010; Ecobilan, 2004; FRIDGE, 2002; and Green Cities California MEA, 2010; Santa Monica Single-use Carryout Bag Ordinance Final EIR, January 2011.

<sup>2</sup> Emissions per 1,000 bags from Ecobilan, 2004; Santa Monica Single-use Carryout Bag Ordinance Final EIR, January 2011.

<sup>3</sup> Emissions per 1,000 bags from FRIDGE, 2002 and Green Cities California MEA, 2010; Santa Monica Single-use Carryout Bag Ordinance Final EIR, January 2011.

<sup>4</sup> Emissions per year = (Emissions in kg per 1,000 bags rate x number of bags used per year / 1,000)

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

As mentioned previously, emissions associated with the manufacture of carryout bags would not occur within Encinitas because no known manufacturing facilities are located within Encinitas, nor are there any known manufacturing facilities located within the air basin. Nevertheless, as discussed in the Setting, air pollutant emissions from manufacturing facilities are regulated under the Clean Air Act and, if located within the air basin, would be subject to the requirements of the San Diego County Air Pollution Control District (SDCAPCD). Both recycled paper bag manufacturing facilities and



reusable bag manufacturing facilities that emit any criteria pollutant or hazardous air pollutant (HAP) at levels equal to or greater than the Major Source Thresholds (MST) of the local air quality management district would need to obtain and maintain compliance with a Title V permit. Adherence to permit requirements would ensure that a manufacturing facility would not violate any air quality standard. Manufacturing facilities would also be required to obtain equipment permits for emission sources through the local air quality management district in order to ensure 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, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant.

Emissions from Truck Trips. Delivery trucks that transport carryout bags from manufacturers or distributors to the local retailers in Encinitas also contribute air emissions locally and regionally. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material (ARB “Diesel & Health Research”, 2011). The visible emissions in diesel exhaust are particulate matter, or PM, which are small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures (“hot-spots”).

Long-term post-Ordinance emissions would include those emissions associated with truck trips to deliver carryout bags (single-use plastic, recycled paper and reusable) from manufacturing facilities or distributors to Encinitas retail establishments. Table 7 shows the change in truck trips (a net increase of approximately 0.11 truck trips per day) as a result of the Proposed Ordinance.

**Table 7 Estimated Truck Trips per Day  
Following Implementation of the Proposed Ordinance**

<b>Carryout Bag Type</b>	<b>Proposed # of Bags Used per Year</b>	<b>Number of Bags per Truck Load<sup>1</sup></b>	<b>Proposed Truck Trips Per Year<sup>2</sup></b>	<b>Proposed Truck Trips per Day</b>
Single-Use Plastic	1,593,701	2,080,000	1	0.00
Recycled Paper	9,562,204	217,665	44	0.12
Reusable	398,425	108,862	4	0.01
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	2,080,000	6	0.02
<b>Total Proposed Truck Trips for Carryout Bags</b>			<b>54</b>	<b>0.15</b>
<b>Existing Truck Trips for Plastic Bags</b>			<b>15</b>	<b>0.04</b>
<b>Net New Truck Trips</b>			<b>39</b>	<b>0.11</b>

<sup>1</sup> City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.

<sup>2</sup> (Number of Carryout Bags Per Year) / (Number of Carryout Bags per Truck) = Truck Trips per Year



The URBEMIS computer program was used to calculate mobile emissions resulting from the number of trips generated by the Proposed Ordinance. Emissions associated with such truck trips are summarized in Table 8 and would not exceed any SDCAPCD thresholds.

