



City of Palo Alto

City Council Staff Report

(ID # 3065)

Report Type: Action Items

Meeting Date: 3/11/2013

Council Priority: Environmental Sustainability

Summary Title: 1st Reading: Disposable Checkout Bag Ordinance and EIR Approval

Title: Certification of the Final Environmental Impact Report and Adoption of an Ordinance Amending Palo Alto Municipal Code Section 5.35 to Expand Plastic Bag Ban to Retail and Food Establishments, Require Retailers to Charge Fee for Paper Bag Use and Provision of Phased Implementation

From: City Manager

Lead Department: Public Works

Recommendation

Staff recommends that Council:

- 1) Certify the Final Environmental Impact Report (FEIR) (Attachment B) which is a requirement for this project as a result of the City's 2008 settlement with the Save the Plastic Bag Coalition and
- 2) Adopt the proposed Retail and Food Service Establishment Checkout Bag Requirements Ordinance (Attachment A).

Draft Motion: Move to Certify the FEIR and Adopt Ordinance included as Attachment A to Staff Report.

Executive Summary

The proposed Retail and Food Service Establishment Checkout Bag Requirements Ordinance (Bag Ordinance) would restrict all retail services including food service establishments (any place that sells prepared or ready-to-consume food including

supermarkets, delicatessens, restaurants, catering trucks, etc.) from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. Food service establishments would not be required to charge for a recyclable paper checkout bag. It would also revise the definition of “reusable bag” in the existing ordinance to include only bags that are longer-lasting and more durable.

Background

Plastics account for 60% of the litter found in local creeks and a recent Scripps Institution of Oceanography study reports that the amount of plastic debris in an area of the Pacific Ocean known as the "Great Pacific Garbage Patch" has grown a hundredfold over the past four decades. Local cities are required by the stormwater Municipal Regional Permit to reduce trash by and in local creeks by 100% by 2022, with cities implementing plastic bag bans as one of the actions to achieve these requirements. Extensive local and regional efforts to meet this need over the years include accelerated street sweeping, annual creek clean up events, curbside recycling, truck tarping requirements, creek booms used to collect floating debris, extensive public outreach, and the 2009 ordinance restricting large grocery stores from distributing single-use plastic bags. Plastic bags continue to blow into creeks and streets and across city boundaries despite these efforts. In 2012, staff found approximately 350 single use plastic checkout bags in and around local Palo Alto creeks and streets during a combination of two creek clean up events and an informal “bag sighting” survey performed by staff volunteers over a one month period.

Palo Alto adopted an ordinance restricting single-use plastic bags at large grocery stores which became effective on September 18, 2009 (Municipal Code 5.35). This ordinance was a first step in addressing the negative impacts of plastic bags in the natural environment during a time when few community bans on plastic bags existed. In November 2009, staff promised to return in the future with a recommendation for further controls including implementing a store charge for single-use paper bags (CMR:401:09). This was also a recommendation of the

Reusable Bag Task Force which had advised staff during the drafting of the first ordinance.

The Reusable Bag Task Force was co-sponsored by the Palo Alto Chamber of Commerce and comprised of representatives from Palo Alto grocery stores, reusable bag manufacturers, retail owners and community members. Their final recommendations to staff advised that the City should:

- Apply the (2009) ordinance to all retail;
- Enact the ordinance to all businesses at the same time; and
- Require a store charge for paper bags to deter their use which also have negative environmental impacts associated with their manufacture and disposal.

Because of the economic climate at that time, staff proposed the ordinance (that is currently in effect) which does not require a store charge for paper and which applies only to large grocery stores, the highest users of plastic bags. Staff is returning to Council now with the expanded ordinance which factors in all of the key Task Force Recommendations as well as additional revisions based on information gathered during the last three years since the ordinance took effect.

Discussion

Since Palo Alto adopted its ordinance in 2009 approximately 65 cities and counties throughout California have followed with similar ordinances and 24 cities on the Bay Area Peninsula are considering similar ordinances in 2013. Most of these same cities now or will soon also require a store charge for paper and reusable bags. Typical bag charges are between ten (\$0.10) and twenty-five cents (\$0.25) per bag.

Although large grocery stores in Palo Alto have complied with the City's existing ordinance, plastic litter, including plastic bags, continues to be found in local creeks. Staff has conducted annual surveys of paper, plastic and reusable bag use at large grocery stores and pharmacies in Palo Alto since 2008. As of March 2013,

the percentage of grocery store customers using reusable bags increased from nine percent to 24% following implementation of the 2009 ordinance and the number of customers requesting “no bag” has increased from eight percent to 20%. Despite extensive and long-term public outreach these percentages have not continued to increase for either option.

The goals of the proposed ordinance are to:

- Reduce the environmental impacts of pollution associated with single-use plastic checkout bags in local creeks, baylands, public parks and open spaces, in the San Francisco Bay, in the marine environment, and in landfills (particularly Kirby Canyon Landfill)
- Reduce the number of all single-use bags (paper and plastic) distributed by retailers and food service establishments to Palo Alto customers
- Promote a shift toward the use of long-lasting and durable reusable bags by retail customers in Palo Alto
- Help the City meet strict stormwater permit requirements
- Help move the City towards its vision of Zero Waste

It is estimated that adopting the proposed ordinance would reduce total single-use plastic and paper bag usage by almost 20,000,000 bags per year.

The proposed ordinance would:

- Prohibit the use of single-use plastic bags at all retail and food service establishments;
- Require a store charge of (first) ten cents (\$0.10) for paper or reusable bags at retail, increasing to twenty-five cents (\$0.25) one year later. The charge would be retained entirely by the retail establishment and would not be taxable. Food service establishments could continue to provide paper checkout bags free of charge;
- Strengthen durability standards for reusable bags using industry testing requirements;

- Provide a one-year exemption for participants in state or federal supplemental food programs.

The above changes are a result of both staff and community input received to date. It should be noted that based on the 2010 City of San Jose Final Environmental Impact Report for that city's ordinance, it is estimated that ten cent charges for paper bags result in about 65% of retail customers converting to reusable bags; 25 cent charges result in 89% of customers switching to reusable bags. Communities such as the District of Columbia, Los Angeles County and the City of San Jose have seen actual conversion of customers requesting reusable bags between 62% to 94% depending on the charge and the economic demographics of the region.

Inclusion of Food Service Establishments in the Ordinance

The proposed ordinance differs from those adopted or considered by surrounding communities in that it includes restrictions for food service establishments.

The additional requirement of disallowing single-use plastic bags at food service establishments would reduce an estimated 1.3 million plastic bags used that could be released into the environment. Several other California cities and counties are now considering including food service establishments as a next step. Encouragingly, a 2012 Palo Alto survey showed that one-third of all Palo Alto food service establishments already use paper exclusively across all restaurant types from take-out and food trucks to fine dining, and even more use a combination of paper and plastic.

To address concerns raised by that California Restaurant Association (CRA) and the Save the Plastic Bag Coalition (STPBC) about hot liquid items potentially spilling in paper bags which would not be able to contain liquids, the proposed ordinance would allow “product bags”—plastic bags without handles and therefore not considered a checkout bag as defined by the ordinance—to be used around individual containers of soups or stews.

Additionally, Palo Alto's proposed ordinance would not require a charge for paper bags at food service establishments or require the use of reusable bags. Charging for paper assumes that reusable bags are available for use as a preferred option for food take out. The CRA has opposed requiring reusable bag use citing hygiene concerns and provides statements on this topic that are very similar to that of the the STPBC. These presented claims have not been evaluated for actual risk to the consumer. However, the proposed ordinance addresses the concern by not requiring reusable bags, but does not prohibit their use thereby allowing the discretion of consumers and food service establishments. This discretion is offered based on the CRA request that food service establishments be allowed to make the determination of which bags are best to use at their business and the relatively high number of food service establishments in Palo Alto that already use paper bags exclusively for food takeout.

While extension of the plastic bag ban has met resistance by STPBC and CRA, there are a few cities that have expanded their bans to include food service establishments.. The cities of Malibu and Fairfax have prohibited single-use plastic checkout bags at food service establishments for several years and report no health, safety or compliance problems to date with this requirement. More recently San Francisco and the County of Santa Cruz have adopted plastic bag bans that apply to food service establishments.

Lawsuits Challenging Bag Bans

The Plastic bag industry has filed numerous lawsuits against cities that have enacted local bag bans. So far these lawsuits have focused on three legal theories: (1) CEQA compliance; (2) Proposition 26 and (3) Retail Food Code preemption. Save the Plastic Bag Coalition filed lawsuits against the first generation of bag ban ordinances (including Palo Alto's) asserting that cities should prepare Environmental Impact Reports (EIRs) prior to enacting local bag bans. STPBC claimed that elimination of plastic bags resulted in the increased production and distribution of paper bags which in turn could result in increased greenhouse gases triggering a potentially significant impact under the California Environmental Quality Act (CEQA). To avoid litigation, cities began preparing EIRs

or relying on Master EIRs prepared by others. In 2011, the California Supreme Court in *Save the Plastic Bag Coalition v. City of Manhattan Beach* held that Manhattan Beach's plastic ban was exempt from CEQA reasoning: "common sense leads us to the conclusion that the environmental impacts discernible from the 'life cycles' of plastic and paper bags are not significantly implicated by a plastic bag ban in Manhattan Beach." The court, however, warned that larger cities may have to do additional environmental analysis.

Second generation bag bans attempted to further reduce both paper and plastic by placing a minimum fee of 10 cents on paper bags in addition to banning plastic bags. In addition some cities have expanded the plastic bag ban to restaurants. Currently, there are two major lawsuits challenging these types of bans. The first case to test the validity of a paper bag fee was brought against the County of Los Angeles in a case titled *Schmeer v. County of Los Angeles*. County of Los Angeles' ordinance required store owners to charge a 10 cents fee on paper bags, and plaintiffs sued on the grounds that the fee violated Proposition 26. Proposition 26 prohibits any new general or special tax imposed by local government without prior approval by the voters. On February 21, 2013, the Court of Appeal ruled that since this fee was charged by store owners and no portion of it was remitted to the County it did not constitute a "tax" under Proposition 26. This decision is not yet final and it is likely that it will be appealed to the California Supreme Court.

STPBC has also sued over bag bans that have been expanded to restaurants and other food establishments. So far, STPBC has filed lawsuits against Santa Cruz County, Carpinteria and San Francisco on the grounds that restaurant bans are preempted by the Retail Food Code, a state law regulating health and sanitation standards for retail food operations. Carpinteria elected to settle by exempting restaurants, while San Francisco and County of Santa Cruz have chosen to litigate. In September 2012, San Francisco's local restaurant ban was upheld by the trial court which held that the Retail Food Code did not preempt the local ban. STPBC has announced it will appeal. So far there has been no final trial court ruling on the County of Santa Cruz restaurant ban.

Timeline

Staff proposes the following timeline should Council approve the proposed ordinance and final draft EIR:

Month/Year	Project Milestones
March 2013	Council approval of EIR First ordinance reading
April 2013	Second ordinance reading Notice of EIR Preparation (NOP) Posted/30 day challenge period
April - July 2013	Public outreach to retail, food service establishments and residents
July 1, 2013	Proposed ordinance effective date for retail
November 1, 2013	Anticipated ordinance effective date for food service establishments
Fall 2014	Council Report on Ordinance Impacts
Ongoing	Monitoring and ordinance enforcement

Resource Impact

No significant additional financial or staff resources will be necessary to implement this ordinance. Public education is already included within the Wastewater Treatment Funds FY 2013 operating budget, and staff who are

currently managing this project will continue to work on implementation and enforcement of the ordinance. While initial implementation and enforcement of the ordinance will require a large amount of staff time, it is expected that this will taper after the ordinance is fully implemented in 2014. Enforcement at food service establishments will be provided by staff already assigned to inspect these locations for compliance with the City's fats, oil and grease program.

Policy Implications

Expansion of the current ordinance is fully consistent with the City's Plastics Reduction Policy, Zero Waste Plan, Clean Bay Plan, Sustainability Plan, and stormwater regulatory requirements.

Environmental Review

An EIR was conducted for this project. This was done as required by a 2008 settlement with the Save the Plastic Bag Coalition (STPBC), a group representing manufacturers of plastics and plastic bags, which claimed that restricting the use of plastic bags would lead to increased greenhouse gas emissions because paper takes more energy to manufacture than plastic. However, a Palo Alto analysis conducted at that time concluded that even assuming the bag production figures provided by STPBC were correct, there would be no greenhouse gas increase because there would be a sufficient switch to reusable bags to offset any switch to paper. Palo Alto's analysis was a basis for a Mitigated Negative Declaration which was prepared to comply with the California Environmental Quality Act. Save the Plastic Bag Coalition initiated litigation over this issue as it has done with cities throughout California who attempt to pass similar legislation without undergoing the time consuming and sometimes expensive EIR process.

Although the Palo Alto analysis answered the substantive issue raised in the litigation, Palo Alto settled the case in order to save taxpayers the costs of a trial and to avoid consuming City Staff and City Council time. The settlement left the current Ordinance to be enforced as adopted but required the City to prepare an EIR for any future ordinances which restrict single-use plastic bags at other stores.

As part of the required EIR, the currently proposed project was evaluated along with six additional alternatives including a “no project” alternative. Alternatives were based on feedback received during public scoping meetings and staff input. Both the main project and all project options demonstrated a beneficial or less than significant impact. Based on the information shown in the EIR, best practices for bag ordinances used in other cities and observations of staff since the current ordinance has been in effect, staff recommends proceeding with the proposed ordinance at this time and will return to Council with an evaluation of ordinance impacts in Fall 2014, one year after full ordinance implementation has occurred.

Attachments:

- Attachment A-Draft Ordinance: Retail and Food Service Establishment Checkout Bag Requirements (PDF)
- Attachment B: Final Draft EIR (PDF)
- CCM 3-11-2013 Item 3 (PDF)

Ordinance No. _____

**Ordinance of the Council of the City of Palo Alto Amending Chapter 5.35
of the Palo Alto Municipal Code Regarding Retail and
Food Service Establishment Checkout Bag Requirements**

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Findings. The City Council finds as follows:

- (a) Single use plastic bags have environmental effects as many of these bags are conveyed across land or through storm drains into local creeks, the San Francisco Bay and into the Pacific Ocean. Studies have shown that 70% of the litter found in storm drains and at clean up events is plastic (bags, packaging, single-use disposable products).
- (b) Plastic bags that enter the marine environment have been found to adversely impact many wildlife species that ingest or become entangled in them. Paper bags tend to break down faster and do not pose the same risks for ingestion and entanglement.
- (c) Eighty percent of ocean debris originates from land. Plastic debris does not completely biodegrade in the marine environment; instead plastics break down into smaller and smaller pieces, absorbing toxins, which in turn harm marine animals when they are mistaken for food. The Pacific Ocean contains a huge accumulation of plastic debris. Some scientists estimate that the density of plastic can be as great as one million pieces of plastic per square mile and plastic debris has increased over 100 fold in the past 40 years.
- (d) Plastic and paper checkout bags represent an unnecessary use of a nonrenewable resource. Reusable bags represent the sustainable alternative to single-use bags of all types, because they consume less resources overall and produce less waste.
- (e) Even with the emphasis on recycling of plastics in the last several decades, the plastic bag recycling rate in California as of 2008 remains at approximately five percent or less, according to the California Integrated Waste Management Board.
- (f) The City discourages the use of all types of single-use checkout bags, because single-use bags consume more resources and produce more waste than reusable bags. However, plastic bags are the least desirable type of all single-use bags, because they consume a nonrenewable resource, degrade very slowly and harm creek and marine life. It is the City's intent to address all types of single-use checkout plastic bags, including compostable and biodegradable ones, because all types consume non-renewable resources and can harm creek and marine life.

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- (g) Expanding the current ordinance supports the City's goal of Zero Waste by 2021 by reducing distribution of both plastic and paper bags. Ordinance expansion would reduce residuals contamination in municipal compost. A majority of compost contamination is comprised of plastic film and must be disposed as garbage.
- (h) Paper bags are more successfully recycled than plastic bags given current technologies. Therefore, diverting paper bags from landfill disposal is more attainable than it is for plastic bags. However, recyclable paper checkout bags do cause negative environmental impacts such as air, land and water pollution during resource extraction, manufacturing, transportation and ultimately in their disposal as even recycling paper bags consumes energy and causes pollution.
- (i) Reusable bags are considered worldwide to be the best option to reduce waste and litter, protect wildlife and conserve resources. Reusable bags have lower associated greenhouse gas emissions than single-use bags and are readily available and affordable for the customer.
- (j) In 2012, despite an existing ban on single use plastic bags in grocery stores over 10,000 square feet, approximately 350 bags were found in the lower Palo Alto watershed. 130 of these bags were found on streets and in storm drains by a small number of volunteers during a one month tally, and an additional 220 plastic bags were removed from Adobe and Matadero Creeks during annual volunteer creek clean-up events.
- (k) Given public awareness of the harm caused by single-use plastic bags, one-third of Palo Alto food establishments already use paper bags exclusively to carry home food, and have voluntarily eliminated the use of single-use plastic bags without harm or public complaint. This includes the full range of food establishments from take-out to fine dining establishments.
- (l) Despite the positive impacts of the existing ordinance approximately fifty-seven percent of combined grocery store and pharmacy checkout bags in Palo Alto are single-use paper or plastic based on a 2012 survey. Therefore, further incentives are needed to decrease single-use checkout bags.
- (m) The City has given away more than 14,500 reusable checkout bags to Palo Alto residents to encourage their use.
- (n) Many cities in Santa Clara, San Mateo, San Francisco and Alameda counties in connection with single-use bag ordinances have initiated charges on single-use paper bags in order to offset the cost to retailers of this program and as an additional incentive for customers to use their own reusable bags.
- (o) Local cities are required by the Municipal Regional Permit (MRP) for storm water to reduce trash by 40% by 2014, 70% by 2017 and 100% by 2022, with cities

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implementing plastic bag bans as one of the actions to achieve these requirements. Palo Alto's short term trash reduction plan complying with the MRP is claiming a 6% reduction of trash with the current single use bag ban, however, cities with more comprehensive bans are claiming 12% reduction, assisting them in meeting this strict requirement in a cost-effective manner.

- (p) Due to the negative environmental effects and the need to comply with regulatory requirements to reduce trash, it is therefore in the best interest of public health, safety, and welfare to restrict single-use bag distribution within the boundaries of the City of Palo Alto.
- (q) It is the intent of the Council to reduce negative impacts of single-use checkout bags through implementation of this Ordinance by continuing the requirement for grocery stores to not provide single-use plastic checkout bags and expanding that requirement to include all Retail Service and Food Service Establishments, while implementing a charge to allow customers to purchase a single-use paper bag or a reusable bag if the customer wants a bag and has not brought a reusable bag.

SECTION 2. Sunset of Ordinance 5032. Ordinance 5032 adding Chapter 5.35 (Retail Sales – Requirement for Paper Checkout Bags and Limited Prohibition on Single-Use Plastic Checkout Bags) to the Palo Alto Municipal Code shall sunset and be of no further force and effect on June 30, 2013.

SECTION 3. New Provisions. Effective July 1, 2013, Ordinance 5032 shall be superseded by a new Chapter 5.35 to read as follows:

Chapter 5.35

Retail and Food Service Establishment Checkout Bag Requirements.

Sections:

- 5.35.010 Definitions
- 5.35.020 Types of Checkout Bags Permitted at Retail Service and Food Service Establishments
- 5.35.030 Checkout Bag Charge for Paper or Reusable Bags at Retail Service Establishments.
- 5.35.040 Operative Dates
- 5.35.050 Exemptions
- 5.35.060 Severability
- 5.35.070 Penalties

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5.35.010 Definitions.

- (a) “Checkout Bag” means a bag that is provided by a Retail Establishment at the checkstand, cash register, point of sale or other point of departure for the purpose of transporting food or merchandise out of the establishment. Checkout Bags do not include Produce or Product bags as defined in this Chapter.
- (b) “Food Service Establishment” means any establishment, located or providing food within the City of Palo Alto, which provides prepared and ready-to-consume food or beverages, for public consumption including but not limited to any Retail Service Establishment, Eating and drinking service (as defined in Chapter 18), Take-out service (as defined in Chapter 18), supermarket, delicatessen, restaurant, food vendor, sales outlet, shop, cafeteria, catering truck or vehicle, cart or other sidewalk or outdoor vendor or caterer.
- (c) “Produce or Product Bag” means:
- i. any bag without handles provided to a customer to carry produce meats, bulk food, or other food items to the point of sale inside a store;
 - ii. to hold prescription medication dispensed from a pharmacy;
 - iii. to protect food or merchandise from being damaged or contaminated by other food or merchandise when items are placed together in a Reusable bag or Recyclable paper checkout bag;
 - iv. a bag without handles that is designed to be placed over articles of clothing on a hanger.
- (d) “Recyclable Paper Checkout Bag” means a paper bag that meets one of the following criteria:
- i. Pre-Approved Standard. A paper bag that meets all of the following requirements:
 1. contains no old growth fiber;
 2. is 100% recyclable overall and contains a minimum of 40% post-consumer recycled content;
 3. displays the word “Recyclable” on the outside of the bag; and
 4. the manufacturer, the location (country) where manufactured and the percentage of post-consumer recycled content in an easy-to-read size font.
 - ii. Alternative Materials. The Superintendent is authorized to approve alternate materials or testing methods meeting this section’s requirements provided that the Superintendent finds that the proposed materials or testing standards satisfactorily complies with the intent, quality and effectiveness in order to meet the purposes of this Chapter. The particulars of any approval made by the Superintendent under this

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subsection shall be entered upon the records of the Public Works Department and a signed copy shall be furnished to the applicant.