**Table 8**  
**Mobile Emissions - Proposed Ordinance**

	Emissions (lbs/day)					
	CO	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>x</sub>	ROG	PM <sub>2.5</sub>
Mobile Emissions: Proposed Ordinance <sup>1</sup>	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Thresholds (lbs/day) <sup>2</sup>	550	250	100	250	N/A	N/A
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>N/A</b>	<b>N/A</b>

<sup>1</sup> URBEMIS version 9.2.4 calculations for Truck Trips

<sup>2</sup> San Diego APCD Rule 20.2

Other adopted and pending carryout bag ordinances in the region including those in the cities of Solana Beach and San Diego would continue to reduce the number of single-use plastic bags used in the region and promote a shift toward the use of reusable bags. Similar to the Proposed Ordinance, such ordinances would be expected to generally reduce the overall number of carryout bags manufactured. Existing and future manufacturing facilities would continue to be subject to federal and state air pollution regulations (see the Setting for discussion of applicable regulations). Similar to the Proposed Ordinance, other adopted and pending ordinances would be expected to incrementally reduce ozone emissions. Adopted and pending ordinances may increase atmospheric acidification emissions associated with recycled paper bag use, though this would depend on the mandatory charge for recycled paper bags associated with each ordinance. For ordinances with higher fees on recycled paper bags (greater than \$0.10), more single-use plastic bags would be replaced by reusable bags rather than recycled paper bags and the associated atmospheric acidification emissions would be reduced compared to existing conditions. Nevertheless, with adherence to existing rules and regulations regarding air pollution emissions from carryout bag manufacturing facilities (i.e.: EPA Title V permit program, local air district regulations) impacts associated with carryout bag manufacturing would be less than significant and not cumulative considerable.

Similar to the Proposed Ordinance, other adopted and pending ordinances would also be expected to incrementally change the number of truck trips associated with carryout bag delivery and associated emissions. However, based on the incremental increase in air pollutant emissions associated with the Proposed Ordinance (increase of less than one tenth of a pound per day for each criteria pollutant), the other ordinances are not expected to generate a cumulative increase in emissions that would exceed San Diego County Air Pollution Control District (SDAPCD) thresholds or adversely affect regional air quality. Moreover, the increase in truck trips to deliver reusable bags would be at least partially offset by a reduction in trips to deliver single-use plastic bags. Therefore, cumulative air quality impacts with respect to truck trips associated with carryout bag



delivery would not be significant.

### **Greenhouse Gas Emissions**

Through manufacture, transport, and disposal, each single-use paper bag generates 2.97 times more GHG emissions than the manufacture, transport, and disposal of a single-use plastic bag. If used only once, the manufacture, use and disposal of a reusable cotton carryout bag results in 131 times the GHG emissions of a single use HDPE plastic bag (Environment Agency, 2011). On a per bag basis, single-use plastic bags have less impact than single-use paper and reusable bags; however, reusable bags are intended to be used multiple times. With reuse of carryout bags, the total carryout bags that would be manufactured, transported and disposed of would be reduced.

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

As discussed above in the Utilities discussion, it is anticipated that most reusable carryout bag users would simply include reusable bags in wash loads that would occur with or without the bags. Nevertheless, in order to provide a conservative estimate for impacts related to energy usage resulting from the Proposed Ordinance, this analysis assumes that the demand for energy would increase in order to maintain the hygiene of reusable bags, where bags are cleaned by washing machine and clothes dryers. Assuming that all reusable bags are made of cotton and that all of them are machine washed in separate loads for just reusable bags, this would create an additional 251,637 loads of laundry per year.

Table 9 provides an estimate of GHG emissions that would result from the change in the makeup of carryout bags in Encinitas resulting from implementation of the Proposed Ordinance. As shown in Table 9, although the total number of carryout bags would be reduced by approximately 7.5 million bags per year, the projected increase in the use of recycled paper and reusable bags is expected to increase overall GHG emissions associated with the manufacture, transport, and disposal of carryout bags by approximately 0.06 CO<sub>2</sub>E per person per year. Washing and drying of the additional reusable bags resulting from the proposed ordinance would also increase greenhouse gas emissions by approximately 0.0038 metric tons CO<sub>2</sub>E per person per year.



**Table 9**  
**Proposed GHG Emissions by Bag Type**

Manufacture, Use and Disposal					
Carryout Bag Type	Proposed # of Bags Used per Year	GHG Impact Rate (metric tons CO <sub>2</sub> E)		CO <sub>2</sub> E per year (metric tons)	CO <sub>2</sub> E per person (metric tons) <sup>4</sup>
Single-Use Plastic	1,593,701	0.04 per 1,500 bags <sup>1</sup>		42	0.0007
Recycled Paper	9,562,204	0.1188 per 1,000 bags <sup>2</sup>		1,136	0.0188
Reusable	398,425	5.24 per 1,000 bags <sup>3</sup>		2,088	0.0345
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	0.04 per 1,500 bags <sup>1</sup>		340	0.0056
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				3,606	0.0596
Washing					
Carryout Bag Type	# of Loads per Year <sup>5</sup>	Electricity Use Per Load (kWh) <sup>6</sup>	Total Electricity Use Per Year (kWh)	CO <sub>2</sub> E per year (metric tons) <sup>7</sup>	CO <sub>2</sub> E per person (metric tons)
Reusable	125,818	3.825	481,256	113	0.0019
<i>Subtotal (Washing)</i>				113	0.0019
<b>Total GHG Emissions from Proposed Ordinance</b>				<b>3,720</b>	<b>0.0615</b>
<b>Existing GHG Emissions</b>				<b>850</b>	<b>0.0141</b>
<b>Net Change (Total minus Existing)</b>				<b>2,870</b>	<b>0.0474</b>

CO<sub>2</sub>E = Carbon Dioxide Equivalent units

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

<sup>2</sup> 10% reduction (from a rate of 3.3 to 2.97) based on the Scottish Report (AEA Technology, 2005) and the Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

<sup>3</sup> Based on Environment Agency – United Kingdom government report, 2011.

<sup>4</sup> Emissions per person are divided by the existing population in Encinitas

<sup>5</sup> Assumes that have of all reusable bags would be machine washed. Assumes that each bag is washed once a month. Assumes 19 bags per load based on an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.).

<sup>6</sup> US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

<sup>7</sup> Assuming Electricity = 0.524 pounds CO<sub>2</sub> per kWh and 2,204.6 pounds per metric ton (PG&E, 2013)

Based on the conservative assumptions described above, implementation of the Proposed Ordinance would result in a net increase (minus the existing GHG emissions from plastic bag use) of approximately 2,870 metric tons CO<sub>2</sub>E per year within Encinitas. This would exceed the City's threshold of approximately 900 metric tons CO<sub>2</sub>E per year. This estimate conservatively assumes that all reusable bags would be cotton bags and that reusable bags are used 52 times per year; thus the actual GHG emissions may be less.

Other adopted and pending carryout bag ordinances in the region including those in the cities of Solana Beach and San Diego would continue to reduce the amount of single-use plastic bags, and promote a shift toward reusable bags. Similar to the Proposed Ordinance, such ordinances would be expected to generally reduce the overall number of bags manufactured. However, similar to the Proposed Ordinance, other adopted and



pending ordinances could incrementally change the GHG emissions associated with bag manufacturing, transportation and disposal. Based on the incremental increase in emissions associated with the Proposed Ordinance, the other ordinances are also expected to generate increases in GHG emissions. For these reasons, the project's increase of GHG emissions along with other ordinances in the region would be cumulatively considerable.

Sincerely,  
**RINCON CONSULTANTS, INC.**

Matt Maddox, MESM  
Senior Program Manager

Joe Power, AICP  
Principal



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## **Appendix**

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### *Bag Use Calculations and Modeling Results*



## EXISTING AND PROPOSED BAG USE

**Table 1**  
**Estimated Single-Use Plastic Bag Use in Encinitas**

Area	Population [1]	Number of single-use plastic bags Used per Person [2]	Total Bags Used Annually
Encinitas	60,482	527	31,874,014

[1] SANDAG 2013 Demographic & Socio Economic Estimates

[2] Based on annual statewide estimates of plastic bag use from the CIWMB (2007) - 527 bags per person = 20 billion bags used statewide per year (CIWMB, 2007) / 37,966,000 people statewide (California's current population according to the State Department of Finance, 2013).