- iii. Alternative Standard. Any other published uniform Recyclable Paper Bag standard as approved by the Superintendent.

- (e) “Retail Service Establishment” means any establishment providing retail sale, rental, service, processing, or repair of items primarily intended for consumer or household use, including but not limited to the following: groceries, meat, vegetables, dairy products, baked goods, candy, and other food products; liquor and bottled goods, household cleaning and maintenance products; drugs, cards, and stationery, notions, books, tobacco products, cosmetics, and specialty items; flowers, plants, hobby materials, toys, household pets and supplies, and handcrafted items; apparel, jewelry, fabrics, and like items; cameras, photography services, household electronic equipment, records, sporting equipment, kitchen utensils, home furnishing and appliances, art supplies and framing, arts and antiques, paint and wallpaper, carpeting and floor covering, interior decorating services, office supplies, musical instruments, hardware and homeware, and garden supplies; bicycles; mopeds and automotive parts and accessories (excluding service and installation); cookie shops, ice cream stores and delicatessens.

- (f) “Reusable Checkout Bag” shall mean a bag with handles that is specifically designed and manufactured for multiple reuse which can be washed or wiped clean and meets one of the following criteria:
 - i. Pre-approved materials. The bag meets all of the following requirements:
 - 1. EcoLogo ATP-001 standards for durability (including future amendments or any successor legislation):
 - a. Capacity Test - minimum of 15 liters
 - b. Dynamic Test - minimum of 5 sets of 300 cycles (1,500 cycles total).
 - 2. Is 2.25 mils thick or greater as measured according to ASTM D6988-08 or ISO 4593:1993 or ISO 4591:1992 standards (for embossed film) (including future amendments or any successor legislation).
 - 3. To Confirm Heavy Metal Content:
 - a. State methods used for preparing and for testing samples of each unique bag component following the Model Toxics in Packaging Legislation, and;

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4. Is labeled in an easy-to-read sized font with the name of the manufacturer, the country of origin where manufactured, the material from which it is manufactured, the percentage of post-consumer recycled content, and a statement that the bag does not contain heavy metals.
 - ii. Alternative Materials. The Superintendent is authorized to approve alternate materials or testing methods meeting this section's requirements provided that the Superintendent finds that the proposed materials or testing standards satisfactorily complies with the intent, quality and effectiveness in order to meet the purposes of this Chapter. The particulars of any approval made by the Superintendent under this subsection shall be entered upon the records of the Public Works Department and a signed copy shall be furnished to the applicant.
 - iii. Alternative Standard. Any other published uniform bag standard as approved by the Superintendent.
- (g) "Single-Use Plastic Checkout Bag" means any bag made predominately of plastic derived from natural gas, petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale which does not meet the definition of a Reusable Checkout Bag.
- (h) "Superintendent" means the Assistant Director of Environmental Services for Public Works, his or her designee or such other person as may be designated by the City Manager.

5.35.020 Types of Checkout Bags Permitted at Retail Service and Food Service Establishments

- (a) Retail Service Establishments within the City of Palo Alto shall provide or make available to a customer only Reusable Bags or Recyclable Paper Checkout Bags for the purpose of carrying away goods or other materials from the point of sale, subject to the terms of this Chapter.
 - i. Single-Use Plastic bags exempt from the ordinance include those integral to the packaging of the product, Produce or Product Bags, newspaper bags, door-hanger bags, or bags sold in packages containing multiple bags intended for use as garbage, pet waste or yard waste bags.
 - ii. Farmers Markets may provide Produce or Product Bags to hold produce or bulk items. Checkout bag charges for these bags are not required at Farmers Markets unless Checkout Bags used to hold Produce or Product Bags are provided.

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- (b) Effective November 1, 2013, Food Service Establishments shall provide or make available to a customer only Recyclable Paper Checkout Bags or Reusable Bags, at their discretion, for the purpose of carrying away goods or other materials from the point of sale, subject to the terms of this Chapter.
 - i. Produce or Product Bags without handles may be used at Food Service Establishments to hold containers of food items that are free liquids such as soups or stews that might be susceptible to spilling.
- (c) The City of Palo Alto encourages, but does not require in-store public education and encouragement to customers about the use of reusable bags. In-store education for Retail Service and Food Service Establishments is available at www.cityofpaloalto.org/plastics.
- (d) Nothing in this Chapter prohibits customers from using bags of any type that they bring to the establishment themselves or from carrying away goods that are not placed in a bag at point of sale, in lieu of using bags provided by the establishment.
- (e) A Retail Service or Food Service Establishment may provide a Reusable Bag at no charge if it is distributed as part of an infrequent and limited time promotion. Infrequent and limited time promotions shall not exceed a total of 14 days in any consecutive 12 month period.

5.35.030 Checkout Bag Charge for Paper or Reusable Bags at Retail Service Establishments.

- (a) Effective July 1, 2013, no Retail Service Establishment shall provide a Recyclable Paper Checkout Bag or Reusable Bag to a customer at the point of sale, unless the store charges the customer a checkout bag charge of at least ten cents (\$0.10) per bag to cover the costs of compliance with the ordinance, the actual costs of providing recyclable paper bags, educational materials or other costs of promoting the use of reusable bags.
- (b) Effective, July 1, 2014, no Retail Service Establishment shall provide a Recyclable Paper Checkout Bag or a Reusable Bag to a customer at the point of sale, unless the establishment charges the customer a checkout bag charge of at least twenty-five cents (\$.25) per bag.
- (c) Retail Service Establishments shall establish a system for informing the customer of the charge required under this section prior to completing the transaction. This system can include store Clerks inquiring whether customers who do not present their own reusable bag at point of checkout want to purchase a checkout bag.

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- (d) The checkout bag charge shall be separately stated on the receipt provided to the customer at the time of sale and shall be identified as the Checkout Bag Charge. Any other transaction fee charged by the Retail Service in relation to providing a Checkout Bag shall be identified separately from the Checkout Bag Charge. The checkout bag charge may be completely retained by the Retail Service and used for public education and administrative enforcement costs.
- (e) Retail Services Establishments shall keep complete and accurate records of the number or the dollar amount collected from Recyclable Paper and Reusable Checkout Bags sold each month. This information is required to be made available to City staff upon request up to three times annually and must be provided within seven days of request. Reporting false information, including information derived from incomplete or inaccurate records or documents, shall be a violation of the Ordinance. Records submitted to the City must be signed by a responsible agent or officer of the establishment attesting that the information provided on the form is accurate and complete.

5.35.040 Delayed Implementation for Food Service Establishments.

All Food Service Establishments shall comply with the requirements of Section 5.35.020 of this Ordinance beginning November 1, 2013.

5.35.050 Exemptions.

- (a) Undue Hardship. The City Manager, or his or her designee, may exempt a Retail Service or Food Service Establishment from the requirements of this Chapter for a period of up to one year, upon sufficient evidence by the applicant that the provisions of this Chapter would cause undue hardship. An undue hardship request must be submitted in writing to the City. The phrase “undue hardship” may include, but is not limited to, the following:
 - i. Situations where there are no acceptable alternatives to Single-Use Plastic Checkout Bags for reasons which are unique to the Retail Service or Food Service Establishment.
 - ii. Situations where compliance with the requirements of this Chapter would deprive a person of a legally protected right.
- (b) Retail Service Establishments shall not enforce the 10 cent or 25 cent store charge for customers who participate in the California Special Supplemental Food Program for Women, Infants, and Children, or in the Supplemental Nutrition Assistance Program (SNAP—formerly food stamps). This provision will expire on June 30, 2014.

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5.35.060 Severability.

If any provision or clause of this Chapter is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other provisions of this Chapter, and clauses of this Chapter are declared to be severable.

5.35.070 Penalties.

- (a) Anyone violating or failing to comply with any of the requirements of this Chapter shall be guilty of an infraction as set forth in Chapter 1.08 of the Palo Alto Municipal Code.
- (b) Each violation of this Chapter shall be considered a separate offense.
- (c) The remedies and penalties provided in this Section are cumulative and not exclusive.

SECTION 4. CEQA. The Department of Public Works prepared an Environmental Impact Report for this Ordinance, which confirmed that the Ordinance does not have the potential to result in a significant impact on the environment and results in only beneficial or less than significant impacts. The EIR was available for public review beginning November 15 through December 31 and was certified by the City Council on March 11, 2013.

SECTION 5. Severability. If any provision or clause of this Ordinance is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other provisions of this Chapter, and clauses of this Chapter are declared to be severable.

SECTION 6. Effective Date. This Ordinance shall be effective on July 1, 2013.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

Not Yet Approved

ATTEST:

City Clerk

APPROVED AS TO FORM:

Senior Asst. City Attorney

Mayor

APPROVED:

City Manager

Director of Public Works

Director of Administrative
Services

City of Palo Alto

Disposable Checkout Bag Ordinance

Draft
**Environmental
Impact Report**

SCH #2012062037



November 2012

Disposable Checkout Bag Ordinance EIR

Draft Environmental Impact Report SCH #2012062037

Prepared by:

City of Palo Alto
2501 Embarcadero Way
Palo Alto, California 94303
Contact: Julie Weiss, Environmental Specialist
(650) 329-2117

Prepared with the assistance of:

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

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Appendices

- Appendix A: NOP, Initial Study, NOP Comment Letters
- Appendix B: Air Quality URBEMIS Results/ Air Quality and Greenhouse Gas Estimates
- Appendix C: Utilities Calculations
- Appendix D: Proposed Draft Ordinance
- Appendix E: List of Potential Retailers in Palo Alto



EXECUTIVE SUMMARY

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

PROJECT SYNOPSIS

Project Sponsor

City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303
Contact: Julie Weiss, Environmental Specialist
(650) 329-2117

Project Characteristics

The proposed Disposable Checkout Bag Ordinance (the “Bag Ordinance”) would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. Food service establishments would not be required to charge for a recyclable paper checkout bag. The proposed Bag Ordinance would also revise the definition of “reusable bag” in the existing ordinance to include only bags that are longer-lasting and more durable. The existing ordinance, adopted in 2009, prohibits the distribution of single-use plastic checkout bags at grocery stores with more than two million dollars in annual sales and requires retailers to provide only paper or a choice between paper and plastic.

The intent of the proposed Bag Ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, the San Francisco Bay, and the marine environment, as well as to reduce plastic bag contributions to landfills. It is anticipated that by prohibiting single-use plastic checkout bags and requiring a store charge for each paper and reusable bag distributed by retailers, the proposed Bag Ordinance would promote a shift to the use of reusable bags by retail customers and reduce the number of single-use plastic and paper checkout bags within Palo Alto.

In the proposed Bag Ordinance, single-use plastic checkout bags are defined as bags made from petroleum or bio-based plastic that are less than 2.25 mils thick (or 0.00225 inches) and meet certain standards for durability. The proposed Bag Ordinance would prohibit retail services and food service establishments in Palo Alto from distributing, both petroleum and bio-based single-use checkout plastic bags, at the point of sale. The proposed Bag Ordinance would not prohibit the distribution of disposable bags provided solely for produce, bulk food or meat at a produce, bulk food or meat department within a grocery store, supermarket, produce or other similar retail services.



As noted above, the proposed Bag Ordinance would require regulated retail services to impose a mandatory charge for each recyclable paper checkout bag provided. Food service establishments would not be required to charge for each recyclable paper checkout bag. The checkout bag charge would be separately stated on the receipt and provided to the customer at the time of sale and shall be identified as the “Checkout Bag Charge.” Any other transaction fee charged by the retailer in relation to providing a checkout bag shall be identified separately from the Checkout Bag Charge. The Checkout Bag Charge would be completely retained by the affected retailers to compensate for increased costs related to compliance with the proposed Bag Ordinance, actual costs associated with providing recyclable paper checkout bags or reusable bags, and costs associated with a store’s educational materials or education campaign encouraging the use of reusable bags.

The complete Draft Ordinance is contained in Appendix D.

PROJECT OBJECTIVES

The City’s objectives for the proposed Bag Ordinance are to:

- *Reduce the environmental impacts of pollution in local creeks, baylands, public parks and open spaces, in the San Francisco Bay, in the marine environment, and in landfills (particularly Kirby Canyon Landfill) related to single-use plastic checkout bags*
- *Reduce the number of single-use bags distributed by retailers and food service establishments that are used by customers in Palo Alto*
- *Promote a shift toward the use of long-lasting and durable reusable bags by retail customers in Palo Alto*
- *Deter the use of paper bags by customers in Palo Alto*
- *Reduce waste and move toward zero waste within Palo Alto*

ALTERNATIVES

As required by the California Environmental Quality Act (CEQA), the Environmental Impact Report (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 proposed Bag Ordinance would not be adopted. Thus, the use of checkout bags at retail stores in Palo Alto would not change compared to current conditions. The City’s existing Plastic Bag Restriction Ordinance would still be in place and would continue to require “supermarkets” to provide only reusable bags and/or recyclable paper bags to customers at the point of sale (but would not require them to charge for reusable or paper bags). However, under the No Project alternative, only seven stores (plus two stores that were under construction at the time of this analysis as described in Section 2.0, Project Description) would be required to adhere to the existing ordinance. Thus, under this alternative, single-use plastic and paper carryout bags would continue to be available free-of-charge to customers at most retail stores in Palo Alto.*



- **Alternative 2: Food Service Establishments (FSE) Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely** - This alternative assumes the proposed Bag Ordinance would prohibit all Palo Alto retail services (including supermarkets) from providing single-use plastic bags to customers at the point of sale and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. However, under this alternative, food service establishments would be exempt from the Ordinance. In other words, food service establishments would be permitted to distribute single-use plastic bags and paper bags free-of-charge to customers in Palo Alto. As a result of the exclusion of food service establishments from the ban on single-use plastic bags, it is anticipated that this alternative would increase the use of single-use plastic bags and decrease the use of recyclable paper and reusable bags compared to the Proposed Bag Ordinance.
- **Alternative 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at Food Service Establishments, No Plastic at Either** - This alternative would prohibit all Palo Alto retail services (including supermarkets) and food service establishments from providing single-use plastic bags to customers at the point of sale, but would increase the mandatory charge for a recyclable paper or reusable checkout bag at retail services from \$0.10 to \$0.25 initially rather than one year after ordinance implementation. As a result of the subsequent \$0.15 mandatory charge increase per paper bag at retail services, it is anticipated that this alternative would further promote the use of reusable bags since customers would be deterred from purchasing paper bags due to the additional cost. Please note that similar to the proposed Bag Ordinance, under this alternative food service establishments would not be required to charge for paper bags.
- **Alternative 4: \$0.10 for Paper Bags at Both Retail Services and Food Service Establishments, No Plastic at Either** - Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, under this alternative, mandatory charge of \$0.10 for recyclable paper bags would apply to food serve establishments as well as retail establishments in the City. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. As a result of the mandatory charge for paper bags at all retailers and food service establishments, it is anticipated that this alternative would further promote the use of reusable bags or not using bags since customers at all retail establishments (including food service establishments) would be deterred from purchasing paper bags due to the cost.
- **Alternative 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and Food Service Establishments, No Plastic at Either** - Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, under this alternative, a mandatory charge of \$0.25 for recyclable paper bags would apply to food serve establishments as well as retail establishments in the City. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. As a result of the \$0.25 mandatory charge for recyclable paper bags at all retailers and food service establishments, it is anticipated that this



alternative would further promote the use of reusable bags since customers at all retail services and at food service establishments would be deterred from purchasing paper bags due to the cost.

- ***Alternative 6: Food Service Establishments Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*** – This alternative assumes that the Bag Ordinance would restrict food service establishments from providing single-use plastic checkout bags at the point of sale but would not apply to other retail services (except supermarkets as they are already prohibited from providing single-use plastic bags under the existing ordinance). In addition, similar to the proposed Bag Ban Ordinance, under this alternative, food service establishments would not be required to charge a fee for the use of paper bags. In other words, food service establishments would not be permitted to distribute single-use plastic bags, but would be permitted to distribute paper bags free-of-charge to customers in Palo Alto. As a result of the inclusion of food service establishments from the ban on single-use plastic bags, it is anticipated that this alternative would decrease the use of single-use plastic bags at food service establishments and increase the use of recyclable paper bags, since food service establishment customers would be more likely to use a paper bag at no cost.
- ***Alternative 7: No Plastic or Paper at Either Retail or Food Service Establishments*** - Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, this alternative would also prohibit retailers and food service establishments from providing paper carryout bags to customers at the point of sale. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. In addition, because paper bags would also be prohibited from being distributed at all retailers and food service establishments, it is anticipated that this alternative would further promote the use of reusable bags (or not using a bag), since customers at all retail services and at food service establishments would be required to either bring their own bag, purchase a reusable bag or simply not use a bag at all.

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED BAG ORDINANCE

Table ES-1 includes a brief description of the environmental issues relative to the proposed Bag 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 The proposed Bag Ordinance could potentially alter processing activities related to checkout bag production, which has the potential to increase air pollutant emissions. However, the proposed Bag Ordinance is expected to substantially reduce the number of single-use plastic checkout bags, thereby reducing the amount of total bags manufactured and overall emissions associated with bag manufacture and use. Therefore, air quality impacts related to alteration of processing activities would be Class IV, <i>beneficial</i> .	Mitigation is not required.	The impact would be beneficial without mitigation.
Impact AQ-2 Implementation of the proposed Bag Ordinance would generate air pollutant emissions associated with an incremental increase in truck trips to deliver paper and reusable checkout bags to local retailers. However, emissions would not exceed BAAQMD operational significance thresholds. Therefore, operational air quality impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.
BIOLOGICAL RESOURCES		
Impact BIO-1 The proposed Bag Ordinance would incrementally increase the number of paper and reusable bags within Palo Alto. However, the reduction in the amount of single-use plastic bags would be expected to reduce the amount of non biodegradable plastic entering coastal and marine habitats, 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 Implementation of the proposed Bag Ordinance would incrementally increase GHG emissions compared to existing conditions. However, emissions would not exceed thresholds of significance. Impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	The impact would be less than significant without mitigation.
Impact GHG-2 The proposed Bag Ordinance would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	The impact would be less than significant without mitigation.



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

Impact	Mitigation Measures	Significance After Mitigation
HYDROLOGY/WATER QUALITY		
Impact HWQ-1 Although the proposed Bag Ordinance would incrementally increase the number of recyclable paper and reusable bags used in Palo Alto, the overall reduction in the total amount of checkout bags would incrementally reduce the amount of litter and waste entering storm drains, improving water quality. This would be a Class IV, <i>beneficial</i> , effect.	Mitigation is not required.	The impact would be beneficial without mitigation.
Impact HWQ-2 The proposed Bag Ordinance 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 to existing regulations including NPDES Permit requirements, AB 258 and the California Health and Safety Code. Therefore, impacts to water quality from altering bag processing activities would be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.
UTILITIES AND SERVICE SYSTEMS		
Impact U-1 The increased use of reusable bags within Palo Alto as a result of the proposed Bag Ordinance would incrementally increase water demand due to the washing of reusable bags. However, sufficient water supplies are available to meet the demand created by reusable bags. Therefore, water supply impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.
Impact U-2 Water use associated with washing reusable bags would incrementally increase wastewater generation in the City. However, projected wastewater flows would remain within the capacity of the City's wastewater collection and treatment system, and would not exceed applicable wastewater treatment requirements of the RWQCB. Impacts would be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.



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

Impact	Mitigation Measures	Significance After Mitigation
Impact U-3 The proposed Bag Ordinance would alter solid waste generation associated with bag use in Palo Alto. However, projected future solid waste generation would remain within the capacity of local landfills. Impacts would therefore be Class III, <i>less than significant</i> .	Mitigation is not required.	Impacts would be less than significant without mitigation.

SUMMARY OF ENVIRONMENTAL IMPACTS OF PROJECT ALTERNATIVES

Considerations:

The total bag numbers assumed for the proposed Bag Ordinance are first year estimates only. In the second year, the bag numbers and positive impacts for Alternative 3 apply. Charging a larger fee on paper checkout bags typically results in a more significant decrease in the use of single-use checkout bags and resulting decrease in potential impacts.

Air Quality:

Air quality impacts from the various alternatives are related to bag manufacture and truck trips for delivery of bags. Except for No Project alternative and Alternative 6, the alternatives have a beneficial impact on ozone and atmospheric acidification. While there is some minor variation among the alternatives for the number of truck trips, neither the proposed Bag Ordinance nor any of the alternatives exceed any Bay Area Air Quality Management District thresholds of significance.