**Table 2**  
**Bag Use Post-Ordinance and Replacement Assumptions**

Type of Bag	Replacement Assumption	Explanation	Bags Used Post-Ordinance Adoption
Single-Use Plastic	5% remaining [1]	Because the Proposed Ordinance does not apply to all retailers (e.g. restaurants), some single-use plastic bags would remain in circulation.	1,593,701
Recycled Paper	30% [2]	Although the volume of a recycled paper bag is generally 150% of the volume of a single-use plastic bag, such that fewer recycled paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.	9,562,204
Reusable	65% [2]	Although a reusable bag is designed to be used up to hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.	398,425
Replacement Bags for Secondary Plastic Bag Uses	40% of initial plastic bag use [3]	Because some single-use plastic bags do get reused another time for garbage bags or other uses, individuals may purchase new plastic bags for this purpose.	12,749,606
<b>Total Bag Use After Ordinance</b>			<b>24,303,936</b>
<b>Total Single-Use Plastic Bag Use After Ordinance</b>			<b>14,343,306</b>
<b>Total Reduction in Single-use Plastic Bags</b>			<b>17,530,708</b>
<b>% Reduction in Single-use Plastic Bags</b>			<b>55%</b>
<b>Total reduction in Carryout Bags</b>			<b>7,570,078</b>
<b>% Reduction in Carryout Bags</b>			<b>24%</b>

[1] Rate utilized in the City of Huntington Beach Draft EIR, Draft EIR, SCH # 2011111053, February 2012

[2] Rates utilized in the City of Santa Monica Nexus Study, March 2010.

[3] Rate determined by United Kingdom Environment Agency Study "Lifecycle assessment of supermarket carrier bags:

## UTILITIES

Conversions/Assumptions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
Gallons to acre-feet	3.06888E-06
Plastic Bag Size (liters)	14
Recyclable Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37

Existing Conditions	
Number of plastic bags used per year	31,874,014
Number of plastic bags used per day	87,326

2012 Recycle Rate	
plastic bags (HDPE)	7.10%
paper bags	37.60%

Source: EPA, *Municipal Solid Waste Generation, Recycling, and Disposal in the US, Tables and Figures for 2012*,  
[http://www.epa.gov/waste/nonhaz/municipal/pubs/2012\\_msw\\_dat\\_tbls.pdf](http://www.epa.gov/waste/nonhaz/municipal/pubs/2012_msw_dat_tbls.pdf)

Proposed Ordinance	Per Day	Per Year
Number of plastic bags still in use (5% of existing)	4,366	1,593,701
Number of paper bags per day with 30% conversion	26,198	9,562,204
Number of reusable bags per day with 65% conversion	1,092	398,425
40% replacement plastic bags	34,930	12,749,606

**Table 3**  
**Water Use From Reusable Bag Cleaning**

Washing Method [1]	# of Additional Reusable Bags from Proposed Ordinance that Require Washing	# of Loads per Year	Gallons of Water per Wash Load [3]	Total Water Use (gallons per year)	Total Water Use (AFY)	Total Water Use (gallons per day)
Machine Washed [2]	199,213	125,818	27	3,397,099	10.4	9,307
Hand Washed	199,213	N/A	1	2,390,551	7.3	6,549
<b>TOTAL</b>				<b>5,787,650</b>	<b>17.8</b>	<b>15,857</b>

[1] Assumes half of reusable bags are machine washed and half hand washed. Assumes bags washed monthly.

[2] Assumes 19 bags per wash load (based on average washer capacity of 8 pounds per load and 6.8 ounces per reusable bag as measured on 8/10/2010 by Rincon Consultants, Inc.)