Biological Resources:

The impact on biological resources relates to single-use bag litter entering the environment and causing impacts, including ingestion by and entanglement of wildlife. The proposed Bag Ordinance and all alternatives except the No Project alternative, have a beneficial impact on biological resources. The alternatives that ban plastic bags have a greater beneficial impact (proposed Bag Ordinance, Alternative 3, 4, 5 and 7).

Greenhouse Gas Emissions:

Greenhouse gas emissions relate to the manufacture, use, and disposal of bags. The proposed Bag Ordinance and all alternatives have less than significant impacts on greenhouse gas emissions. As paper bags have a higher per bag estimate of greenhouse gas impacts, increase in paper bag use results in slight increases of greenhouse gas emissions. As a result, Alternative 3 (also the second year of the proposed Bag Ordinance) and Alternative 5, both of which increase the checkout bag fee to \$0.25, as well as Alternative 7 which bans both plastic and paper bags, show a net decrease in greenhouse gas emissions. The proposed ordinance results in 0.006



metric tons CO₂E per person per year. In comparison, one car produces 4.6 metric tons of GHG emissions per year.¹

Hydrology/Water Quality:

Hydrology/Water Quality impacts relate both to the production of bags and the potential for litter. All alternatives have less than significant impacts on water quality relating to the production of bags. With respect to litter, the proposed Bag Ordinance and Alternatives 3, 4, 5 and 7 have a beneficial impact on water quality by reducing plastic bag litter and its impacts on water quality.

Water and Wastewater:

Water and Wastewater impacts relate to the water demand and increase in wastewater from washing reusable bags. The impacts for the proposed Bag Ordinance and the alternatives that increase reusable bag use (alternatives 2, 3, 4, 5 and 7) slightly increase water demand and wastewater discharge due to bag washing, however, the impacts are less than significant.

Solid Waste:

The estimate of solid waste generation changes, resulting from the proposed Bag Ordinance and the alternatives, is based on two data sets. One of the datasets estimates a reduction in solid waste, while the other estimates an increase in solid waste, both incorporating recycling rates but including different estimates of bag weights. The EIR is based on the worst case scenario from the data set that shows a potential increase in solid waste from the proposed Bag Ordinance. Even using the conservative data and assumptions, the proposed Bag Ordinance and the alternatives have a less than significant impact on solid waste generation. Alternatives 3 (also second year of proposed ordinance) and 5 result in an estimated net decrease of solid waste due to the reduction of paper bag use caused by the higher checkout fee of \$0.25. And, Alternative 7 results in an estimated net decrease of solid waste due to prohibiting both plastic and paper carryout bags at all retailers and food service establishments.

Table ES-2 includes a comparison of impacts for each of the seven alternatives evaluated.

¹ The annual use of an automobile driving an average of 12,000 miles per year and with an average 22.9 miles per gallon (MPG) consumption emits 4.6 metric tons of CO₂E per year (one metric ton is equivalent to 2,205 pounds). Households that have a sport utility vehicle (SUV) or light duty truck drive and drive an average of 14,500 miles per year with an average MPG of 16.2 emit 7.9 metric tons per year (SAIC, *Public Transportation's Contribution to U.S. Greenhouse Gas Reduction*, September 2007).



Table ES-2
Impact Comparison and Ranking of Project Alternatives
Compared with Current Ordinance/“No Project” Alternative

Issue	<p>Proposed Bag Ordinance <i>Retail: No plastic bags, 10 cent store charge for paper, 25 cent after one year;¹ FSE: No plastic, no charge for paper</i></p> <p><i>Values below show absolute value and net change (either increase or decrease) compared to existing conditions</i></p>	<p>Alt 1: No Project</p> <p><i>Current ordinance remains, i.e., no plastic bags at grocery stores, no charge for paper. FSE exempt</i></p> <p><i>Values below are all existing conditions.</i></p>	<p>Alt 2: FSE Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely*</p>	<p>Alt 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at FSE, No Plastic at Either*</p> <p><i>Foregoes first step \$0.10 cent retail charge</i></p>	<p>Alt 4: \$0.10 for Paper Bags at Both Retail Services and FSE, No Plastic at Either*</p> <p><i>No increase to \$0.25 for retail or FSE</i></p>	<p>Alt 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and FSE, No Plastic at Either*</p>	<p>Alt 6: FSE Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*</p>	<p>Alt 7: No Plastic or Paper at Either Retail or FSE *</p>
Air Quality	<p>Ozone 282 kg per year</p> <p>Atmospheric Acidification 19,745 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 314 kg and Atmospheric Acidification by 8,356 kg</p> <p>Net increase of truck trips (32) and thus mobile emissions</p>	<p>Ozone 596 kg per year</p> <p>Atmospheric Acidification 28,101 kg per year</p> <p>13 Truck Trips per Year</p>	<p>Ozone 273 kg per year</p> <p>Atmospheric Acidification 18,480 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 323 kg and Atmospheric Acidification by 9,621</p> <p>Net increase of truck trips (26) and thus mobile emissions</p>	<p>Ozone 100 kg per year</p> <p>Atmospheric Acidification 7,317 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 496 kg and Atmospheric Acidification by 20,784 kg</p> <p>Net increase of truck trips (4) and thus mobile emissions</p>	<p>Ozone 244 kg per year</p> <p>Atmospheric Acidification 17,156 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 352 kg and Atmospheric Acidification by 10,945 kg</p> <p>Net increase of truck trips (26) and thus mobile emissions</p>	<p>Ozone 81 kg per year</p> <p>Atmospheric Acidification 6,022 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 515 kg and Atmospheric Acidification by 22,079 kg</p> <p>Net increase of truck trips (1) and thus mobile emissions</p>	<p>Ozone 605 kg per year</p> <p>Atmospheric Acidification 29,639 kg per year</p> <p>Increases emissions from existing conditions for Ozone by 9 kg and Atmospheric Acidification by 1,538 kg</p> <p>Net increase of truck trips (5) and thus mobile emissions</p>	<p>Ozone 16 kg per year</p> <p>Atmospheric Acidification 1,621 kg per year</p> <p>Reduces emissions from existing conditions for Ozone by 580 kg and Atmospheric Acidification by 26,480 kg</p> <p>Net decrease of truck trips (8) and thus decrease mobile emissions</p>
Biological Resources	<p>No plastic bags allowed, thus no plastic bag litter affecting marine resources.</p>	<p>Plastic bag litter from both retail services and food service establishments Approximately 26 million plastic bags used which if littered may affect marine resources.</p>	<p>Although fewer than existing conditions, would allow FSEs to distribute plastic bags (estimated 1,296,193 per year) which may become litter and affect marine resources.</p>	<p>No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (6.22 million fewer paper bags).</p> <p>Thus less paper litter.</p>	<p>No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (1.3 million fewer paper bags).</p> <p>Thus less paper litter.</p>	<p>No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (6.87million fewer paper bags).</p> <p>Thus less paper litter.</p>	<p>No plastic bags allowed at FSEs. Increase of paper bags compared to existing conditions 1.3 million more paper bags.</p>	<p>No plastic bags allowed. No paper bags allowed (9.07 million fewer paper bags allowed than proposed Bag Ordinance).</p> <p>Thus less paper litter.</p>
Greenhouse Gas Emissions	<p>1,112 metric tons CO₂e</p> <p>A net increase of 421 metric tons CO₂e compared to existing conditions.</p>	<p>691 metric tons CO₂e</p>	<p>993 metric tons CO₂e</p> <p>A net increase of 302 metric tons CO₂e compared to existing conditions.</p>	<p>385 metric tons CO₂e</p> <p>A net decrease of 306 metric tons CO₂e compared to existing conditions.</p>	<p>960 metric tons CO₂e</p> <p>A net increase of 269 metric tons CO₂e compared to existing conditions.</p>	<p>309 metric tons CO₂e</p> <p>A net decrease of 382 metric tons CO₂e compared to existing conditions.</p>	<p>811 metric tons CO₂e</p> <p>A net increase of 120 metric tons CO₂e compared to existing conditions.</p>	<p>52 metric tons CO₂e</p> <p>A net decrease of 639 metric tons CO₂e compared to existing conditions.</p>
Hydrology/Water Quality	<p>No plastic bag litter thus improvement to litter/waste that enters storm drains.</p> <p>Increased production of paper bags (9,073,352 additional paper bags) which may increase water quality impacts associated with production and manufacturing.</p>	<p>Some plastic bag litter and waste enters storm drains.</p> <p>Production of plastic and paper bags has some less than significant water quality impacts.</p>	<p>Some plastic bag litter as 1,296,193 plastic bags per year would still be in City.</p> <p>Increased production of paper bags (7,777,159 additional paper bags) which may increase water quality impacts associated with production and manufacturing.</p>	<p>No plastic bag litter thus improvement to litter/waste that enters storm drains.</p> <p>Increased production of paper bags (2,851,625 additional paper bags) which may increase water quality impacts associated with production and manufacturing.</p>	<p>No plastic bag litter thus improvement to waste that enters storm drains.</p> <p>Increased production of paper bags (7,777,159 additional paper bags) which may increase water quality impacts associated with production and manufacturing.</p>	<p>No plastic bag litter thus improvement to waste that enters storm drains.</p> <p>Increased production of paper bags (2,203,528 additional paper bags) which may increase water quality impacts associated with production and manufacturing.</p>	<p>No plastic bag litter from FSEs thus improvement to waste that enters storm drains compared to existing conditions.</p> <p>Increased production of paper bags (1.3 million additional paper bags) which may increase impacts associated with production and manufacturing.</p>	<p>No plastic bag litter thus improvement to waste that enters storm drains.</p> <p>Decreased production of paper bags as none would be distributed within City. However, increased production of reusable bags (174,488 additional reusable bags) which may increase impacts associated with production and manufacturing.</p>



Table ES-2
Impact Comparison and Ranking of Project Alternatives
Compared with Current Ordinance/"No Project" Alternative

Issue	Proposed Bag Ordinance <i>Retail: No plastic bags, 10 cent store charge for paper, 25 cent after one year;¹ FSE: No plastic, no charge for paper</i> <i>Values below show absolute value and net change (either increase or decrease) compared to existing conditions</i>	Alt 1: No Project <i>Current ordinance remains, i.e., no plastic bags at grocery stores, no charge for paper. FSE exempt</i> <i>Values below are all existing conditions.</i>	Alt 2: FSE Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely*	Alt 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at FSE, No Plastic at Either* <i>Foregoes first step \$0.10 cent retail charge</i>	Alt 4: \$0.10 for Paper Bags at Both Retail Services and FSE, No Plastic at Either* <i>No increase to \$0.25 for retail or FSE</i>	Alt 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and FSE, No Plastic at Either*	Alt 6: FSE Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*	Alt 7: No Plastic or Paper at Either Retail or FSE *
Utilities and Service Systems								
Water and Wastewater <i>AFY = Acre feet per year</i>	Water: 18.52 AFY Wastewater: 16,541 gallons per day	Water: 0 AFY Wastewater: 0 gallons per day <i>(no increase in the number of reusable bags, therefore no increase in water/wastewater)</i>	Water: 18.52 AFY Wastewater: 16,541 gallons per day	Water: 25.55 AFY Wastewater: 22,661 gallons per day	Water: 20.52 AFY Wastewater: 17,864 gallons per day	Water: 26.07 AFY Wastewater: 23,285 gallons per day	Water: 0 AFY Wastewater: 0 gallons per day <i>(zero (0) increase in the number of reusable bags, therefore no increase in water/wastewater compared to existing conditions)</i>	Water: 28.5 AFY Wastewater: 25,448 gallons per day
Solid Waste <i>Estimates utilize the more conservative Boustead data as a worst case scenario</i>	0.59 tons per day Net increase of 0.27 tons per day <i>99 more tons per year</i>	0.32 tons per day 128 tons per year	0.5 tons per day Net increase of 0.18 tons per day <i>66 tons per year</i>	0.18 tons per day Net decrease of 0.14 tons per day <i>51 less tons per year</i>	0.5 tons per day Net increase of 0.179 tons per day <i>65 more tons per year</i>	0.14 tons per day Net decrease of 0.18 tons per day <i>66 less tons per year</i>	0.39 tons per day Net decrease of 0.07 tons per day <i>26 less tons per year</i>	0.00003 tons per day Net decrease of 0.319 tons per day <i>117 less tons per year</i>
Bags	Plastic	0	25,923,864	1,296,193	0	0	24,627,671	0
	Paper	9,073,352	3,108,000	7,777,159	2,851,625	7,777,159	1,296,193	0
	Reusable	324,048	111,000	324,048	443,697	348,975	0	498,536
	Total	9,397,400	29,142,864	9,397,400	3,295,322	812,6134	2,659,688	25,923,864

¹After the first year this alternative would have benefits of Alternative 3
All numbers are annual unless otherwise noted. Impacts assume results after one year of ordinance implementation.
FSE=Food Service Establishment (e.g., restaurants, food trucks, etc.)
* Values show absolute value and net change (either increase or decrease) compared to existing conditions



ASSUMPTIONS

This EIR is based on existing and best available data. A detailed study of Palo Alto would have been cost-prohibitive and was not performed, because existing data sets contain conservative assumptions intended as a general assessment of potential impacts. Even with conservative assumptions, the EIR concludes that impacts of the proposed Bag Ordinance are either beneficial or not significant. Specifically, the EIR is conservative in its assumptions in the following ways:

1. **No Bag Option:** The EIR does not account for customers choosing not to use a bag, which may be a common occurrence when faced with a fee and not having a reusable bag at their disposal. Preliminary surveys at Palo Alto grocery stores indicate that approximately 21% percent of customers do not use a bag (City of Palo Alto Annual Survey of Paper, Plastic and Reusable Bag Use, Updated 2012) . It is also likely that restaurant customers would forgo a bag if charged. Due to limited scientifically accepted data, however, the EIR does not address these issues and conservatively assumes a shift towards reusable bag use. As a result, the water use impact, air quality and GHG emissions impacts for reusable bags may be overstated.
2. **Bag Washing:** The EIR assumes that reusable bags are washed separately weekly from other laundry, which may not actually occur, as consumers would likely include bags with regular washes. This results in a conservative estimate of water used for bag washing.
3. **Reusable bag use:** While the definition in the ordinance includes a statement that reusable bags must be able to be used 125 times, the EIR assumes 52 uses to be conservative. This conservative assumption would overestimate solid waste and other impacts as a result of reusable bags.
4. **Bag Sizes:** The EIR assumes a standard grocery paper checkout bag as the size for all paper checkout bags, as well as a one-to-one replacement ratio of plastic bags with paper checkout bags for approximately 35% of the bags. Paper bags used at food service establishments and retail stores may vary considerably in size, however, no data exists to reliably estimate the impact of these various sizes. In addition, plastic checkout bags are smaller than paper grocery bags and the one-to-one replacement assumption overestimates the number of paper bags used. The bag size assumption results in a very conservative and likely overestimated solid waste generation, greenhouse gas emissions, and air quality emissions impact analyses as a result of paper bags usage.
5. **Existing Bag Use:** Based on an informal survey of food service establishments, about one third of Palo Alto food service establishments already use paper bags, as do many retail stores. This results in a higher estimate of future paper bag use in the EIR, which affects the air quality, greenhouse gas, and solid waste estimates.
6. **Paper Bag Recycling and Composting:** Paper bags in Palo Alto are likely recycled or, as part of the commercial and future residential program, may be composted and would not increase solid waste estimates. Plastic bags, however, while accepted in the



Palo Alto's recycling program, are not as likely to be recycled or composted and cause operational issues for solid waste handling equipment. Assuming that paper bags become solid waste, results in the solid waste impacts of the project and the alternatives to be very conservative and likely overstated.

7. Food Service Establishment use of Plastic Bags: Plastic bag use by food service establishments was assumed to be approximately 5% of total plastic bag use. This assumption is consistent with the rates used in the County of San Mateo Reusable Bag Ordinance Final Program EIR, SCH#2012042013, October 2012 and the Sunnyvale Single-Use Carryout Bag Ordinance. Final Environmental Impact Report, SCH#2011062032, December 2011.



1.0 INTRODUCTION

This document is a Draft Environmental Impact Report (EIR) for the proposed Disposable Checkout Bag Ordinance (the “Bag Ordinance”) in the City of Palo Alto. The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. Food Service Establishments would be exempt from the paper bag charge. The intent of the proposed Bag Ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce waste overall, as well as to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed Bag Ordinance is described in greater detail in Section 2.0, *Project Description*. This section discusses:

- *The project 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 PROJECT BACKGROUND

The City of Palo Alto adopted an ordinance restricting single-use plastic bags on March 30, 2009 (CMR 138:09). This existing Plastic Bag Restriction Ordinance became effective on September 18, 2009 and requires that “supermarkets,” as defined by the ordinance, shall provide only reusable bags and/or recyclable paper bags to customers at the point of sale. Thus, supermarkets in Palo Alto are currently restricted from providing single-use plastic checkout bags. In November 2009, staff promised to return to Council with a recommendation to implement a fee system for single-use paper bags (CMR:401:09). This Environmental Impact Report (EIR) is a requirement of a settlement with the Save the Plastic Bag Coalition (STPBC—an industry organization referred to as Savetheplasticbag.org in previous City reports) per 2009 litigation brought against the City following adoption of the City’s 2009 ordinance. Palo Alto completed a Mitigated Negative Declaration (MND) in 2009, which was prepared to comply with the California Environmental Quality Act (CEQA). Although the MND addressed the substantive issues raised in the litigation by STPBC, Palo Alto settled the case in order to save taxpayers the cost of a trial. The settlement, however, requires the City to prepare an EIR prior to extending the ordinance to include other stores. This EIR has been prepared to comply with this agreement. However, in preparing this EIR the City does not intend to waive its right to argue in any subsequent litigation that the proposed Bag Ordinance is exempt from CEQA under both prior and recently decided case precedent.

Although large grocery stores in Palo Alto have complied with the City’s existing ordinance, plastic litter, including plastic carryout bags, continues to be found in local creeks. In a recent City-sponsored creek clean up 85 plastic bags were picked up along a one-mile stretch of Matadero Creek, a majority of which were single use checkout bags (personal communication,



Julie Weiss, June 2012). Bags are easily blown into waterways, across City boundaries, and from freeways, and are consistently found during creek cleanups.

Plastic carryout bags are designed to hold products for a short period of time, and essentially do not decompose in natural environments. In addition, local cities are required by the Municipal Regional Permit for stormwater to reduce trash by 40% by 2014, 70% by 2017 and 100% by 2022. Plastic bag bans are one of the actions that cities can implement to comply with these stringent requirements in a cost-effective manner. The short-term trash reduction plan submitted by Palo Alto claims a 6% trash reduction with the current single use bag ban (which applies only to supermarkets); however, cities with more comprehensive bans are claiming 12% reduction of trash.

Given the ubiquitous presence of plastic bags and their negative contribution to pollution in the local and global environment, City staff seeks to expand the plastic carryout bag ban to include all retail and food service establishments and to establish a store charge for paper bag use with the goal of incentivizing consumers to use reusable bags in lieu of single-use paper or single-use plastic. City staff has prepared a draft Bag Ordinance consistent with the Council's direction. This EIR analyzes the proposed Bag Ordinance's environmental impacts in accordance with CEQA.

In addition to Palo Alto, several cities and counties in California have previously considered or passed similar ordinances. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma.

1.2 PURPOSE AND LEGAL AUTHORITY

The proposed Bag Ordinance requires the discretionary approval of the City of Palo Alto City Council. Therefore, it is subject to the requirements of CEQA. In accordance with Section 15121 of the *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 Palo Alto decision-makers. The process will culminate with City Council hearings to consider certification of a Final EIR and approval of the Bag Ordinance. Section 2.6 in Section 2.0, *Project Description*, provides a detailed description of approvals that may be necessary for the Bag Ordinance.

1.3 SCOPE AND CONTENT

This EIR addresses the issues that the City of Palo Alto determined could potentially have significant effects. The issues addressed in this EIR include:

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

This EIR addresses the issue areas referenced above that were identified in an Initial Study as having potentially significant environmental impacts. The Initial Study is included in Appendix A.

The EIR references pertinent City policies and guidelines, certified EIRs and other adopted CEQA documents, and background documents prepared by the City in preparing the proposed Bag Ordinance. 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 six alternative scenarios for the Bag 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 *CEQA Guidelines* state:

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

A Notice of Preparation (NOP) of an EIR was prepared for the proposed Bag Ordinance and distributed on June 12, 2012 for agency and public review for a 30-day review period. The City received four letters in response to the NOP. The City also conducted two public scoping meetings during the NOP comment period. These took place on June 26 and June 28, 2012. The



comments received during the NOP comment period primarily related to alternative projects including a “No Food Service Establishment” alternative (See Alternative #2 in Section 6.0, *Alternatives*), a “\$1.00 fee for paper bags” alternative (see Section 6.6, *Alternatives Considered but Rejected*), a “ban on both plastic and paper bags” alternative (see Section 6.6, *Alternatives Considered but Rejected*), and a “fee for both plastic and paper bags” alternative (see Section 6.6, *Alternatives Considered but Rejected*). The NOP, Initial Study, and NOP comment letters for the project are presented in Appendix A.