[3] California Energy Commission: Consumer Energy Center, 2014, <http://www.consumerenergycenter.org/residential/appliances/washers.html>

**Table 4  
Solid Waste Generation - Ecobilan**

	Existing Plastic Bag Use	Proposed Plastic Bag Use	Proposed Paper Bag Use	Proposed Reusable Bag Use	Proposed Replacement Bag Use
kg waste per 9000 liters groceries (w/EPA recycling)	4.42	4.42	7.58	--	4.42
kg waste per bag per day	0.0069	0.0069	0.0172	0.2	0.0069
kg waste in Encinitas per day	600.69	30.03	451.60	218.32	240.28
Tons per day	0.66	0.03	0.50	0.24	0.26
Tons per year	241.68	12.08	181.70	87.84	96.67
<b>Total Increase from Ordinance (tons/day)</b>	<b>1.04</b>				
<b>Total Increase from Ordinance (tons/year)</b>	<b>378.29</b>				
<b>Net increase from Ordinance (tons/day)</b>	<b>0.37</b>				
<b>Net Increase from Ordinance (tons/year)</b>	<b>136.61</b>				

Source: Ecobilan, February 2004

A conservative assumption that all reusable bags would be made of cotton and would be disposed in a landfill after one year is included in this analysis.

**Table 5  
Solid Waste Generation - Boustead**

	Existing Plastic Bag Use	Proposed Plastic Bag Use	Proposed Paper Bag Use	Proposed Reusable Bag Use	Proposed Replacement Bag Use
kg waste per 1000 paper bags (1500 plastic bags)	6.54	6.54	21.15	--	6.54
kg waste per bag per day	0.0044	0.0044	0.0212	0.2	0.0044
kg waste in Encinitas per day	380.75	19.04	554.18	218.32	152.30
Tons per day	0.42	0.02	0.61	0.24	0.17
Tons per year	153.19	7.66	222.97	87.84	61.28
<b>Total Increase from Ordinance (tons/day)</b>	<b>1.04</b>				
<b>Total Increase from Ordinance (tons/year)</b>	<b>379.74</b>				
<b>Net Increase from Ordinance (tons/day)</b>	<b>0.62</b>				
<b>Net Increase from Ordinance (tons/year)</b>	<b>226.55</b>				

Source: Boustead Consulting and Associates Ltd. 2007. Note: Boustead data does not estimate solid waste from reusable bags.

Since Boustead does not estimate solid waste from reusable bags, a conservative assumption that all reusable carryout bags would be made of cotton is included in this analysis.

## AIR QUALITY

### Existing Air Pollution Emissions

Area	Existing Total Plastic Bags Used Annually	Existing Ozone Emissions per year (kg)	Existing AA Emissions per year (kg)
Encinitas	31,874,014	733	34,551

**Table 6  
Proposed Air Pollution Emissions by Bag Type**

Carryout Bag Type	Proposed # of Bags Used per Year	Ozone Emissions (kg) per 1,000 bags [1,2]	AA Emissions (kg) per 1,000 bags [1,3]	Proposed Ozone Emissions per year (kg) [4]	Proposed AA Emissions per year (kg) [4]
Single-Use Plastic	1,593,701	0.023	1.084	37	1,728
Recycled Paper	9,562,204	0.03	2.06	287	19,698
Reusable	398,425	0.032	3.252	13	1,296
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	0.023	1.084	293	13,821
<b>Total Proposed Emissions in Encinitas</b>				<b>630</b>	<b>36,542</b>
<b>Existing Emissions in Encinitas</b>				<b>733</b>	<b>34,551</b>
<b>Net Change (Total minus Existing)</b>				<b>(104)</b>	<b>1,991</b>
<b>% Change</b>				<b>-14%</b>	<b>6%</b>

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

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

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

[4] Emissions per year = (Emissions in kg per 1,000 bags rate x number of bags used per year / 1,000)

**Existing Estimated Truck Trips per Day**

<b>Carryout Bag Type</b>	<b>Existing Total Plastic Bags Used Annually</b>	<b>Number of Bags per Truck Load [1]</b>	<b>Existing Truck Trips Per Year [2]</b>	<b>Existing Truck Trips per Day</b>
Single-Use Plastic	31,874,014	2,080,000	15	0.04

[1] City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.