1.4 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City of Palo Alto 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. 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 Draft EIR 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 Draft EIR 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 Final EIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).



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2.0 PROJECT DESCRIPTION

This section describes the proposed 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 Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303
Contact: Julie Weiss, Environmental Specialist
(650) 329-2117

2.2 PROJECT LOCATION

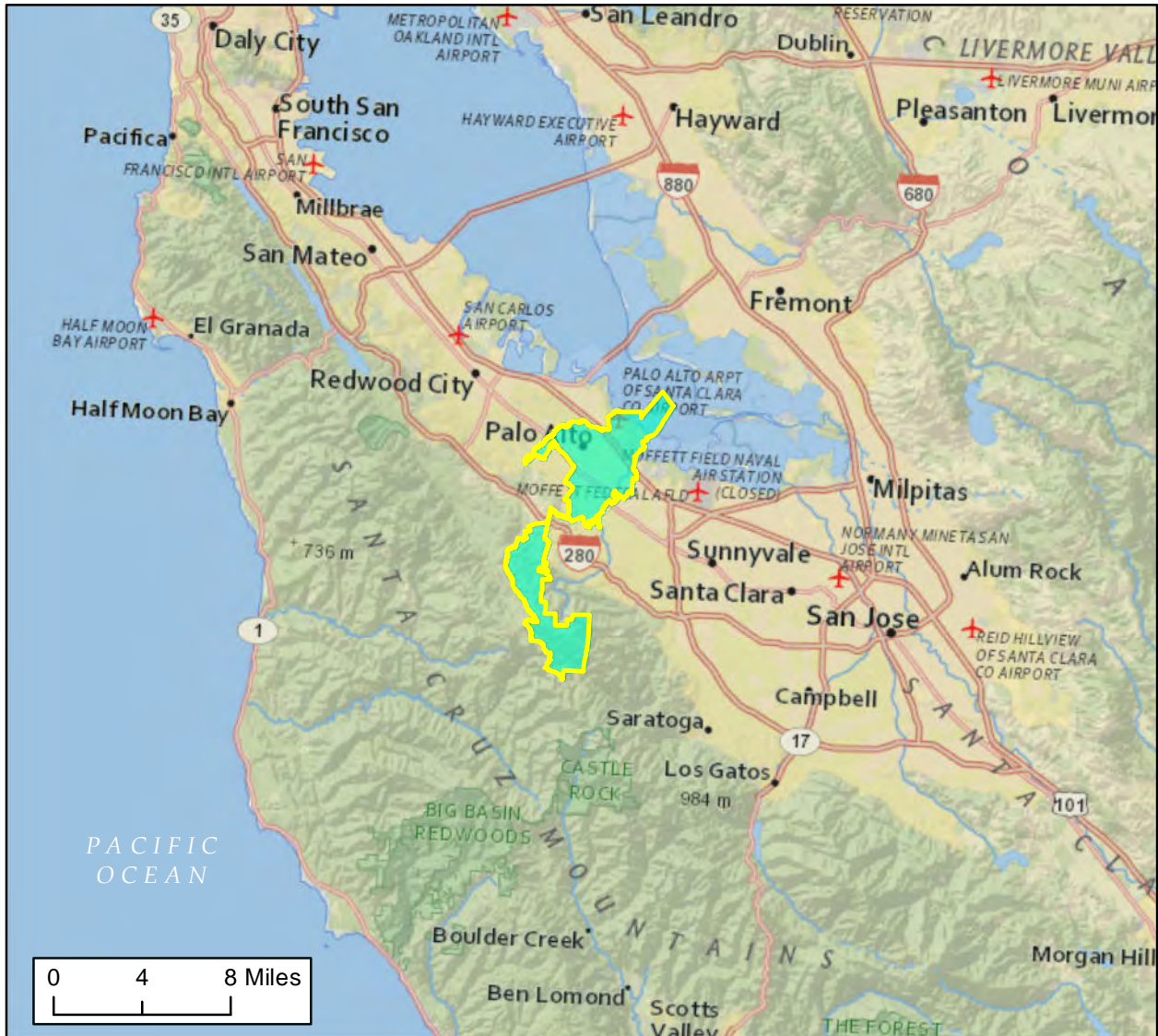
The proposed Disposable Checkout Bag Ordinance (the “Bag Ordinance”), referred to as the Expanded Plastic Bag Restriction ordinance in the Notice of Preparation, focuses on plastic bags as a first step in total single-use bag reduction and would apply to retail services and food service establishments located throughout Palo Alto’s corporate limits. Palo Alto is located in Santa Clara County and is approximately 26 square miles in size, of which approximately one-third is open space. The City’s boundaries extend from San Francisco Bay on the east to the Skyline Ridge of the coastal mountains on the west, with Menlo Park to the north and Mountain View to the south. Palo Alto contains a variety of land uses, including residential (single- and multi-family), commercial, industrial, office, and public facilities. Figure 2-1 illustrates the location of Palo Alto in its regional context, and Figure 2-2 shows an aerial of the City and surrounding communities.

2.3 EXISTING CHARACTERISTICS


2.3.1 Checkout Bags in Palo Alto

Palo Alto adopted an ordinance restricting single-use plastic bags on March 30, 2009 (CMR 138:09). This existing Plastic Bag Restriction Ordinance became effective on September 18, 2009 and requires that “supermarkets,” as defined by the ordinance, shall provide only reusable bags and/or recyclable paper bags to customers at the point of sale. Thus, supermarkets in Palo Alto are currently restricted from providing single-use plastic checkout bags. There are currently seven full service grocery stores that meet the Supermarket definition: JJ&F Food Store, Piazza's Fine Foods, Mollie Stone's Supermarkets, Whole Foods Market, Country Sun, Trader Joe’s and Safeway). In addition, two new stores (the Fresh Market and Miki’s Farm Fresh Produce) are currently being built, though as of the finalization of this document they are not yet complete and open for business. The existing ordinance also requires that all retail establishments within the City shall provide the following to customers: paper bags only, or a choice between paper or plastic bags. In November 2009, staff promised to return to Council with a recommendation of implementing a fee system for single-use paper bags (CMR:401:09).





Imagery provided by National Geographic Society, ESRI and its licensors, 2012.

 Project Location




Regional Location

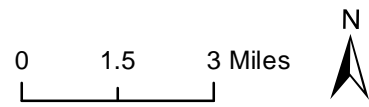
Figure 2-1

Disposable Checkout Bag Ordinance EIR
Section 2.0 Project Description



Bing Maps Hybrid: (c) 2010 Microsoft Corporation and its data suppliers. Additional baselayer data from San Mateo County Information Services Department, May 2012.

 Project Location
(City of Palo Alto Boundary)



City of Palo Alto Aerial

Figure 2-2



Based on existing conditions, it is estimated that the proposed Bag Ordinance would apply to approximately 1,270 retailers and 278 food service establishments located within Palo Alto (also known as the “Study Area”). A list of potential stores is included in Appendix E.

Types of Checkout Bags. 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 sufficiently sturdy (for short-term use) carrying sack, but are intended for a single 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. It is also claimed that conventional single-use plastic bags are manufactured by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources and that 85% of plastic bags used in the United States are made in the United States (Stephen L. Joseph, July 22, 2010). Their life cycle begins with the conversion of crude oil or natural gas—non-renewable resources—into hydrocarbon monomers, which are then further processed into polymers (Herrera et al, 2008; County of Los Angeles, 2009). These polymers are connected with heat to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags. Typical single-use plastic bags are approximately five to nine grams in weight, and can be purchased in bulk for approximately two to five cents per bag (AEA Technology, 2009). Single-use plastic bags can be reused by customers, are accepted in Palo Alto’s recycling program and are recyclable once, into products such as plastic lumber for which there are scant or no second recycling options. Approximately 5% of single-use plastic bags in California are currently recycled (US EPA, 2005; Green Cities California MEA, 2010; and Boustead, 2007).

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

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 three dollars wholesale, weigh at least ten times what an HDPE plastic bag weighs and two times what a paper bag weighs, and require greater material consumption on a per bag basis than HDPE plastic bags (ExcelPlas Australia, 2004; City of Pasadena, 2008). Many types of reusable bags are available today. These include: (1) non-woven polypropylene (100% recyclable) ranging from \$1-\$2.50 per bag; (2) cotton canvas bags, which are approximately \$5.00 per bag; (3) bags made from recycled water/soda bottles, which



are approximately \$6.00 per bag; (4) polyester and vinyl, which are approximately \$10.00 per bag; and (5) 100% cotton, which are approximately \$10.00 per bag (Green Cities California MEA, 2010; and, Santa Monica Single Use Carryout Bag Ordinance Final EIR, January 2011).

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

Palo Alto Checkout Bag Consumption. Based on statewide data, currently almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (Green Cities California MEA, 2010; and CIWMB, 2007). As shown in Table 2-1, without the existing Plastic Bag Restriction Ordinance (in other words, prior to when the Plastic Bag Restriction Ordinance went into effect in September of 2009) retail customers in Palo Alto used about 34.8 million plastic bags per year. However, since the existing Plastic Bag Restriction Ordinance bans the use of plastic bags at seven supermarkets¹ in the City (which would use an estimated 1.48 million plastic bags per year per store if not restricted), it is anticipated that the existing plastic checkout bag use in Palo Alto is approximately 25.92 million bags per year. Retail customers in Palo Alto may include residents of other communities and residents of Palo Alto may not necessarily be customers of retailers in the City. However, for this analysis, in order to estimate the existing number of plastic bags used per year in Palo Alto, the statewide data was utilized to apply the number of bags used per person per year rate to the number of residents in Palo Alto. This estimate is considered reasonable and conservative for the purposes of this analysis.

**Table 2-1
 Estimated Single-Use Plastic Checkout Bag Use in Palo Alto**

Area	Population*	Number of Plastic Checkout Bags Used per Person**	Total Plastic Checkout Bags Used Annually
City of Palo Alto	65,544	531	34,803,864
Reduction of Plastic Bag Use as a Result of Existing "Plastic Bag Restriction Ordinance" (6 stores total) ¹			(8,880,000)
Total with implementation of Existing Plastic Bag Restriction Ordinance			25,923,864

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

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

¹ Reduction is based on Existing Ordinance applying to six supermarkets which would have utilized approximately 1.48 million plastic bags per year per store (City of Santa Monica Nexus Study contained in the Santa Monica Single Use Carryout Bag Ordinance Final EIR, January 2011). Please note that this does not take into account the Trader Joe's store as it is store policy to only distribute paper bags (thus prior to the existing ordinance Trader Joe's did not use plastic bags and the two stores currently (as of June 2012) being built (the Fresh Market and Miki's Farm Fresh Produce) since these supermarkets have not yet opened for business at the time of this analysis and therefore are not currently distributing plastic bags.

¹ Please note that prior to the implementation of the existing Ordinance, the Trader Joe's store did not distribute plastic bags as part of the in-store policy. Therefore since plastic bags were not used, the existing Ordinance did not reduce plastic bags at this store but reduced plastic bag use at six stores as described in Table 2-1.



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 location 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 further require 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, transport, and recycling of plastic bags.

Finally, 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:

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. SB 1219 extends the in-store recycling requirement of AB 2449 until 2020.

2.4 PROPOSED BAG ORDINANCE CHARACTERISTICS

The proposed Disposable Checkout Bag Ordinance (the “Bag Ordinance”) would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. Food service establishments would not be required to charge for a recyclable paper checkout bag. It would also revise the definition of “reusable bag” in the existing ordinance to include only bags that are longer-lasting and more durable.



The intent of the proposed Bag Ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce waste overall, as well as to reduce pollution in local creeks, San Francisco Bay, and the marine environment. It is anticipated that by prohibiting single-use plastic checkout bags and requiring a store charge for each paper bag distributed by retailers, the proposed Bag Ordinance would promote a shift to the use of reusable bags by retail customers and reduce the number of single-use plastic and paper checkout bags within Palo Alto.

In the proposed Bag Ordinance, single-use plastic checkout bags are defined as bags made from petroleum or bio-based plastic that are less than 2.25 mils thick (0.00225 inches). The proposed Bag Ordinance would prohibit retail services and food service establishments in Palo Alto from distributing both petroleum and bio-based single-use checkout plastic bags at the point of sale. The proposed Bag Ordinance would not prohibit the distribution of disposable bags provided solely for produce, bulk food or meat at a produce, bulk food or meat department within a grocery store, supermarket, produce or other similar retail services.

As noted above, the proposed Bag Ordinance would require regulated retail services to impose a mandatory charge for each paper checkout bag provided. Food service establishments would not be required to charge for each recyclable paper checkout bag. The checkout bag charge would be separately stated on the receipt and provided to the customer at the time of sale and shall be identified as the "Checkout Bag Charge." Any other transaction fee charged by the retailer in relation to providing a checkout bag shall be identified separately from the Checkout Bag Charge. The Checkout Bag Charge would be completely retained by the affected retailers to compensate for increased costs related to compliance with the Bag Ordinance, actual costs associated with providing recyclable paper checkout bags or reusable bags, and costs associated with a store's educational materials or education campaign encouraging the use of reusable bags.

The staff-prepared working draft of the Bag Ordinance is contained in Appendix D. It is expected that minor modifications to the Bag Ordinance may be made by the Council following additional public outreach and hearings. In addition, the alternatives chapter analyzes the environmental impacts of other more substantive potential changes to the Bag Ordinance that can reasonably be anticipated at this point.

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

The analysis in this EIR assumes that as a result of the proposed Bag Ordinance 100% of the volume of plastic bags currently used in Palo Alto (25,923,864 plastic bags per year) would be replaced by recyclable paper bags (approximately 35%) and reusable bags (approximately 65%), as shown in Table 2-2. Thus, for this analysis, it is assumed that an estimated 9,073,352 recyclable paper bags would replace 35% of the plastic bags currently used in Palo Alto. This 1:1 replacement ratio is considered conservative, because the volume of a single-use paper carryout bag (20.48 liters) is generally equal to approximately 150% of the volume of a single-use plastic bag (14 liters), such that fewer paper bags would ultimately be needed to carry the same number of items. In addition, there are people that decline receiving a bag of any kind.



Preliminary surveys indicate that approximately 25% percent of customers do not use a bag (City of Palo Alto Annual Survey of Paper, Plastic and Reusable Bag Use, Updated 2012). In order to estimate the number of reusable checkout bags that would replace 16,850,512 plastic bags (65% of the estimated number of plastic checkout bags currently used annually in Palo Alto), it is assumed that a reusable carryout bag would be used by a customer once per week for one year (52 times). This is a conservative estimate as a reusable bag, as required by the proposed Bag Ordinance, must have the capability of being used 125 times. Based on the estimate of 52 uses, 16,850,512 single-use plastic bags that would be removed as a result of the Bag Ordinance would be replaced by 324,048 reusable bags. This amounts to about five reusable bags per person per year based on Palo Alto’s current population of 65,544. As shown in Table 2-2, this analysis assumes that the approximately 25.92 million single-use plastic checkout bags currently used in Palo Alto annually would be reduced to approximately 9.4 million total bags as a result of the Bag Ordinance.

**Table 2-2
 Plastic Checkout Bag
 Replacement Assumptions in Palo Alto**

Type of Bag	Replacement Assumption	Bags used Post-Ordinance	Explanation
Single-use Plastic	All removed	0	Because the proposed Bag Ordinance would apply to all retailer services and food establishments, no plastic bags would remain in circulation.
Recyclable Paper	35% ¹	9,073,352	Although the volume of a single-use paper carryout bag is generally 150% of the volume of a single-use plastic bag, such that fewer paper bags would be needed to carry the same number of items, it is conservatively assumed that paper would replace plastic at a 1:1 ratio.
Reusable	65% ¹	324,048	Although a reusable bag is designed to be used hundreds of times (Green Cities California MEA, 2010; Santa Monica Single-Use Carryout Bag Ordinance Final EIR, 2011), it is conservatively assumed that a reusable bag would be used by a customer once per week for one year, or 52 times.
Total		9,397,400	

¹ Rates utilized in the City of San Jose Final EIR, SCH # 2009102095, October 2010.



2.6 PROJECT OBJECTIVES

The City's objectives for the proposed Bag Ordinance are to:

- *Reduce the environmental impacts of pollution in local creeks, baylands, public parks and open spaces, in the San Francisco Bay, in the marine environment, and in landfills (particularly Kirby Canyon Landfill) related to single-use plastic checkout bags*
- *Reduce the number of single-use bags distributed by retailers and food service establishments that are used by customers in Palo Alto*
- *Promote a shift toward the use of long-lasting and durable reusable bags by retail customers in Palo Alto*
- *Deter the use of paper bags by customers in Palo Alto*
- *Reduce waste and move toward zero waste within Palo Alto*

2.7 REQUIRED APPROVALS and PERMITS

The proposed Bag Ordinance would require an amendment to the Palo Alto Municipal Code (CMR 138:09) with discretionary approval by the Palo Alto City Council. The following approvals would be required:

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

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



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3.0 ENVIRONMENTAL SETTING

This section provides a general overview of the environmental setting for the proposed Bag 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

Palo Alto is located in Santa Clara County and encompasses approximately 26 square miles, of which approximately one-third is open space. The City's boundaries extend from San Francisco Bay on the east to the Skyline Ridge of the coastal mountains on the west, with Menlo Park to the north and Mountain View to the south. Palo Alto contains a variety of land uses, including residential (single- and multi-family), commercial, industrial, office, and public facilities. Palo Alto has a current population of 65,544 (California Department of Finance, 2012).

Like most of the San Francisco Bay area, Palo Alto has a Mediterranean climate, with mild, moist winters and comfortably warm, very dry summers. Average daytime summer temperatures are in the high 70s, and during the winter, average daytime high temperatures rarely stay below 50 °F. Palo Alto is in the south-eastern section of the San Francisco Peninsula. Palo Alto is crossed by several creeks that flow north to San Francisco Bay, from South to North: Adobe Creek, Barron Creek, Matadero Creek, and San Francisquito Creek.

Residents in Palo Alto receive water from the City and County of San Francisco's Regional Water System (RWS), operated by the San Francisco Public Utilities commission (SFPUC). This supply is mostly surface water supplies from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts. Electric and gas service within the majority of the City limits are provided by the City of Palo Alto. Wastewater draining from indoor sources in Palo Alto flows through sewer pipes that direct the wastewater to the City's Regional Water Quality Control Plant for treatment before being discharged to the San Francisco Bay.

Palo Alto is served by the Santa Clara Valley Transportation Authority (buses), San Mateo County Transit District (SamTrans) (service to San Mateo County to the north), the Stanford University Free Shuttle, the Palo Alto Free Shuttle, and the Caltrain commuter rail. The US 101, and I-280 freeways run through the City. A segment of State Route 82 also runs through the center of the City, following the path of historic El Camino Real.

Based on existing conditions, it is estimated that the proposed Bag Ordinance would apply to approximately 1,270 retailers and 278 food service establishments located within Palo Alto (also known as the "Study Area"). A list of potential stores is included in Appendix E.

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 a project site, this document analyzes the environmental impacts associated with a proposed ordinance and does not include development or construction activity. As such, the cumulative significance of the proposed Bag Ordinance has been analyzed within the context of other bag ordinances that are approved or pending throughout California. Table 3-1 lists current adopted and pending ordinances in California. These ordinances are considered in the cumulative analyses in Section 4.0, *Environmental Impact Analysis*. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma.

While there may be additional jurisdictions who consider adoption of a similar bag ordinance in the future, the following list is intended to conservatively estimate cumulative impacts related to bag ordinances. Accounting for those jurisdictions who have not yet considered adoption of a bag ordinance would be speculative as there is no reasonable way to quantitatively estimate the impacts associated with those jurisdictions who have “as-yet to consider” such a proposal. Therefore, the following list is a conservative and reasonable estimate of the cumulative projects based upon the best available sources of information for this Draft EIR.

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

Ordinance Location	Proposed Action	Status
City of Calabasas	This ordinance bans the issuance of plastic carryout bags and imposes a ten (10) cent charge on the issuance of recyclable paper carryout bags at regulated stores.	Adopted February 2011 Effective July 2011
City of Carmel-by-the-Sea	This ordinance is a plastic bag ban in all retail stores.	Adopted July 2012 Effective February 2013
City of Carpinteria	This ordinance is the first double bag ban in the state. Starting in July 2012, large retailers as specified are prohibited from distributing single-use paper and plastic bags. Starting in April 2013, plastic bags are banned in all other retail stores including food service establishments.	Adopted March 12, 2012 Carpinteria’s 2012 bag ban was challenged by the Save The Plastic Bag Coalition (STPBC) March 20, 2012. They settled out of court with the agreement that the City would exempt restaurant carryout bags from the ordinance.
City of Dana Point	This ordinance places a ban on single-use plastic bags from all retail stores within city	Adopted March 6, 2012 Effective in larger stores April 1,



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

Ordinance Location	Proposed Action	Status
	limits.	2013, and all other stores October 1, 2013.
City of Fairfax	This ordinance allows all stores, shops, eating places, food vendors and retail food vendors, to provide only recyclable paper or reusable bags as checkout bags to customers.	Adopted August 2007 After legal challenge, adopted by voter initiative November 2008
City of Fort Bragg	This ordinance bans plastic bags and requires a 10 cent paper bag charge in all retail stores.	Adopted May 14, 2012 Effective in large stores December 10, 2012 and all other stores December 2013.
City of Huntington Beach	This ordinance would prohibit distribution of plastic carry-out bags in commercial point of sale purchases within Huntington Beach, and establish a ten (10) cent charge on the issuance of recyclable paper carry-out bags at all stores that meet at least one of the criteria listed below.	A Draft EIR has been prepared and circulated in February 2012. City Council review of the ordinance and certification of the Final EIR is pending.
City of Laguna Beach	This ordinance requires a plastic bag ban in all retail stores. Grocery stores, pharmacies, and convenience/liquor stores must include a 10 cent minimum price requirement on paper bags distributed.	Adopted February 2012 Effective January 1, 2013
City of Long Beach	This ordinance bans plastic carryout bags at all supermarkets and other grocery stores, pharmacies, drug stores, convenience stores, food marts, and farmers markets and would place a ten (10) cent charge on the issuance of recyclable paper carryout bags by an affected store, as defined. The ordinance would also require a store to provide or make available to a customer recyclable paper carryout bags or reusable bags.	Long Beach passed this ordinance in May 2011. But unlike LAC, Long Beach did not issue a statement of overriding consideration for the likelihood of passing the GHG emission threshold of significance. The suit was settled after Long Beach agreed to adopt the County's Statement of Overriding Consideration in October 2011. Addendum to the County of Los Angeles Final EIR certified May 2011. The ordinance was also effective in larger stores starting August 2011, and will expand to others stores in 2012.
City of Los Angeles	The ordinance would prohibit provision of single-use plastic bags at supermarkets. Large markets are allowed to phase out plastic bags over 6 months and then provide free paper bags for 6 months. Smaller markets have a year to phase out plastic bags. After a year, paper bags would be allowed for a charge of 10 cents.	Approved May 2012



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

Ordinance Location	Proposed Action	Status
City of Malibu	This ordinance bans the use of non-compostable and compostable plastic shopping bags for point-of-sale distribution.	Adopted May 2008 Effective November 2009
City of Manhattan Beach	This ordinance bans the distribution of plastic bags at the point-of-sale for all retail establishments in Manhattan Beach.	Adopted July 2008 The California Supreme Court overturned a legal challenge to the ordinance in July 2011, ruling in favor of an appeal by the City of Manhattan Beach affirming the right of small local governments to phase out plastic grocery bags without an EIR.
City of Millbrae	This ordinance bans single-use bags and free paper carryout bags and would apply to all retailers. Stores can charge a minimum of 10 cents per bag, should a customer need to purchase one. Those paper bags sold must be comprised of at least 40 percent post-consumer recycled materials. Thicker reusable plastic bags are allowed but would also need to be imprinted showing the bag is made of at least 40 percent post-consumer recycled materials.	Adopted February 2012. Certified a Negative Declaration. Effective September 1, 2012.
City of Monterey	This ordinance bans plastic bags and places an initial 10 cent minimum price requirement on paper bags for the first year, and 25 cents after.	Adopted December 6, 2011
City of Ojai	An ordinance bans plastic shopping bags and imposes a 10-cent fee on paper bags at grocery stores, supermarkets, convenience stores, liquor stores and gasoline mini-marts.	Adopted April 2012. Effective July 1, 2012.
City of Pasadena	This ordinance bans plastic bags, and imposes a 10 cent minimum price on paper bags.	Adopted November 2011 Effective July 1, 2012 for large stores and supermarkets and December 2012 for convenience stores.
City of San Francisco	Retail stores governed by the ordinance can only provide the following types of bags: a. compostable plastic b. recyclable paper c. reusable bag of any material In February 2012, the ordinance was expanded to all retail and food establishments within the City and requires a minimum ten cent charge for reusable bags.	Adopted April 2007 In February 2012, San Francisco expanded its bag ban and was sued by the STPBC. The two causes of action are related to CEQA compliance and the bag ban for food service establishments. In September 2012, the ruling was in favor of San Francisco on all counts which allows food service establishments to be included under San Francisco's ordinance.
City of San Jose	This ordinance prohibits the distribution of single-use carryout paper and plastic bags at the	Adopted January 2011 Effective January 2012



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

Ordinance Location	Proposed Action	Status
	point of sale (i.e., check-out) for all commercial retail businesses in San José except food service establishments. An exception is made for “green” paper bags containing at least 40 percent recycled content, accompanied by a charge of 10 cents to the customer, with the charge retained by the retailer. For the first two years, paper bags will be sold under this ordinance at 10 cents each; after two years the minimum price per paper bag is 25 cents each.	
City of Santa Cruz	This ordinance bans plastic bags and places a 10 cent paper bag charge.	Adopted July 2012 Effective April 2013
City of Santa Monica	This ordinance: (1) prohibits retail establishments in Santa Monica from providing “single-use plastic carryout bags” to customers at the point of sale; (2) prohibits the free distribution of paper carryout bags by grocery stores, convenience stores, mini-marts, liquor stores and pharmacies; and (3) requires stores that make paper carryout bags available to sell recycled paper carryout bags to customers for not less than ten cents per bag.	Adopted January 2011 Effective September 2011
City of Solana Beach	This ordinance prohibits the provision of plastic bags (except at food service establishments) and allows purchase of paper bags for 10 cents.	Adopted May 2012, amended July 2012
City of Sunnyvale	This ordinance prohibits specified retail establishments in Sunnyvale from providing single-use plastic carryout bags to customers at the point of sale, and creates a mandatory 10 cent (\$0.10) charge for each paper bag distributed by these stores.	Adopted December 2011 Effective June 20, 2012 (grocery stores, convenience stores and large retailers) Effective March 2013 (all retailers)
City of Ukiah	This ordinance prohibits retail establishments (except eating establishments) in Ukiah from providing single-use bags. Recycled-content paper bags or reusable bags could be provided at a minimum charge of 10 cents per bag.	Adopted May 2012 Effective in large stores 180 days after adoption and 545 days for all other stores.
City of Watsonville	This ordinance prohibits retail establishments from providing non-recycled paper or plastic bags and allows sale of recycled and recyclable paper bags for a 10 cent charge.	Adopted May 2012
City of West Hollywood	This ordinance prohibits retail establishments from providing non-recycled paper or plastic bags and places a 10 cent recyclable paper bag charge.	Adopted August 2012
County of Alameda (Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union	This ordinance prohibits the distribution of single-use carryout paper and plastic bags at the point of sale (i.e., check-out) for all commercial retail businesses in Alameda County. Exception would be made for recycled paper or reusable bags containing a specified minimum percentage of recycled content, which can only be provided to customers for a nominal charge (ten cents on or before January 1, 2015	Adopted January 2012 Effective January 1, 2013



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

Ordinance Location	Proposed Action	Status
City)	and 25 cents on or after January 1, 2015) to cover the cost to the business of providing the bags.	
County of Los Angeles	This ordinance bans the issuance of plastic carryout bags and imposes a ten (10) cent charge on the issuance of recyclable paper carryout bags at all supermarkets and other grocery stores, pharmacies, drug stores, convenience stores, and foodmarts, in unincorporated Los Angeles County. The ordinance requires a store to provide or make available to a customer only recyclable paper carryout bags or reusable bags. The ordinance would also encourage a store to educate its staff to promote reusable bags and to post signs encouraging customers to use reusable bags in the unincorporated areas of the County of Los Angeles.	Adopted November 2010 In October 2011, Hilex and some individuals filed a petition to void the LA County ordinance. They alleged that the 10-cent charge on paper bags is really a local special tax that requires voter approval as amended by Prop 26. In March 2012, the Court denied the petition and ruled that a paper bag charge was not a tax under Prop 26. Helix appealed the decision April 2012 and the case is still pending.
County of Marin	This ordinance prohibits the distribution of plastic carryout bags and would charge at least \$0.05 for a recycled paper bag.	Adopted January 2011 In September 2011, Marin County Superior Court found the ordinance “a reasonable legislative and regulatory choice” to protect the environment without causing a significant negative impact. The County had correctly determined the project to be exempt based on its actions to protect the environment and natural resources. STPBC filed an appeal of this decision on November 29, 2011 and the case is still pending.
County of Mendocino	This ordinance bans plastic bags with a 10 cent paper bag charge.	Adopted June 12, 2012 Effective in large stores January 2013, and all other retailers January 2014
County of San Luis Obispo (City and County of San Luis Obispo, Atascadero, Grover Beach, Morro Bay, Paso Robles, and Pismo Beach)	The San Luis Obispo County Integrated Waste Management Authority adopted a plastic bag ban with a 10 cent minimum price requirement on paper bags.	Adopted January 2012 It goes into effect on September 1, 2012 in all seven incorporated cities as well as unincorporated areas of the county. A petition was filed January 30, 2012. The SLO lawsuit had two causes of action, but the second cause was dropped in February. The first cause of action is CEQA compliance. The case is pending.



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

Ordinance Location	Proposed Action	Status
County of San Mateo (unincorporated) and 24 participating municipalities in San Mateo and Santa Clara Counties	This ordinance prohibits the provision of single use plastic bags and places a 10 cent (up to 25 cents in January 2013) charge on recycled paper bags.	Approved by San Mateo County Board of Supervisors October 2012. Effective April 2013.
County of Santa Clara	This ordinance allows affected retail establishments to distribute either a 'green' paper bag or a reusable bag. Reusable bags may be given away or sold and are initially defined (until January 2013) as bags made of cloth or other machine washable fabric that has handles; or a durable plastic bag with handles that is at least 2.25 mils thick and is specifically designed and manufactured for multiple use. 'Green' paper bags may be sold to customers for a minimum charge of \$0.15 and are defined as paper bags that are 100% recyclable and are made from 100% recycled material.	Adopted April 2011 Effective January 2012
County of Santa Cruz	The ordinance bans single-use plastic bags and places a 10 cent minimum price requirement on single-use paper bags throughout unincorporated county areas.	Adopted September 13, 2011 The STPBC filed a lawsuit in October 2011. The case was settled out of court and in February 2012 the City repealed the ban of plastic bags used at food service establishments.
County of Sonoma	This ordinance by the Sonoma County Waste Management Agency would regulate the use of paper and plastic single use carryout bags within the geographical limits of Sonoma County, including the nine incorporated cities and town, starting July 1, 2013. The intent of the ordinance is to reduce the environmental impacts related to the use of single use carryout bags, and to promote a shift toward the use of reusable bags.	An EIR is being prepared and is anticipated for release in December 2012.

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



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4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed Disposable Checkout Bag 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 *CEQA Guidelines* §15382 as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

The assessment of each issue area begins with a discussion of the setting relevant to that issue area. Following the setting is a discussion of the proposed Bag 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 Bag 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 a significant environmental impact could have a significant secondary 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 Bag Ordinance in conjunction with other adopted and pending carryout bag ordinances.



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4.1 AIR QUALITY

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

4.1.1 Setting

a. Characteristics of Air Pollutants. The City of Palo Alto is located within the San Francisco Bay Area Air Basin (Basin). The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that monitors and regulates air pollution within the Basin. Pollutants that are monitored within Santa Clara County and compared to State and Federal Standards include ozone, carbon monoxide, nitrogen dioxide and suspended particulates. The general characteristics of these pollutants are described below.

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

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



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

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

b. Air Quality Standards. Federal and state standards have been established for six criteria pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulates less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5} respectively), and lead (Pb). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 4.1-1 lists the current federal and state standards for criteria pollutants.

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

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	53 ppb (annual avg) 100 ppb (1-hr avg)	0.030 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	75 ppb (1-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 µg/m ³ (30 day avg)	1.5 µg/m ³ (calendar qtr) 0.15 µg/m ³ (rolling 3-month avg)
Particulate Matter (PM ₁₀)	150 µg/m ³ (24-hr avg)	20 µg/m ³ (annual avg) 50 µg/m ³ (24-hr avg)
Particulate Matter (PM _{2.5})	15 µg/m ³ (annual avg) 35 µg/m ³ (24-hr avg)	12 µg/m ³ (annual avg)

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



The BAAQMD 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.”

c. Current Air Quality. The San Francisco Bay Area Air Basin monitoring station located closest to Palo Alto is the Redwood City monitoring station, located at 897 Barron Avenue in Redwood City. No PM₁₀ data is available from the Redwood City monitoring station; therefore, data for PM₁₀ was taken from the next nearest monitoring station, located at 22601 Voss Avenue in Cupertino, approximately nine miles southeast of Palo Alto. Table 4.1-2 indicates the number of days that each of the state and federal air quality standards has been exceeded at these stations. As shown, the ozone concentration exceeded the state standard twice in 2010. The PM_{2.5} concentration exceeded federal standards on one day in 2010. There were no exceedances of either the state or federal standards for NO₂, PM₁₀ or CO from 2009 through 2011.

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

Pollutant	2009	2010	2011
Ozone, ppm - Worst Hour	0.087	0.113	0.076
Number of days of State exceedances (>0.09 ppm)	0	2	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Carbon Monoxide, ppm - Worst 8 Hours	1.76	1.72	1.67
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
Nitrogen Dioxide, ppm - Worst Hour	0.056	0.059	0.056
Number of days of State exceedances (>0.25 ppm)	0	0	0
Particulate Matter <10 microns, µg/m ³ Worst 24 Hours ^b	*	27.9	28.3
Number of samples of State exceedances (>50 µg/m ³)	0	0	0
Number of samples of Federal exceedances (>150 µg/m ³)	0	0	0
Particulate Matter <2.5 microns, µg/m ³ Worst 24 Hours	34.2	36.5	24.2
Number of samples of Federal exceedances (>35 µg/m ³)	0	1	0

^bData collected for the Cupertino Monitoring Station
 Source: CARB, 2009, 2010, & 2011 Air Quality Data Statistics, Top Four Summary, available at <http://www.arb.ca.gov>. Data collected from the Redwood City Monitoring Station
 *Insufficient data available to determine a value

d. Air Quality Management. Under state law, the BAAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The Bay Area 2010 Clean Air Plan (CAP) provides a plan to improve Bay Area air quality and protect public health. The legal impetus for the CAP is to update the most recent ozone plan, the Bay Area 2005 Ozone Strategy, to comply with state air quality planning requirements as codified in the California Health & Safety Code. Although steady progress in reducing ozone



levels in the Bay Area has been made, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the CAP to include all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone precursors to neighboring air basins (BAAQMD, September 2010).

The Bay Area was recently designated as non-attainment for the national 24-hour fine particulate matter (PM_{2.5}) standard, and the BAAQMD is required to prepare a PM_{2.5} State Implementation Plan (SIP) pursuant to federal air quality guidelines by December 2012. The 2010 CAP is not a SIP document and does not respond to federal requirements for PM_{2.5} or ozone planning. However, in anticipation of future PM_{2.5} planning requirements, the CAP control strategy also aims to reduce PM emissions and concentrations. In addition, the U.S. Environmental Protection Agency (EPA) is currently reevaluating national ozone standards, and is likely to tighten those standards in the near future. The control measures in the CAP will also help in the Bay Area's continuing effort to attain national ozone standards (BAAQMD, September 2010).

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

Manufacturing Process. The manufacturing process to make checkout 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 checkout bags produced. These emissions may contribute to air quality impacts related to acid rain (atmospheric acidification) or ground level ozone formation.

Although manufacturing facilities may emit air pollutants in the production of checkout 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 EIR, the analysis is focused on the Bay Area Air Basin, the air basin in which Palo Alto is located.

Truck Trips. Delivery trucks that transport checkout bags from manufacturers or distributors to the local retailers in Palo Alto also contribute air emissions locally and regionally. As discussed in the *Transportation* section of the Initial Study (see Appendix A), based on the estimated single-use plastic checkout bag use as shown in Table 2-2, retail customers in Palo Alto currently use an estimated 25,923,864 plastic bags per year. Assuming 2,080,000 plastic bags per truck load (City of Santa Monica Single-use Carryout Bag Ordinance Final EIR, January 2011; refer to Appendix A), approximately 13 annual truck trips (an average of about 0.03 trips per day) would be needed to deliver these checkout bags.

Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material (ARB "Health Effects of Diesel Exhaust", 2012). The visible emissions in diesel exhaust are known as particulate matter or PM, which are small and readily respirable. The particles



have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures (“hot-spots”) (ARB, Health Effects of Diesel Exhaust”, 2012).

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

Ground Level Ozone and Atmospheric Acidification. Various studies have estimated air emissions for the different checkout bags (single-use plastic, paper or reusable bags) to determine a per bag emissions rate. In order to provide metrics to determine environmental impacts associated with the proposed Bag Ordinance, reasonable assumptions based upon the best available sources of information have been established and are utilized in this EIR. Specific metrics that compare impacts on a per bag basis are available for single-use plastic, single-use paper and low-density polyethylene (LDPE) reusable bags. Air pollutant emissions associated with the manufacturing and transportation of one single-use paper bag result in 1.9 times the impact on atmospheric acidification as air pollutant emissions associated with one single-use plastic bag. Similarly, on a per bag basis, a reusable checkout bag that is made of LDPE plastic would result in 3 times the atmospheric acidification compared to a single-use plastic bag if the LDPE bag is only used one time. In addition, on a per bag basis, a single-use paper bag has 1.3 times the impact on ground level ozone formation of a single-use plastic bag. Finally, a reusable checkout 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 checkout bag as a representation of reusable bags in evaluating air quality impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential air pollutant emissions. However, the emissions from all types of reusable bags are lower than single-use plastic and paper checkout bags, because reusable bags are typically used at least one year, or 52¹ uses. Thus, the air pollutant emissions from these bags are expected to be comparable to the LPDE bag or lower.

Table 4.1-3 lists the emissions contributing to ground level ozone and atmospheric acidification using the per-bag impact rates discussed above and the estimated number of existing single-use paper and plastic bags used in Palo Alto. The manufacturing and transportation of single-use plastic bags currently used in Palo Alto each year generates an estimated 596 kilograms (kg) of emissions associated with ground level ozone and 28,101 kg of emissions associated with atmospheric acidification.

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



**Table 4.1-3
 Current Emissions from Ground Level Ozone and
 Atmospheric Acidification (AA) from Checkout Bags
 In Palo Alto**

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	25,923,864	1.0	0.023	596.25	1.0	1.084	28,101.47
Total				596	Total		28,101

Source:

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

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

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

f. Regulations applicable to Manufacturing Facilities.

EPA Title V Permit. Title V is a federal program designed to standardize air quality permits and the permitting process for major sources of emissions across the country. The name "Title V" comes from Title V of the 1990 federal Clean Air Act Amendments, which requires the EPA to establish a national, operating permit program. Accordingly, EPA adopted regulations [Title 40 of the Code of Federal Regulations, Chapter 1, Part 70 (Part 70)], which require states and local permitting authorities to develop and submit a federally enforceable operating permit programs for EPA approval. Title V only applies to "major sources." EPA defines a major source as a facility that emits, or has the potential to emit (PTE) any criteria pollutant or hazardous air pollutant (HAP) at levels equal to or greater than the Major Source Thresholds (MST). The MST for criteria pollutants may vary depending on the attainment status (e.g. marginal, serious, or extreme) of the geographic area and the Criteria Pollutant or HAP in which the facility is located (EPA Title V Requirement, accessed March 2010). Checkout 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, such as NO_x, CO, PM₁₀, oxides of sulfur (SO_x), or toxics. Permits ensure that emission controls meet the need for the local region to make steady progress toward achieving and maintaining federal and state air quality standards. The BAAQMD, the local air quality management district serving Palo Alto, 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 Bay Area Air Basin to make steady progress toward achieving and maintaining federal and state air quality standards (as shown in Table 4.1-3). Permits also ensure proper operation of control devices, establish recordkeeping and reporting mechanisms, limit toxic emissions, and control dust or odors. In addition, the BAAQMD routinely inspects operating facilities to verify that equipment operates in compliance with BAAQMD rules and regulations.

g. 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 checkout bags in California will 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 engines when idling more than five minutes at any location within California beginning in 2008 (ARB “Heavy-Duty Vehicle Idling Emission Reduction Program”, updated March 2009). All trucks making deliveries in Palo Alto are required to comply with the no-idling requirements.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. The proposed Bag Ordinance does not include any physical development or construction related activities; therefore, the analysis focuses on emissions related to checkout bag manufacturing processes and truck trips associated with delivering checkout bags to retailers in Palo Alto. Operational emissions associated with the truck trips to deliver checkout bags to Palo Alto retailers were calculated using the using the URBEMIS 2007 v. 9.2.4 computer program². The estimate of operational emissions by URBEMIS includes truck trips (assumed to be heavy trucks - 33,000 to 60,000 pounds) and utilizes the trip generation rates based on the traffic analysis contained in the *Transportation/Circulation* section of the Initial Study (see Appendix A).