[2] (Number of Carryout Bags Per Year) / (Number of Carryout Bags per Truck) = Truck Trips per Year

**Table 7**

**Estimated Truck Trips per Day**

**Following Implementation of the Proposed Ordinance**

<b>Carryout Bag Type</b>	<b>Proposed # of Bags Used per Year</b>	<b>Number of Bags per Truck Load [1]</b>	<b>Proposed Truck Trips Per Year [2]</b>	<b>Proposed Truck Trips per Day</b>
Single-Use Plastic	1,593,701	2,080,000	1	0.00
Recycled Paper	9,562,204	217,665	44	0.12
Reusable	398,425	108,862	4	0.01
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	2,080,000	6	0.02
<b>Total Proposed Truck Trips for Carryout Bags</b>			<b>54</b>	<b>0.15</b>
<b>Existing Truck Trips for Plastic Bags</b>			15	0.04
<b>Net New Truck Trips</b>			<b>39</b>	<b>0.11</b>

[1] City of Santa Monica Single-Use Carryout Bag Ordinance EIR (SCH #2010041004), January 2011.

[2] (Number of Carryout Bags Per Year) / (Number of Carryout Bags per Truck) = Truck Trips per Year

**Table 8**

**Mobile Emissions - Proposed Ordinance**

	<b>Emissions (lbs/day)</b>					
	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>SO<sub>x</sub></b>	<b>ROG</b>	<b>PM<sub>2.5</sub></b>
Mobile Emissions: Proposed Ordinance [1]	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Thresholds (lbs/day) [2]	550	250	100	250	N/A	N/A
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>N/A</b>	<b>N/A</b>

[1] URBEMIS version 9.2.4 calculations for Truck Trips.

[2] San Diego APCD Rule 20.2

## GREENHOUSE GAS EMISSIONS

### Existing GHG Emissions

Area	Population	Existing Total Plastic Bags Used Annually	GHG Impact Rate (metric tons CO2E) [1]	Existing CO2E emissions per year (metric tons)	Existing CO2E per person per year (metric tons) [2]
Encinitas	60,482	31,874,014	0.04 per 1,500 bags	850	0.0141

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

[2] Emissions per person are divided by the current Sacramento population – 473,509 (California Department of Finance, 2013)

CO2E = Carbon Dioxide Equivalent Units

**Table 9  
Proposed GHG Emissions by Bag Type**

<b>Manufacture, Use and Disposal</b>					
<b>Carryout Bag Type</b>	<b>Proposed # of Bags Used per Year</b>	<b>GHG Impact Rate (metric tons CO<sub>2</sub>E)</b>		<b>CO<sub>2</sub>E per year (metric tons)</b>	<b>CO<sub>2</sub>E per Person (metric tons) [4]</b>
Single-Use Plastic	1,593,701	0.04 per 1,500 bags [1]		42	0.0007
Recycled Paper	9,562,204	0.1188 per 1,000 bags [2]		1,136	0.0188
Reusable	398,425	5.24 per 1,000 bags [3]		2,088	0.0345
Replacement Bags for Secondary Plastic Bag Uses	12,749,606	0.04 per 1,500 bags [1]		340	0.0056
<i>Subtotal (Manufacturing, Use, and Disposal)</i>				3,606	0.0596
<b>Washing</b>					
<b>Carryout Bag Type</b>	<b># of Loads per Year [5]</b>	<b>Electricity Use Per Load (kWh) [6]</b>	<b>Total Electricity Use Per Year (kWh)</b>	<b>CO<sub>2</sub>E per year (metric tons) [7]</b>	<b>CO<sub>2</sub>E per Person (metric tons)</b>
Reusable	125,818	3.825	481,256	113	0.0019
<i>Subtotal (Washing)</i>				113	0.0019
<b>Total GHG Emissions from Proposed Ordinance</b>				<b>3,720</b>	<b>0.0615</b>
<b>Existing GHG Emissions</b>				<b>850</b>	<b>0.0141</b>
<b>Net Change (Total minus Existing)</b>				<b>2,870</b>	<b>0.0474</b>

CO<sub>2</sub>E = Carbon Dioxide Equivalent units

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

[2] 10% reduction (from a rate of 3.3 to 2.97) based on the Scottish Report (AEA Technology, 2005) and the Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

[3] Based on Environment Agency – United Kingdom government report, 2011.