The proposed Bag Ordinance would create a significant air quality impact if it would:

² Please note that the California Emissions Estimator Model (CalEEMod), which is normally recommended for use by the BAAQMD, was considered for use as part of the analysis. However, because the truck trips associated with carryout bags were so few compared to larger projects normally analyzed with CalEEMod, the emissions output in CalEEMod did not yield any relevant results (all emissions were listed as 0.0 pounds per day). The decision to continue using the URBEMIS model is up to the lead agency or other users (CalEEMod FAQ; www.aqmd.gov/caleemod/faq.htm). As such, the use of URBEMIS for this analysis is deemed reasonable and conservative.



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 levels of toxic air contaminants*
5. *Create objectionable odors affecting a substantial number of people*
6. *Not implement all applicable construction emission control measures recommended in the Bay Area Air Quality Management District CEQA Guidelines*

The Initial Study (see Appendix A) concluded that only the second and third criteria could potentially result in a significant impact, while the proposed Bag Ordinance would result in no impact with respect to the first, fourth, fifth and sixth criteria. Hence, only the second and third criteria are addressed in this section.

On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines (BAAQMD Homepage, accessed May 2012). As such, lead agencies need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Lead agencies may rely on the BAAQMD's CEQA Guidelines (updated May 2011) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures. However, the BAAQMD has been ordered to set aside the thresholds and is no longer recommending that these thresholds be used as a general measure of a project's significant air quality impacts. Lead agencies may continue to rely on the Air District's 1999 Thresholds of Significance and to make determinations regarding the significance of an individual project's air quality impacts based on substantial evidence in the record for that project.

For this EIR, the City of Palo Alto has determined that the BAAQMD's significance thresholds in the updated May 2011 CEQA Guidelines for project operations within the San Francisco Bay Area Air Basin are the most appropriate thresholds for use to determine air quality impacts of the proposed Bag Ordinance. First, Palo Alto has used the May 2011 BAAQMD thresholds in previous environmental analyses under CEQA and found them to be reasonable thresholds for assessing air quality impacts. Second, these thresholds have been utilized in another bag ordinance CEQA document in Santa Clara County (e.g., Sunnyvale Single-Use Carryout Bag Ordinance, Final Environmental Impact Report SCH#2011062032, December 2011). In addition, these thresholds are lower than the 1999 BAAQMD thresholds, and thus use of the thresholds in the May 2011 CEQA Guidelines is more conservative. Therefore, these thresholds are considered reasonable for use in this EIR. The proposed Bag Ordinance would result in a significant impact if emissions would exceed any of the following thresholds:

- *54 pounds per day of ROG*
- *54 pounds per day of NO_x*
- *82 pounds per day of PM₁₀*
- *54 pounds per day of PM_{2.5}*



b. Project Impacts and Mitigation Measures.

Impact AQ-1 **The proposed Bag Ordinance could potentially alter processing activities related to checkout bag production, which has the potential to increase air pollutant emissions. However, the proposed Bag Ordinance is expected to substantially reduce the number of single-use plastic checkout bags, thereby reducing the amount of total bags manufactured and overall emissions associated with bag manufacture and use. Therefore, air quality impacts related to alteration of processing activities would be Class IV, beneficial.**

The intent of the proposed Bag Ordinance is to reduce the amount of single-use checkout bags, and to promote the use of reusable bags by Palo Alto retail customers. The proposed Bag Ordinance would incrementally reduce the number of single-use plastic checkout bags that are manufactured and would incrementally increase the number of recyclable paper and reusable bags manufactured compared to existing conditions.

As described in the *Setting*, emissions associated with single-use paper bag production result in 1.9 times the impact on atmospheric acidification as a single-use plastic bag. On a per bag basis, a reusable checkout bag that is made of LDPE plastic results in three times the atmospheric acidification compared to a single-use plastic bag. Reusable bags may be made of various materials other than LDPE, including cloths such as cotton or canvas. However, because LDPE reusable bags are one of the most common types of reusable bags and are of similar durability and weight (approximately 50 to 200 grams) as other types of reusable bags, this EIR utilizes the best available information regarding specific metrics on a per bag basis to disclose environmental impacts associated with the proposed Bag Ordinance. Further, given the high rate of reuse of all types of reusable bags (usually at least one year, or 52 times), the air pollutant emissions from these bags when compared to plastic and paper checkout bags are expected to be comparable or lower (Santa Clara County Single-Use Checkout Bag Initial Study, October 2010). Similarly, 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 checkout 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).

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; however, unlike single-use plastic bags, reusable checkout bags are intended to be used multiple times (at least 125 uses as required by the proposed Bag Ordinance).³ Therefore, fewer total checkout bags would need to be manufactured as a shift toward the use of reusable bags occurs. As described in Section 2.0, *Project Description*, stores making available paper checkout bags would be required to sell recycled paper checkout bags made from 100% recycled material with a 40% post-consumer

³ For the purposes of this analysis, it is assumed that reusable bags would be used once per week for a year, or 52 times, before being replaced. However, for the purposes of the ordinance, reusable bags *can* be used as many as 125 times.



recycled content to customers for a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. This mandatory charge would create 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 consumers in Palo Alto. The proposed Bag Ordinance may lead to some short-term increase in paper bag use as consumers would be unable to get a free plastic bag while shopping, but may be willing to pay a charge to use paper bags.

As discussed in Table 2-2 of Section 2.0, *Project Description*, this analysis assumes that as a result of the Bag Ordinance, the approximately 25.92 million single-use plastic checkout bags currently used in Palo Alto annually would be reduced to approximately 9.4 million total bags (324,048 reusable bags plus 9,073,352 recyclable paper bags).

Table 4.1-4 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of the proposed Bag Ordinance and compares these emissions to what occurs under current conditions. As shown, the increased use of reusable checkout bags in the City would reduce emissions that contribute to ground level ozone by approximately 314 kg per year (a 53% decrease) and would reduce emissions contributing to atmospheric acidification by approximately 8,356 kg per year (a 30% decrease).

**Table 4.1-4
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Checkout Bags in Palo Alto**

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
Recyclable Paper	9,073,352	1.3	0.03	272	1.9	2.06	18,691
Reusable	324,048	1.4	0.032	10.4	3.0	3.252	1,054
Total				282	Total		19,745
Existing				596	Existing		28,101
Net Change				(314)	Net Change		(8,356)

Source:

* Refer to Table 2-2.

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

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

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



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 Santa Clara County, the BAAQMD). Either a paper bag manufacturing facility or a reusable checkout 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 Bag Ordinance would reduce emissions associated with ozone and atmospheric acidification. Therefore, the proposed Bag Ordinance would have a beneficial impact with respect to air quality.

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

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

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

Long-term emissions associated with the proposed Bag Ordinance would include those emissions associated with truck trips to deliver checkout bags (paper and reusable) from manufacturing facilities or distributors to the local retailers in Palo Alto. 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 Bag Ordinance. Trip generation rates were taken from the traffic analysis contained in the *Transportation/Circulation* section of the Initial Study (see Appendix A), which estimates that the change in truck traffic as a result of the proposed Bag Ordinance would be a net increase of 0.09 truck trips per day. Although the reduction in single-use plastic bag deliveries would reduce truck trips compared to existing conditions, the increase in single-use paper and reusable bags would cause the negligible net increase. Mobile emissions associated with such an increase in truck traffic are summarized in Table 4.1-5.



**Table 4.1-5
Operational Emissions Associated with
Proposed Bag Ordinance**

Emission Source	Emissions (lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Mobile Emissions (Truck Traffic)	0.01	0.16	0.02	0.01
Total Emissions	0.01	0.16	0.02	0.01
<i>BAAQMD Thresholds</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Threshold Exceeded?	No	No	No	No

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

As indicated in Table 4.1-5, daily ROG emissions are estimated at 0.01 pounds, daily NO_x emissions are estimated at approximately 0.16 pounds, daily PM₁₀ emissions would be approximately 0.02 pounds, and daily PM_{2.5} emissions would be 0.01 pounds. The incremental increases in ROG, NO_x, PM₁₀, and PM_{2.5} emissions associated with the proposed Bag Ordinance would be substantially less than the BAAQMD thresholds of 54 pounds per day of ROG, NO_x, or PM_{2.5}, and 82 pounds per day of PM₁₀. Because long-term emissions would not exceed BAAQMD thresholds, impacts would not be significant.

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

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

c. Cumulative Impacts. Adopted and pending checkout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single-use checkout bags, and promote a shift toward reusable checkout bags. Similar to the proposed Bag 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 Bag Ordinance, other adopted and pending ordinances would also be expected to incrementally change the number of truck trips associated with checkout bag delivery and associated emissions. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa



Clara, San Mateo, Santa Cruz and Sonoma. However, based on the incremental increase in air pollutant emissions associated with the proposed Bag Ordinance (increase of $\frac{1}{4}$ pound per day or less of each criteria pollutant), the other ordinances are not expected to generate a cumulative increase in emissions that would exceed BAAQMD thresholds or adversely affect regional air quality. Moreover, the increase in truck trips to deliver reusable bags would be at least partially offset by a reduction in trips to deliver single use plastic bags. Therefore, cumulative air quality impacts would not be significant.



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4.2 BIOLOGICAL RESOURCES

This section analyzes the proposed Bag Ordinance's impacts to biological resources. Both direct impacts associated with the proposed Bag Ordinance and indirect impacts to off-site biological resources (including the San Francisco Bay) are addressed.

4.2.1 Setting

a. City of Palo Alto Terrestrial Habitat. Palo Alto is located in the northern part of Santa Clara County, in the portion of the Bay Area known as the Mid-Peninsula. The City shares a boundary with San Mateo County and six cities. Palo Alto comprises 16,627 acres, or about 26 square miles. Approximately 40% of this area is in parks and preserves and another 15% consists of agriculture and other open space uses. The remaining area is nearly completely developed, with single family uses predominating. Less than one percent of the City's land area consists of vacant, developable land (City of Palo Alto Land Use and Design Element, 2007). Palo Alto's open space preserves are primarily located in the southern foothills but also extend along the San Francisco Bay shoreline, on the northeastern edge of the City. Along the San Francisco Bay shoreline, open space is contained in what is generally called the Palo Alto Baylands (City of Palo Alto Natural Environment Element, 2007).

Twenty-four species of rare, threatened, or endangered plants have the potential to occur in the City. Several species, including the Point Reyes Bird's Beak, are known to occur in the Palo Alto Baylands, as shown on Map N-1 of the City's *Natural Environment Element* (2007). The potential locations for these species are primarily within the grassland and chaparral habitats in the foothills, and in the marsh habitat in the Palo Alto Baylands. Palo Alto's open space areas provide habitat for a wide range of wildlife, including mammals, birds, amphibians, reptiles, and insects.

b. Special Status Species. Creeks are among Palo Alto's most important natural resources. Adobe, Barron, Matadero, and San Francisquito Creeks support a wide variety of plant and animal life and are a defining element for several of the City's neighborhoods. As discussed in Section 4.4, *Hydrology and Water Quality*, water quality in San Francisquito Creek is of particular concern because the creek is currently listed by the California State Water Resources Control Board as being impaired, and is habitat for steelhead trout, a federally - listed threatened species. Riparian corridors along the creeks, sometimes several hundred feet wide, provide migratory paths for wildlife, visual relief from the urban environment, and opportunities for hiking and biking trails (City of Palo Alto Natural Environment Element, 2007).

Palo Alto encompasses part of four watersheds: Adobe, Barron, Matadero and San Francisquito Creeks. These watersheds drain an area where natural processes and human activity have created a complex landscape and eventually flow into the San Francisco Bay in both natural and channelized forms. Open space within these watersheds in Palo Alto includes the Palo Alto Baylands and the Foothills Park and Pearson-Arastradero Preserve.

Several special status plant and animal species are known to occur within the vicinity of Palo Alto and have the potential to occur if suitable habitat is present. These include northwestern



pond turtle (*Actinemys marmorata marmorata*), western snowy plover (*Charadrius alexandrinus*), salt marsh harvest mouse (*Reithrodontomys raviventris*), steelhead trout (*Oncorhynchus mykiss irideus*), alkali milk-vetch (*Astragalus tener*), and California seablite (*Suaeda californica*).

While the coastal and marine habitat of San Francisco Bay has been altered due to human disturbance, a number of additional sensitive species have the potential to occur in these environments. Sensitive species that may inhabit the coastal and marine environment are listed in Table 4.2-1. The locations of special-status species, natural communities, and critical habitat documented in the vicinity of Palo Alto, as listed on the California Natural Diversity Database (CNDDDB), are mapped on Figure 4.2-1.

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

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

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

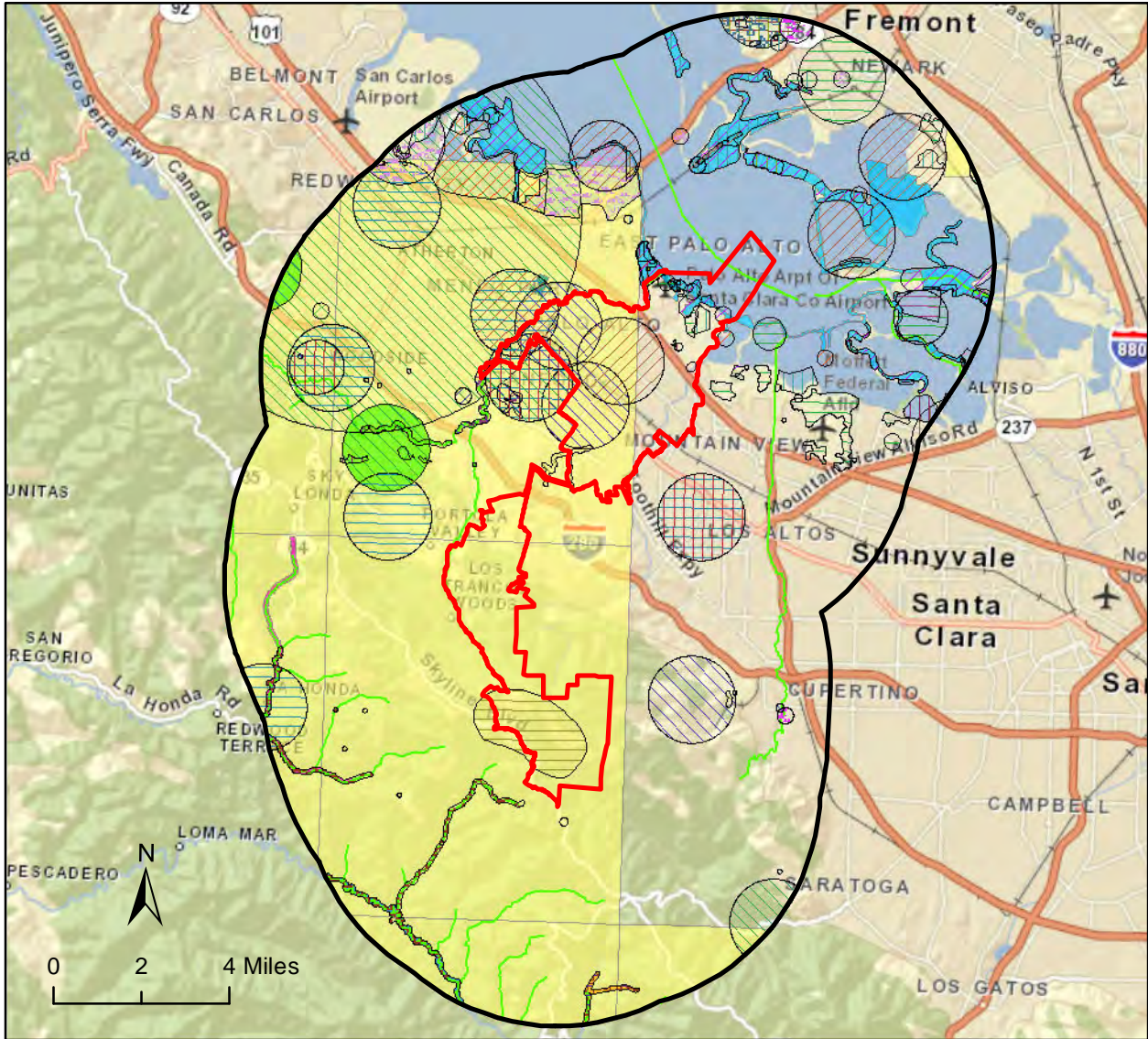
Reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to single-use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 125 times (as defined in the proposed Bag Ordinance, although this number could be greater), reusable bags would be disposed of less often than single-use checkout bags. As such, reusable bags are less likely to enter the marine environment as litter. Thus, reusable bags are less likely to enter the environment as litter compared to single-use plastic or paper bags.

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

Scientific Name	Common Name	Current Federal/State Status
Reptiles		
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco garter snake	FE/SE
<i>Emys marmorata</i>	Western pond turtle	-/SSC
Amphibians		
<i>Ambystoma californiense</i>	California tiger salamander	FE/SE/SSC
<i>Rana draytonii</i>	California red-legged frog	FT/SSC
Invertebrates		
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	FT/-
<i>Lepidurus packardii</i>	Vernal pool tadpole shrimp	FE
Fish		
<i>Acipenser medirostris</i>	Green sturgeon	FT
<i>Hypomesus transpacificus</i>	Delta smelt	FT
<i>Oncorhynchus kisutch</i>	Coho salmon-central California coast	FE
<i>Oncorhynchus mykiss</i>	Central California Coastal & Central Valley steelhead	FT
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run & winter-run Chinook salmon	FT & FE
Birds		
<i>Brachyramphus marmoratus</i>	Marbled murrelet	FT
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE/SE
<i>Charadrius alexandrinus nivosus</i>	Western Snowy plover	FT/SSC
<i>Sterna antillarum browni</i>	California least tern	FE/SE
<i>Pelecanus occidentalis californicus</i>	Brown pelican	FE/delisted
<i>Athene cunicularia</i>	Burrowing owl	-/SSC
<i>Circus cyaneus</i>	Northern harrier	-/SSC
Mammals		
<i>Reithrodontomys raviventris</i>	Salt-march harvest mouse	FE/SE

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





Basemap Sources: ESRI and its licensors, 2012, California Natural Diversity Database, July 2012, and U.S. Fish and Wildlife Service, November 4, 2011. Critical habitat shown is that most recently available from U.S. FWS. Check with U.S. FWS or Federal Register to confirm. Note - Map to be printed in color, due to subtleties in symbology noticeable only on color version.

- | | | |
|--------------------------------------|---|--|
| Project Location | coho salmon - central California coast ESU | Natural Communities |
| 5-Mile Radius | hoary bat | N. Central Coast Calif. Roach/Stickleback/Steelhead Stream |
| Animals | long-eared owl | North Central Coast Drainage Sacramento Sucker/Roach River |
| Alameda song sparrow | mimic tryonia (=California brackishwater snail) | North Central Coast Steelhead/Sculpin Stream |
| American badger | monarch butterfly | Northern Coastal Salt Marsh |
| Bay checkerspot butterfly | northern harrier | Serpentine Bunchgrass |
| California black rail | pallid bat | Valley Oak Woodland |
| California clapper rail | salt-marsh harvest mouse | Critical Habitat |
| California least tern | salt-marsh wandering shrew | Steelhead |
| California red-legged frog | saltmarsh common yellowthroat | CNDDDB Suppressed Records in these quads-
Alameda whipsnake, Alameda whipsnake, American
perigrine falcon, San Francisco garter snake, and
Townsend's big-eared bat. Call DFG to get the
specific location of these sensitive species. |
| California tiger salamander | short-eared owl | |
| Edgewood Park micro-blind harvestman | snowy egret | |
| San Francisco dusky-footed woodrat | steelhead - central California coast DPS | |
| Santa Cruz kangaroo rat | tricolored blackbird | |
| Yuma myotis | unsilvered fritillary | |
| bank swallow | western pond turtle | |
| burrowing owl | western snowy plover | |
| | white-tailed kite | |

Sensitive Animals and Natural Communities Reported
 by the California Natural Diversity Database

Figure 4.2-1
 City of Palo Alto



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 California Fish and Game Code (CFGC). 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. Army Corps of Engineers (USACE) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the federal Clean Water Act (CWA). The USACE also has jurisdiction over rivers and harbors through Section 10 of the CWA. Waters of the State fall under the jurisdiction of the CDFG through the CFGC and the Regional Water Quality Control Board (RWQCB) through Section 401 of the CWA. The RWQCB also has jurisdiction over isolated waters and wetlands through the Porter-Cologne Water Quality Control Act.

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”). The USFWS and the National Marine Fisheries Service (NMFS) share responsibility for implementation of the federal Endangered Species Act, with the USFWS focused on terrestrial and freshwater species and the NMFS focused on marine species. The USFWS is also responsible for regulation of bird species listed under the Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

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

4.2.2 Impact Analysis

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

Based on the City of Palo Alto’s environmental checklist, the proposed Bag Ordinance would create a significant impact to biological resources if it would:



1. *Have a substantially 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, including 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;*
3. *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
4. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10); or*
5. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan.*

The Initial Study (see Appendix A) concluded that only the first criterion could potentially result in a significant impact, while the proposed Bag Ordinance would result in no impact with respect to the second through fifth criterion. Hence, only the first criterion is addressed in this section.

b. Project Impacts and Mitigation Measures.