[4] Emissions per person are divided by the existing population in Encinitas

[5] Assumes that have of all reusable bags would be machine washed. Assumes that each bag is washed once a month. Assumes 19 bags per load based on an average load capacity of 8 pounds per load and 6.8 ounces per bag (as measured on 8/10/2010 by Rincon Consultants, Inc.).

[6] US Department of Energy: Energy Efficiency and Renewable Energy, 2010.

[7] Assuming Electricity = 0.524 pounds CO<sub>2</sub> per kWh and 2,204.6 pounds per metric ton (PG&E, 2013)

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name:

Project Name: Encinitas Bag Ordinance

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Truck Trips for Bag ordinance	0.00	0.01	0.00	0.00	0.00	0.00	3.27
<b>TOTALS (lbs/day, unmitigated)</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2015 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Truck Trips for Bag ordinance		0.11	1000 sq ft	1.00	0.11	0.81
					0.11	0.81

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.2	99.6	0.2
Light Truck < 3750 lbs	0.0	0.9	95.4	3.7

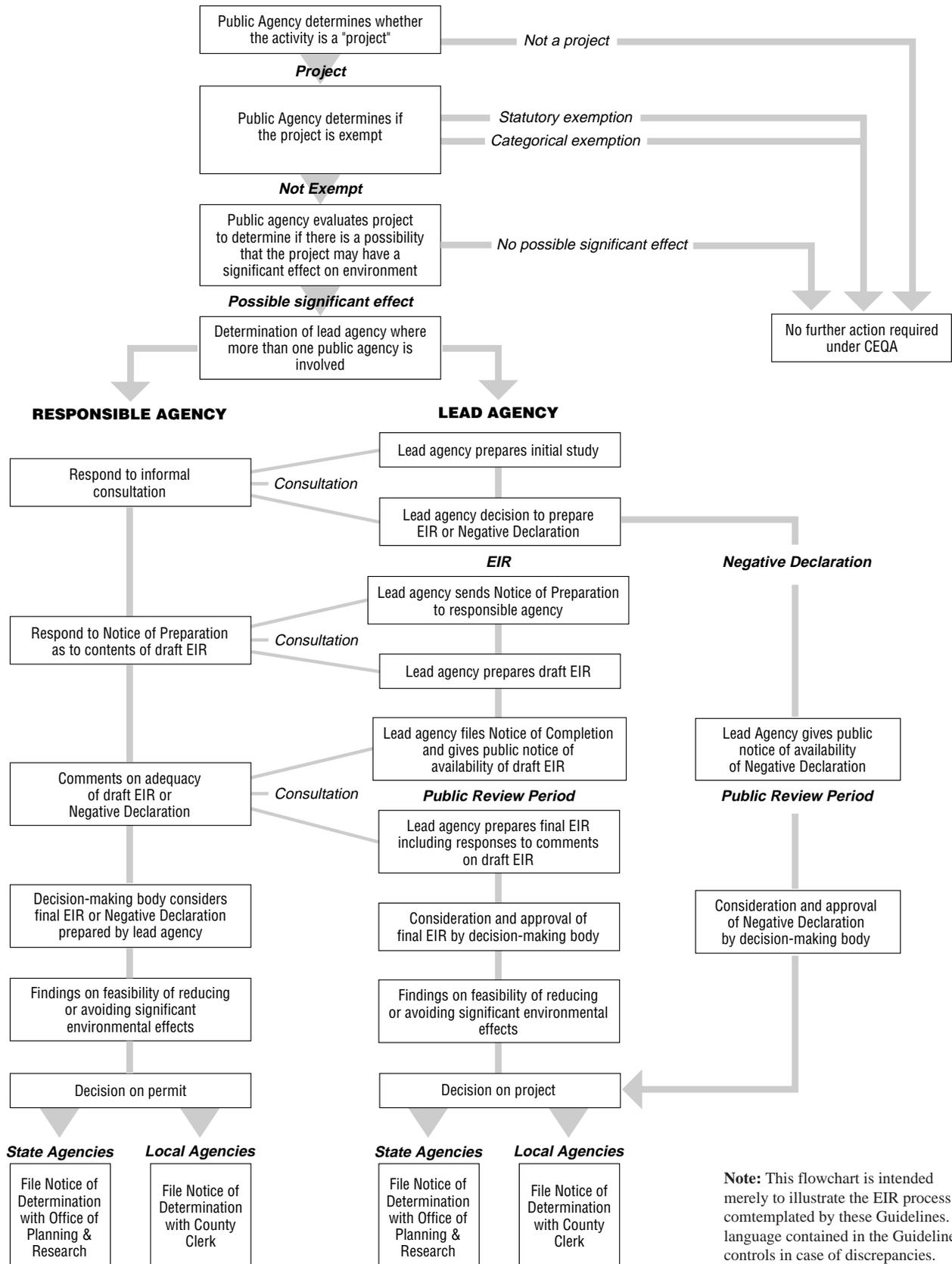
Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	0.0	0.5	99.5	0.0
Med Truck 5751-8500 lbs	0.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	57.1	42.9
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	20.0	80.0
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	48.6	51.4	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Truck Trips for Bag ordinance				2.0	1.0	97.0