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

All checkout bags, including single-use plastic, paper, and reusable bags, have the potential to affect coastal habitats, such as San Francisco Bay, when bags are improperly disposed of. These bags can become litter that enters the storm drain system and creeks, and ultimately enters into 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 checkout 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 five to nine grams and are made of thin (less than 2.25 mils thick) high density polyethylene (HDPE) (Hyder Consulting, 2007). Post-use from a retail store, a customer 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. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use plastic bags that become litter can enter storm drains and watersheds from surface water runoff or may be blown directly into the ocean by the wind.

As described in the *Setting*, when single-use plastic bags enter coastal habitats, marine species can ingest them (or the residue of plastic bags) or may become entangled in the bag (Green Cities California MEA, 2010). Ingestion or entanglement in single-use plastic bags can result in choking, reduced productivity, lacerations, ulcers, and death to sensitive species in the marine environment, including sea turtles, seals, 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 to 100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). A paper bag weighs substantially more (by approximately 40 to 90 grams) 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 ten times what a single-use plastic bag weighs and two 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 up to 125 times (as defined in the proposed Bag Ordinance), they would be disposed of less often than single-use checkout 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 checkout bags.

The proposed Bag Ordinance would reduce plastic bag usage by 100% compared to existing conditions (approximately 25.92 million plastic bags annually), and would reduce total bag use by an estimated 36% (to approximately 9.4 million single-use paper and reusable bags). This reduction in bags would be expected to generally reduce litter-related impacts to sensitive species. Therefore, sensitive species such as sea turtles, fish, and bird species would benefit from the proposed Bag Ordinance, which would reduce the amount of litter that could enter the marine environment. Impacts would be beneficial.



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

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

c. Cumulative Impacts. Adopted and pending checkout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single-use checkout bags, and promote a shift toward reusable checkout bags. This shift would generally have beneficial effects with respect to sensitive biological resources. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma. Similar to the proposed Bag Ordinance, these other adopted and pending ordinances could reduce the number of plastic bags entering the environment, including the San Francisco Bay, as litter. These other ordinances would be expected to have similar beneficial effects. Therefore, there would be no cumulative impacts related to biological resources.



4.3 GREENHOUSE GAS EMISSIONS

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

4.3.1 Setting

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

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

Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and sulfur hexafluoride (SF₆) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO₂E), and is the amount of a GHG emitted multiplied by its GWP. CO₂ has a GWP of one. By



contrast, CH₄ has a GWP of 21, meaning its global warming effect is 21 times greater than CO₂ on a molecule per molecule basis (IPCC, 1997).

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

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO₂ are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [USEPA], April 2011). CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th Century. Concentrations of CO₂ in the atmosphere have risen approximately 40% since the start of the industrial revolution. The global atmospheric concentration of CO₂ has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO₂ concentration growth rate was larger during the last 10 years (1995–2005 average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO₂ represents an estimated 82.7% of total GHG emissions (Department of Energy [DOE] Energy Information Administration [EIA], December 2008). The largest source of CO₂, and of overall GHG emissions, is fossil fuel combustion.

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

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

Fluorinated Gases (HFCS, PFCS and SF₆). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and SF₆, are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such



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

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

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

Based upon the California Air Resources Board (ARB) *California Greenhouse Gas Inventory for 2000-2008* (<http://www.arb.ca.gov/cc/inventory/data/data.htm>), California produced 478 MMT CO₂E in 2008. The major source of GHGs in California is transportation, contributing 36% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 24% of the state's GHG emissions (ARB, June 2010). California emissions are due in part to its large size and large population compared to other states. Another factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. ARB has projected statewide unregulated GHG emissions for the year 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, will be 596 MMT CO₂E (ARB, 2007).

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

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

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

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

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

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

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



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

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

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

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

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

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

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



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

Truck Trips. Delivery trucks that transport checkout bags from manufacturers or distributors to Palo Alto local retailers also create GHG emissions. GHG emissions from truck trips result primarily from the combustion of fossil fuels and include CO₂, CH₄, and N₂O. As discussed in the *Transportation* section of the Initial Study (see Appendix A), based on the estimated single-use plastic checkout bag use as shown in Table 2-2, retail customers in Palo Alto currently use an estimated 25,923,864 plastic bags per year. Assuming 2,080,000 plastic bags per truck load (City of Santa Monica Single-use Carryout Bag Ordinance Final EIR, January 2011; refer to Appendix A), approximately 13 annual truck trips (an average of about 0.03 trips per day) would be needed to deliver these checkout bags.

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

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

If used 20 times, a reusable LDPE checkout bag results in 10% of the GHG emissions of a single-use HDPE plastic bag (AEA Technology, 2005). The analysis uses the above LDPE checkout bag as a representation of reusable bags in evaluating GHG impacts. There is no known available Life Cycle Assessment that evaluates all types of reusable bags (canvas, cotton, calico, etc.) with respect to potential GHG emissions. However, given the high rate of reuse by all types of



reusable bags (100 times or more¹), overall GHG emissions associated with these bags are expected to be comparable to an LPDE bag or lower.

Table 4.3-1 lists the current GHG emissions associated with the manufacture, transport, and disposal of single-use plastic bags in Palo Alto using the per bag GHG emissions rates discussed above and the estimated number of checkout bags currently used. As discussed in Section 2.0, *Project Description*, based on the estimated single-use plastic checkout bag use as shown in Table 2-2, retail customers in Palo Alto currently use an estimated 25,923,864 plastic bags per year. As shown in Table 4.3-1, overall GHG emissions associated with Palo Alto single-use plastic bag use are 691 metric tons of CO₂E per year, or approximately 0.011 metric tons CO₂E per person.

**Table 4.3-1
 Existing Greenhouse Gas Emissions
 from Single-Use Plastic Checkout Bags in Palo Alto**

Bag Type	Existing Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂E (metric tons)	CO₂E per year (metric tons)	CO₂E per Person³
Single-use Plastic	25,923,864	1.0	0.04 per 1,500 bags**	691	0.011
Total				691	0.011

CO₂E = Carbon Dioxide Equivalent units

Source:

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

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

³ Emissions per person are divided by the current Palo Alto population – 65,544 (California Department of Finance, May 2012)

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

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

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



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

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

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

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

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

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



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

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

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

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

SB 375, signed in August 2008, enhances the State’s ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. SB 375 directs each of the state’s 18 major Metropolitan Planning Organizations (MPOs) to prepare a “sustainable communities strategy” (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Bay Area’s SCS is currently under development titled “Plan Bay Area”, which is due for adoption in April 2013. Consistent with the ARB’s regional targets, the Bay Area is required to reduce emissions by 7% by 2020 and by 15% by 2035.

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

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

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

Local Regulations and CEQA Requirements. Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general



regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant.

To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. As noted in Section 4.1, *Air Quality*, on March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the air quality and GHG emissions thresholds contained in the BAAQMD's CEQA Guidelines (Updated May 2011). The court did not determine whether the thresholds were valid on the merits, but found that the adoption of the thresholds was a project under CEQA and therefore determined that the BAAQMD was required to do CEQA analysis on the thresholds. In light of the court's order, lead agencies will need to determine appropriate air quality and GHG thresholds of significance based on substantial evidence in the record.

The Palo Alto Climate Protection Plan was adopted in December 2007, and suggests a variety of possible actions to reduce GHG emissions in each of six general categories, including utilities, sustainable purchasing, transportation and sustainable land use, green building, zero waste, and education and motivation. The Climate Protection Plan includes a baseline inventory of the City's municipal and community (businesses, residents and workers) emissions, citywide emissions reduction targets, and a number of goals and strategies for obtaining those targets. The City's reduction targets for municipal and community emissions are as follows:

- By 2009, the City will reduce emissions by 5 percent from 2005 emission levels for a total reduction of 3,266 metric tons of CO₂.
- By 2012, the City and Community will reduce emissions by 5 percent from 2005 emissions levels for a total reduction of 39,702 metric tons of CO₂.
- By 2020, the City and Community will reduce emissions by 15 percent of 2005 levels, equal to 119,140 metric tons of CO₂.

With the goals listed above, it is intended that the Climate Protection Plan will bring the community in line with State reduction goals of 427 million metric tons of carbon dioxide equivalent emissions in 2020.

In the absence of other local GHG thresholds of significance, for this analysis, the proposed Bag Ordinance is evaluated based on a project-based threshold of 4.6 metric tons CO₂E per service population (defined to include both residents and employees) per year. The City of Palo Alto does not recommend adoption of that threshold for any other purpose at this time, but it is used for this analysis for the following reasons. First, the 4.6 metric tons CO₂E per service population threshold was adopted by the BAAQMD as a quantitative GHG emissions threshold for project-



level analysis (BAAQMD, “California Environmental Quality Act: Air Quality Guidelines” (June 2010). This threshold has been utilized in certified CEQA documents for similar bag ordinances, including in the City of Sunnyvale (FEIR, SCH #2011062032, December 2011) and the County of San Mateo (Draft EIR, SCH#2012042013 which are both also located in the BAAQMD, and the City of Huntington Beach (Draft EIR, SCH #2011111053, February 2012) located in the SCAQMD.

Second, this threshold has been used by Palo Alto in other project level environmental analyses under CEQA and was determined to be a reasonable quantitative threshold for assessing GHG impacts. The BAAQMD derived the recommended “efficiency” metric from statewide compliance with AB 32. Other air pollution control districts have also recommended a similar “Efficiency Threshold”. For example, the San Luis Obispo County Air Pollution Control District recommends a 4.8 metric tons per person per year Efficiency Threshold (SLO APCD, Greenhouse Gas Thresholds and Supporting Evidence, March 2012). Staff at the South Coast Air Quality Management District (SCAQMD) has proposed a project-level threshold of 4.8 metric tons CO₂E per service population (defined to include both residents and employees) per year for use in the South Coast region (SCAQMD, “Proposed Tier 4 Performance Standards: Option #3: SCAQMD Efficiency Target”, September 2010 and personal communication Ian MacMillan, Program Supervisor - CEQA Intergovernmental Review, SCAQMD on December 29, 2011).

Based on the above, the 4.6 metric tons per person per year threshold was considered most reasonable for use in this EIR analysis.

4.3.2 Impact Analysis

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

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

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

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as the Palo Alto Climate Protection Plan). For this EIR, the proposed Bag Ordinance is evaluated



based on the project-level threshold of 4.6 metric tons CO₂E per service population (defined to include both residents and employees) per year (BAAQMD, “California Environmental Quality Act: Air Quality Guidelines” (June 2010). A significant impact related to climate change would occur if GHG emissions associated with implementation of the proposed Bag Ordinance would exceed 4.6 metric tons of CO₂E units per service population (residents and employees) per year. In addition, impacts would be significant if the proposed Bag Ordinance would be inconsistent with any applicable GHG emissions reductions strategies such as the Palo Alto Climate Protection Plan, the 2006 CAT Report or the 2008 Attorney General’s Greenhouse Gas Reduction Measures.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 Implementation of the proposed Bag Ordinance would incrementally increase GHG emissions compared to existing conditions. However, emissions would not exceed thresholds of significance. Impacts would be Class III, less than significant.

The intent of the proposed Bag Ordinance is to reduce the use of single-use checkout bags and promote the use of reusable bags by Palo Alto retail customers. As such, the proposed Bag Ordinance would reduce the number of single-use plastic checkout bags that are manufactured and increase the number of recyclable paper and reusable bags that are manufactured, transported, and disposed of within Palo Alto.

As described in the *Setting*, through manufacture, transport, and disposal, each single-use paper bag generates 3.3 times more GHG emissions than the manufacture, transport, and disposal of a single-use plastic bag. If only used once, the manufacture, use, and disposal of a reusable LDPE checkout 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 checkout bags. However, reusable checkout bags are intended to be used multiple times. With reuse of checkout bags, the total checkout bags that would be manufactured, transported and disposed of would be reduced. As described in Section 2.0 *Project Description*, implementation of the proposed Bag Ordinance would result in replacement of single-use plastic bags currently used in Palo Alto (estimated at 25,923,864 million annually) with an estimated 9.07 million recyclable paper bags and 324,048 reusable bags (refer to Table 2-2).

Table 4.3-2 provides an estimate of GHG emissions that would result from the change in the makeup of checkout bags in Palo Alto resulting from implementation of the proposed Bag Ordinance. Although the total number of checkout bags would be reduced by approximately 16.52 million bags per year, the projected increase in the use of recyclable paper bags is expected to increase overall GHG emissions associated with the manufacture, transport, and disposal of checkout bags by approximately 0.006 CO₂E per person per year compared to current conditions.



**Table 4.3-2
 Estimated Greenhouse Gas Emissions
 from Checkout Bags in Palo Alto
 with Implementation of the Proposed Bag Ordinance**

Bag Type	Estimated Number of Bags Used per Year*	GHG Impact Rate per Bag	CO₂E (metric tons)	CO₂E per year (metric tons)	CO₂E per Person³
Single-use Plastic	0	1.0	0.04 per 1,500 bags**	0	0
Single-use Paper	9,073,352	2.97 ¹	0.1188 per 1,000 bags ¹	1,078	0.016
Reusable	324,048	2.6	0.104 per 1,000 bags***	34	0.0005
Total				1,112	0.017
Existing				691	0.011
Net Change (Total minus Existing)				421	0.006

CO₂E = Carbon Dioxide Equivalent units

** refer to Table 2-2 in Section 2.0, Project Description.*

¹ 10% reduction (from a rate of 3.3) based on Santa Clara County Negative Declaration, October 2010 based on Environmental Defense Fund's Paper Calculator.

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

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

³ Emissions per person are divided by the existing population in Palo Alto - 65,544 (Department of Finance May 2012)

Implementation of the proposed Bag Ordinance would result in a net increase of approximately 0.006 metric tons CO₂E per person per year within Palo Alto. However, both the increase in GHG emissions compared to existing conditions and the total emissions after implementation of the proposed Bag Ordinance would be less than 4.6 metric tons CO₂E per person per year. Impacts related to the GHG emissions would be less than significant.

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

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

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

The proposed Bag Ordinance would be generally consistent with applicable regulations or plans addressing GHG reductions. As indicated above, the Palo Alto Climate Protection Plan



suggests a variety of possible actions to reduce GHG emissions, including utilities, sustainable purchasing, transportation and sustainable land use, green building, zero waste, and education and motivation. These actions are intended to bring the community in line with the AB 32 Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels). In addition, the CAT published the Climate Action Team Report (the “2006 CAT Report”) in March 2006. The CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change GHG emissions. The CAT strategies are recommended to reduce GHG emissions at a statewide level to meet the goals of the Executive Order S-3-05. These are strategies that could be implemented by various State agencies to ensure that the Governor’s targets are met and can be met with existing authority of the State agencies. In addition, in 2008 the California Attorney General published The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level (Office of the California Attorney General, Global Warming Measures Updated May 21, 2008). This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project.

Tables 4.3-3, 4.3-4 and 4.3-5 illustrate that the proposed Bag Ordinance would be consistent with the Palo Alto Climate Protection Plan, the GHG reduction strategies set forth by the 2006 CAT Report and the 2008 Attorney General’s Greenhouse Gas Reduction Measures.

**Table 4.3-3
Proposed Bag Ordinance Consistency with the Palo Alto Climate Protection Plan**

<i>Goals and Actions</i>	<i>Project Consistency</i>
Zero Waste	
Expand efforts in waste prevention through legislation, policies, ordinances, outreach and technical assistance	Consistent The proposed Bag Ordinance is a waste prevention ordinance that is intended to reduce the number of single-use plastic bags and to deter the use of paper bags distributed by retailers and used by customers and to promote a shift toward the use of long-lasting, durable, reusable bags by retail customers in Palo Alto, which would reduce the amount of solid waste generated in the form of single-use checkout bags.
Work with residents, businesses, community organizations, Bay Area Product Stewardship Council, Bay Area Zero Waste Communities, Bay Friendly Regional Coalition and other such groups to further the City’s Zero Waste efforts.	Consistent As part of the proposed Bag Ordinance, the City would continue the promotion of the City sponsored “Bring Your Own Bag” (BYOBag) outreach campaign to educate consumers about the benefits of using reusable checkout bags following the implementation of the proposed Bag Ordinance. The City would also work with the affected stores to help facilitate employee training on the benefits of using reusable checkout bags so the employees can better educate their customers. In addition, the City would work with affected retail and food service establishments to develop promotional activities to increase the use of reusable bags by their customers following the implementation of the proposed Bag Ordinance.
Expand collaborative efforts with targeted businesses to reduce the use of disposable items such as plastic shopping bags and take-out containers.	Consistent The proposed Bag Ordinance would target businesses to reduce the use of plastic checkout bags and would promote a shift toward the use of long-lasting, durable, reusable bags by retail customers in Palo Alto. The proposed Bag Ordinance



**Table 4.3-3
Proposed Bag Ordinance Consistency with the Palo Alto Climate Protection Plan**

<i>Goals and Actions</i>	<i>Project Consistency</i>
	<p>would expand upon the City's existing ordinance by applying the ban to all retailers and food service establishments and would also require retail services to charge a minimum fee for recyclable paper bags, which is intended to deter customers from simply switching from plastic to paper. Rather, the fee is intended to help promote the use of reusable bags which reduces waste as fewer plastic and paper bags would end up in the landfill.</p>
<p>Build on collaborative efforts with targeted businesses to reduce disposable items.</p>	<p>Consistent</p> <p>As described above, the proposed Bag Ordinance expands on the City's existing ordinance. The proposed Bag Ordinance would restrict all retail services and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter for a recyclable paper checkout bag. Food service establishments would not be required to charge for a recyclable paper checkout bag. The proposed Bag Ordinance would assist in reducing disposable items such as single-use plastic checkout bags and would promote a shift toward the use of long-lasting, durable, reusable bags by retail customers in Palo Alto.</p>
<p>Propose possible product bans or fees to reduce the use of products such as plastic bags and bottled water.</p>	<p>Consistent</p> <p>As described above, the proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would promote a shift toward the use of reusable bags by retail customers in Palo Alto. In addition, the Bag Ordinance is intended to deter the use of paper bag by requiring retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter for a recyclable paper checkout bag.</p>
<p>Zero Waste by 2021 (78 – 90% diversion of waste from landfill) – estimated GHG emissions reduction of 25,251 metric tons CO₂E.</p>	<p>Consistent</p> <p>The proposed Bag Ordinance would assist in achieving the goal of 78-90% diversion from the landfill by reducing the number of single-use plastic bags distributed by retailers and used by customers in Palo Alto and by promoting reusable checkout bags, thus reducing the amount of solid waste generated in the form of single-use checkout bags.</p>



**Table 4.3-4
Proposed Bag Ordinance Consistency with Applicable Climate Action
Team Greenhouse Gas Emission Reduction Strategies**

Strategy	Project Consistency
California Air Resources Board	
<p>Vehicle Climate Change Standards</p> <p>AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.</p>	<p>Consistent</p> <p>The trucks that deliver checkout bags to and from Palo Alto retailers on public roadways would be in compliance with ARB vehicle standards that are in effect at the time of vehicle purchase.</p>
<p>Diesel Anti-Idling</p> <p>The ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.</p>	<p>Consistent</p> <p>Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from and making deliveries to Palo Alto retailers are subject to this state-wide law.</p>
<p>Alternative Fuels: Biodiesel Blends</p> <p>ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.</p>	<p>Consistent</p> <p>The diesel vehicles that deliver checkout bags to and from Palo Alto on public roadways could utilize this fuel once it is commercially available.</p>
<p>Alternative Fuels: Ethanol</p> <p>Increased use of E-85 fuel.</p>	<p>Consistent</p> <p>Truck drivers delivering checkout bags could choose to purchase flex-fuel vehicles and utilize this fuel once it is commercially available regionally and locally.</p>
<p>Heavy-Duty Vehicle Emission Reduction Measures</p> <p>Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.</p>	<p>Consistent</p> <p>The heavy-duty trucks that deliver checkout bags to and from Palo Alto retailers on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture.</p>
<p>Achieve 50% Statewide Diversion Goal</p> <p>Achieving the State's 50% waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.</p>	<p>Consistent</p> <p>As of 2006, the City of Palo Alto was diverting 62% of their solid waste (CalRecycle, Jurisdiction Diversion/Disposal Rate Summary, Accessed July 2012), thereby complying with the standards established by AB 939. Any disposal of checkout bags would be required to adhere to the existing standards. The proposed Bag Ordinance would also assist by promoting reusable checkout bags, thus reducing the amount of solid waste generated in the form of single-use checkout bags.</p>
<p>Zero Waste – High Recycling</p> <p>Efforts to exceed the 50% mandate would allow for additional reductions in climate change emissions.</p>	<p>Consistent</p> <p>As described above, the City of Palo Alto currently exceeds the 50% goal of recycling. The proposed Bag Ordinance would assist by promoting reusable checkout bags, thus reducing the amount of solid waste generated in the form of single-use checkout bags. The proposed Bag Ordinance would also shift single-use bag consumption from plastic to paper. This would increase recycling of single-use bags, because paper bags are recycled by services provided to each residence and workplace in Palo Alto.</p>



**Table 4.3-4
Proposed Bag Ordinance Consistency with Applicable Climate Action
Team Greenhouse Gas Emission Reduction Strategies**

<i>Strategy</i>	<i>Project Consistency</i>
Energy Commission (CEC)	
<p><i>Fuel-Efficient Replacement Tires & Inflation Programs</i></p> <p>State legislation established a statewide program to encourage the production and use of more efficient tires.</p>	<p>Consistent</p> <p>Checkout bag delivery drivers could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.</p>
<p><i>Alternative Fuels: Non-Petroleum Fuels</i></p> <p>Increasing the use of non-petroleum fuels in California's transportation sector, as recommended as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.</p>	<p>Consistent</p> <p>Checkout bag delivery drivers could purchase alternative fuel vehicles and utilize these fuels once they are commercially available regionally and locally.</p>

**Table 4.3-5
Proposed Bag Ordinance Consistency with Applicable
Attorney General Greenhouse Gas Reduction Measures**

<i>Strategy</i>	<i>Project Consistency</i>
Transportation-Related Emissions	
<p><i>Diesel Anti-Idling</i></p> <p>Set specific limits on idling time for commercial vehicles, including delivery vehicles.</p>	<p>Consistent</p> <p>Currently, the ARB's Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling restricts diesel truck idling to five minutes or less. Diesel trucks delivering checkout bags to Palo Alto retailers are subject to this state-wide law.</p>
Solid Waste and Energy Emissions	
<p><i>Solid Waste Reduction Strategy</i></p> <p>Project construction shall require reuse and recycling of construction and demolition (C&D) waste.</p>	<p>Consistent</p> <p>As described above, the City of Palo Alto currently exceeds the 50% mandate and diverts approximately 62% of solid waste. Single-use checkout bags make up a portion of C&D waste. The proposed Bag Ordinance would also assist by promoting reusable checkout bags, thus reducing the amount of C&D waste attributed to single-use checkout bags. Any disposal of checkout bags would be required to adhere to the existing standards.</p>

The proposed Bag Ordinance would be consistent with the Palo Alto Climate Protection Plan, the CAT strategies and measures suggested in the Attorney General's Greenhouse Gas Reduction Report as discussed in tables 4.3-3, 4.3-4 and 4.3-5. Therefore, the proposed Bag Ordinance would be consistent with the objectives of AB 32, SB 97, and SB 375. Impacts would be less than significant.