# Appendix A CEQA PROCESS FLOW CHART



**Note:** This flowchart is intended merely to illustrate the EIR process contemplated by these Guidelines. The language contained in the Guidelines controls in case of discrepancies.

# Update on Draft Single-Use Carry- Out Bags Ordinance & Environmental Review Process

Encinitas City Council Meeting  
June 25, 2014

# Single-Use Carry-Out Bags

## **Background:**

- ❖ Single-use carry-out bag reduction measures of interest for some time
- ❖ Part of Environmental Commission's FY13/14 Work Plan
- ❖ Report & recommendations from Env. Commission provided on November 20, 2013
- ❖ Council directed preparation of draft ordinance
- ❖ Draft ordinance & environmental review process undertaken

# Single-Use Carry-Out Bags

## Draft Ordinance key elements:

- ❖ Phased-in implementation
- ❖ Prohibition on distribution of single-use plastic bags
- ❖ Retailer may provide recycled paper bags with minimum 10 cent fee retained by retailer
- ❖ Excludes restaurants, non-profits using donated bags, product bags, customers participating in subsidized food programs



# Single-Use Carry-Out Bags

## Environmental Technical Analysis:

- ❖ Estimated pre and post single use bag use
- ❖ Technical report projected environmental impacts for
  - Air Quality,
  - GHG,
  - Water,
  - Wastewater and
  - Solid Waste
- ❖ Methodology/calculations used conservative in nature based on current methodologies, best practices and litigation avoidance

# Single-Use Carry-Out Bags

❖ **Environmental Technical Analysis uses similar methodology from various CEQA documents consultant prepared for other jurisdictions throughout the State:**

- \* City of Santa Monica
- \* City of Huntington Beach
- \* City of Long Beach
- \* Culver City
- \* Santa Barbara County
- \* County of San Mateo (including all cities in the county)
- \* City of Sunnyvale
- \* City of Santa Clara
- \* Sonoma County Waste Management Agency (including county and all cities in county)
- \* Marin County Hazardous and Solid Waste Management JPA (including eight cities/towns)
- \* City of Sacramento

# Single-Use Carry-Out Bags

## State legislation update:

- ❖ SB 270 (Padilla/DeLeon/Lara) currently in legislative committees process
- ❖ Phased in restrictions beginning July 2015: large stores (>\$2.0 annual sales or > 10,000 sf);
- ❖ July 2016: convenience stores, mini-marts and other retailers selling food items and ABC Type 20 & 21 license;
- ❖ Preempts local jurisdictions from implementing new/mod restrictions after September 1, 2014

# Single-Use Carry-Out Bags

## **Recommendation:**

- \* Receive information and provide any desired direction

*# # #*