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



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

c. Cumulative Impacts. Adopted and pending checkout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single-use plastic checkout bags, and promote a shift toward reusable checkout bags. Similar to the proposed Bag Ordinance, such ordinances would be expected to generally reduce the overall number of bags manufactured and associated GHG emissions. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma. However, based on the incremental increase in per capita emissions associated with the proposed Palo Alto Bag Ordinance, the other ordinances are not expected to generate a cumulative increase in GHG emissions. For these reasons, cumulative significant impacts associated with implementation of checkout bag ordinances throughout the state are not anticipated.



4.4 HYDROLOGY and WATER QUALITY

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

4.4.1 Setting

Checkout bags are manufactured at various facilities, which may or may not be located in Palo Alto or in Santa Clara 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 checkout bags.

a. Surface Water Drainage and Checkout Bags. Palo Alto is located within the Santa Clara Basin, which drains directly to San Francisco Bay. The Santa Clara Basin includes the portion of the Bay south of the Dumbarton Bridge and the 840-square mile area of wetlands that drains into it (Santa Clara Basin Watershed Management Initiative, March 2003). It is bounded by the Dumbarton Bridge to the north, the crest of the Diablo Mountains to the east, and the crest of the Santa Cruz Mountains to the west and south. The Basin is comprised of 13 watersheds.

Palo Alto is crossed by several creeks that flow north to San Francisco Bay, from South to North: Adobe Creek, Barron Creek, Matadero Creek, and San Francisquito Creek.. San Francisquito Creek and its tributaries drain a funnel-shaped area covering 47.5 square miles on the eastern San Francisco Peninsula. Within this small area, natural processes and human activity have created a landscape of tremendous variety and complexity (San Francisquito Watershed Council, June 2012). Adobe Creek is a 14.2-mile-long northward-flowing stream originating on Black Mountain in Santa Clara County. It courses through the cities of Los Altos Hills, Los Altos, and Palo Alto and is joined by Barron Creek, before eventually draining in San Francisco Bay. Matadero Creek is a stream originating in the foothills of the Santa Cruz Mountains. The creek flows in a northeasterly direction until it enters the Palo Alto Flood Basin (Santa Clara Valley Water District, Watersheds, Accessed July 2012).

Urban runoff within Palo Alto consists of stormwater runoff from rainfall as well as non-stormwater runoff from human activities such as over-irrigation of landscapes. Runoff from streets, parking lots, commercial businesses, and private yards may contain oil, grease, pesticides and herbicides, heavy metals, paints and household chemicals, construction materials, sediment and eroded soil. Urban runoff is collected and transported through the City's storm drain system and ultimately discharged to local waterways such as San Francisquito Creek, Matadero Creek, Barron Creek, Adobe Creek and the San Francisco Bay, where they have caused substantial water quality degradation over the past century (City of Palo Alto Natural Environment Element, 2007).

Checkout 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 five to nine grams and are made of thin (less than 2.25 mils



thick) high density polyethylene (HDPE) (Hyder Consulting, 2007). Post-use from a retail store, a customer 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 the machines to malfunction, or are contaminated after use. Only about 5% of the plastic bags in California and nationwide are currently recycled (Green Cities California MEA, 2010; and Boustead, 2007). The majority of single-use plastic bags end up as litter or in the landfill. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use plastic bags that become litter can enter storm drains and may clog catch basins or be transported to the local watershed or the San Francisco Bay.

Single-use paper grocery bags also have the potential to enter the storm drains as litter. However, as described in Section 4.2, *Biological Resources*, because of 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 ten times what a single-use plastic bag weighs and two 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 Checkout Bags. The City of Palo Alto participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program with 12 other cities in Santa Clara County, the County of Santa Clara, and the Santa Clara Valley Water District. As part of the Stormwater NPDES permit, the City has two designated hot spots for trash, one on Matadero and one on Adobe Creek. Clean-ups engaging volunteers are conducted twice a year at both locations. Plastic bags are one of the items found frequently in clean ups.

Water quality may be affected by checkout bags in two different ways: litter from checkout bags and the use of materials for processing activities. As described above in *Surface Water Drainage and Checkout Bags*, litter that enters the storm drain system may clog storm drains and could result in contamination or may be transported into the local watershed or coastal habitat, violating waste discharge requirements (as described below in 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-use 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 checkout bags have less litter-related effects on water quality than single-use plastic bags; however, the manufacturing process for paper bags may utilize various chemicals and materials and may also require the use of fertilizers, pesticides and other chemicals for production of resources (such as pulp). 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 and contribute to regional as well as global water pollution.

Reusable checkout 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 checkout bags, the manufacturing process for reusable bags can utilize materials such as chemicals or fertilizer for production of resources (such as cotton) that if released, either directly to a stream or indirectly via storm water runoff, could degrade water quality in local water bodies.

c. Regulatory Setting. The federal Clean Water Act (CWA) and the California Ocean Plan are the primary mechanisms through which pollutant discharges are regulated in California. The CWA established minimum national water quality goals and created the National Pollutant Discharge Elimination System (NPDES) permit system to regulate the quality of discharged water. All dischargers must obtain NPDES permits. Beginning in 1991, all municipal and industrial storm water runoff is also regulated under the NPDES system. Of the 126 “priority contaminants” (metals and organic chemicals) established by the CWA, the California Ocean Plan has established effluent limitations for 21 of those 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 and the San Francisco Bay Basin Plan. Local agencies also have responsibility for managing wastewater discharges. All are required to meet criteria set forth in their NPDES permits, monitor their discharges, and submit monthly reports to the RWQCB and the EPA.

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 (SWRCB, 2010) reports that it is taking the following actions to comply with Section 13367:

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

“The State Water Board has issued an investigative order to all plastic-related facilities enrolled under the IGP to provide the State Water Board with critical information needed to satisfy the legislative mandates in AB 258 (Krekorian). Facilities subject to this order must complete an online evaluation and assess their points of potential preproduction plastics discharge and means of controlling these discharges. Data gathered as a result of this effort will be used to help the State Board understand the California plastics industry and ultimately develop appropriate regulation of these facilities to ensure compliance with the Clean Water Act.”

The City of Palo Alto is among the 76 co-permittees listed under a regional municipal stormwater permit for San Francisco Bay. The Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074) was adopted by the Regional Water Quality Control Board (RWQCB) for Region 2 on October 14, 2009. This permit regulates discharges from municipal separate storm drain systems into waterways under each co-permittee's jurisdiction. Provision C.10 of the MRP (Trash Load Reduction) requires permittees to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) by 40% before July 1, 2014 by implementing control measures and other actions to reduce trash loads (RWQCB: San Francisco Bay Region: Order R2-2009-0074, October 2009; and, EOA Inc., February 2011). This requirement increases to 70% by 2017 and 10% by 2022. Permittees implementing a control measure for a single-use plastic bag ordinance would potentially receive a load reduction credit of 6-12% (Table CR-1.1, EOA Inc., February 2011).

As one of 15 co-permittees of the Santa Clara Valley Urban Runoff Pollution Prevention Program (Program), the City of Palo Alto supports the Program by actively working to understand the sources, extent and effects of urban runoff pollution; and develops and implements methods for pollution reduction and control. Since 2002, the Program has prioritized the evaluation, management and reduction of trash as a pollutant associated with urban runoff. Permittees were required to submit short term trash load reduction plans to comply with the MRP requirements. The key elements of Palo Alto's Short-Term Plan are:

1. Current Single-use Carryout Plastic Bag Ban
2. Polystyrene Foam Food Service Ware Ban
3. Public Education and Outreach Programs



4. Activities to Reduce Trash from Uncovered Vehicle Loads
5. Improved Trash Bin/Container Management
6. Enhanced Street Sweeping
7. Installation of Full-Capture Treatment Devices to filter and capture trash from the municipal storm drain system
8. Installation of a Litter Boom across Matadero Creek upstream of Highway 101 to capture trash before the creek flows into the Palo Alto Flood Basin in the Baylands.
9. Volunteer Creek Clean-Ups

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. Based on the City of Palo Alto's environmental checklist, the proposed Bag Ordinance would create a significant hydrology or water quality impact if it would:

1. *Violate any water quality standards or waste discharge requirements*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site*
4. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site*
5. *Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems in a manner which could create flooding or provide substantial additional sources of polluted runoff*
6. *Otherwise substantially degrade water quality*
7. *Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map*
8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows*
9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam or being located within a 100-year flood hazard area*
10. *Result in inundation by seiche, tsunami, or mudflow*
11. *Result in stream bank instability*

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



b. Project Impacts and Mitigation Measures.

Impact HWQ-1 Although the proposed Bag Ordinance would incrementally increase the number of recyclable paper and reusable bags used in Palo Alto, the overall reduction in the total amount of checkout bags would reduce the amount of litter and waste entering storm drains and creeks, improving water quality. This would be a Class IV, *beneficial*, effect.

As a result of the proposed Bag Ordinance, existing plastic bags used in Palo Alto (25.92 million annually) would be replaced by an estimated 9.1 million single-use paper bags and 324,048 reusable bags (refer to Table 2-2 in Section 2.0, *Project Description*). This represents a 100% reduction in single-use plastic bags and a reduction of approximately 16.5 million total checkout bags.

Each type of checkout bag's potential to become litter is based on the bag's weight, material and quantity of bags used within Palo Alto. As described in Impact BIO-1 in Section 4.2, *Biological Resources*, the majority of single-use plastic bags end up as litter or in the landfill. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use plastic bags that become litter may enter storm drains from surface water runoff or may be blown directly into local waterways by the wind. Single-use plastic bag litter that enters the storm drain system can block or clog drains resulting in contamination (Green Cities California MEA, 2010). Based on the statewide data that currently almost 20 billion plastic grocery bags (or approximately 533 bags per person) are consumed annually in California (Green Cities California MEA, 2010), retail customers in the City of Palo Alto currently use approximately 25,923,864 plastic bags per year.¹

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, they 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.

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 checkout bags. Therefore, shifting toward greater use of reusable bags would improve water quality and reduce the potential for storm drain blockage.

¹ Reduction is based on Existing Ordinance applying to six supermarkets which would have utilized approximately 1.48 million plastic bags per year per store (City of Santa Monica Nexus Study contained in the Santa Monica Single Use Carryout Bag Ordinance Final EIR, January 2011). Please note that this does not take into account the Trader Joe's store as it is store policy to only distribute paper bags (thus prior to the existing ordinance Trader Joe's did not use plastic bags and the two stores currently (as of June 2012) being built (the Fresh Market and Miki's Farm Fresh Produce) since these supermarkets have not yet opened for business and therefore are not currently distributing plastic bags.



As described in Section 4.1, *Air Quality*, and Section 4.3, *Greenhouse Gas Emissions*, the proposed Bag Ordinance is anticipated to reduce the overall number of checkout bags used in Palo Alto per year by approximately 16.5 million bags. Therefore, the proposed Bag Ordinance would reduce the amount of litter associated with single-use plastic checkout bags. Consequently, water quality would benefit from the proposed Bag Ordinance, which would be expected to reduce the amount of litter that could enter storm drains and local waterways, thus improving water quality and reducing the potential for storm drain blockage. In addition, the proposed Bag Ordinance will contribute towards meeting the stringent future trash reduction targets of the Municipal Regional Stormwater NPDES Permit (MRP) as described above in the setting.

Mitigation Measures. Water quality and storm drains and associated hydrological conditions would benefit from the proposed Bag Ordinance, because the ordinance would be expected to 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 The proposed Bag Ordinance 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 to existing regulations including NPDES Permit requirements, AB 258 and the California Health and Safety Code. Therefore, impacts to water quality from altering bag processing activities would be Class III, less than significant.

The manufacturing process for single-use plastic, single-use paper, and reusable checkout bags utilizes various chemicals and materials. Single-use plastic bag manufacturers utilize “pre-production plastic.” As discussed in the *Setting*, single-use paper checkout bags and reusable checkout 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 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 checkout bags could degrade water quality.

The intent of the proposed Bag Ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in San Francisco Bay and in the marine environment. It is anticipated that by prohibiting single-use plastic checkout bags and requiring a store to charge for each paper bag distributed by retailers, the proposed Bag Ordinance would promote a shift to the use of reusable bags by retail customers and reduce the number of single-use plastic and paper checkout bags within the City. The proposed Bag Ordinance is anticipated to reduce single-use plastic bags in Palo Alto by 100% and reduce the use of all types of bags (including plastic, single-use paper, and reusable) by approximately 16.5 million bags. These shifts in the types and number of checkout bags used



could potentially alter processing activities related to bag production. The manufacturing impacts of each bag type and the anticipated changes in use are described below.

Single-use Plastic Bags. Conventional single-use plastic bags are a product of the petrochemical industry and are typically produced by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources. Single-use plastic bags begin the manufacturing process with the conversion of crude oil or natural gas into hydrocarbon monomers, which are then further processed into polymers. These polymers are heated to form plastic resins, which are then blown through tubes to create the air pocket of the bag. Once cooled, the plastic film is stretched to the desired size of the bag and cut into individual bags (Green Cities California MEA, 2010). As described in 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 that require plastic manufacturing, handling, and transportation facilities to implement best management practices to control discharges (accidental release from spilling) of preproduction plastics. These measures include containment systems, careful storage of pre-production plastics, and the use of capture devices to collect any spills.

Products used in the process to manufacture single-use plastic bags, such as petroleum and natural gas, also have the potential to be released as result of an accident during transport or use. However, regulatory agencies such as the EPA set forth Preliminary Remediation Goals (PRGs) for various pollutants in soil, air, and tap water (USEPA Region IX, Preliminary Remediation Goals Tables, 2004). PRG concentrations can be used to screen pollutants in environmental media, trigger further investigation, and provide initial cleanup goals resulting from an accident or spill of petroleum or natural gas at a single-use plastic bag manufacturing facility.

Single-use Paper Bags. The majority of single-use paper bags are made from Kraft paper, which is 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. The paper bag manufacturing process may utilize fertilizers, pesticides and other chemicals in the production of resources such as pulp. These pollutants may increase the potential for higher concentrations of trace metals, biodegradable wastes (which affect dissolved oxygen levels), and excessive major nutrients such as nitrogen and phosphorus, causing eutrophication as a result of surface water runoff. A single-use paper bag has 14 times the impact of one single-use plastic bag on eutrophication, which is caused when nitrate and phosphate are emitted into water, stimulating excessive growth of algae and other aquatic life (Green Cities California MEA, 2010). Eutrophication reduces the water quality and causes a variety of problems such as a lack of oxygen in the water (Green Cities California MEA, 2010). However, direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the National Pollutant Discharge Elimination System (NPDES) program established in Section 402 of the Clean Water Act (CWA).



Single-use paper bag manufacturers are required to comply with the local plans and policies of the SWRCB and the RWQCB, which regulate discharges to surface and groundwater, regulate waste disposal sites, and require clean up of discharges of hazardous materials and other pollutants. For example, in the City of Palo Alto, single-use paper bag manufacturers would be required to adhere to the Palo Alto Urban Runoff Management Plan (URMP), which specifies BMPs to reduce the presence of pollutants in stormwater discharges to the maximum extent practicable. 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. There are currently no known single-use bag manufacturers in the City of Palo Alto or Santa Clara County.

Reusable Bags. Reusable bags can be manufactured with various materials, including polyethylene (PE) plastic, polypropylene (PP) plastics, multiple types of cloth (cotton canvas, nylon, etc.), and recycled plastic beverage containers (polyethylene terephthalate, or PET), among others (Green Cities California MEA, 2010). Depending on the type of material used in the manufacturing process, reusable bags have various impacts to water quality. A single reusable low density polyethylene (LDPE) bag has 2.8 times the impact of a single-use plastic bag on eutrophication as result of the release of pollutants during 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, overall impacts to eutrophication would be lower in comparison to a single-use plastic bag and a single-use paper bag since reusable bags are intended to be used “hundreds of times” (Green Cities California MEA, 2010). Therefore, each reusable bag would be expected to replace hundreds of single-use plastic or paper bags, more than offsetting the increased impacts associated with each individual bag.

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

Manufacturing facilities would also be required to adhere to existing General Permits that specify local discharge requirements for municipal storm water and urban runoff discharges. For example, in Palo Alto, reusable bag manufacturers would be required to obtain and adhere to Industrial General Permits issued by the Regional Water Board..



Although reusable bags may utilize various materials, reusable checkout bag manufacturers that 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 checkout 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 San Francisco Bay.

Anticipated Changes in Bag Use. As discussed in Table 2-2 of Section 2.0, *Project Description*, this analysis assumes that as a result of the proposed Bag Ordinance, the approximately 25.92 million single-use plastic checkout bags currently used in Palo Alto annually would be reduced to approximately 9.4 million total bags (324,048 reusable bags plus 9,073,352 recyclable paper bags).

Although the proposed Bag Ordinance would be expected to incrementally increase the use of single-use paper bags and reusable bags in Palo Alto, it would also eliminate approximately 16.5 million single-use plastic bags per year. With implementation of the proposed Bag Ordinance, approximately 9.4 million checkout bags (including single-use paper and reusable bags) would be manufactured for use in Palo Alto – a decrease of 16.5 million bags compared to existing conditions. Because the proposed Bag Ordinance would reduce the overall number of checkout bags manufactured, it would reduce the overall impacts to water quality associated with bag manufacturing. Furthermore, 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, as described above. Therefore, impacts to water quality related to the potential change of processing activities as a result of the proposed Bag Ordinance would not be significant.

Mitigation Measures. Because 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. Adopted and pending checkout bag ordinances, as described in Table 3-1 in Section 3.0, *Environmental Setting*, would continue to reduce the amount of single-use checkout bags, and promote a shift toward reusable checkout bags. As discussed above, the hydrology and water quality impacts associated with the proposed Bag Ordinance would not be significant and would generally be beneficial. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and



Sonoma. These ordinances would be expected to result in similar reductions in the amount of litter entering storm drains, local creeks or watersheds, thereby improving water quality. In addition, the overall reduction in bag manufacturing expected to occur as a result of implementation of these ordinances would be expected to generally reduce water quality impacts associated with bag manufacturing. In addition, all single-use paper and reusable bag manufacturing facilities would be required to comply with applicable regulatory requirements pertaining to preservation of water quality, including AB 258 and the California Health and Safety Code, as discussed in Impact HWQ-2. For these reasons, cumulative significant impacts associated with implementation of checkout bag ordinances throughout the state are not anticipated.



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4.5 UTILITIES AND SERVICE SYSTEMS

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

4.5.1 Setting

a. Water Supply.

City Water Supplies. Palo Alto receives water from the City and County of San Francisco's Regional Water System (RWS), operated by the San Francisco Public Utilities Commission (SFPUC). This supply is predominantly surface water supplies from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties. The primary source of water supply in the City of Palo Alto is provided by the SFPUC. The Bay Area Water Supply and Conservation Agency (BAWSCA) was created in 2003 to represent the interests of 26 cities and water districts, and two private utilities, in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the San Francisco Regional Water System. BAWSCA provides these customers with an ability to work with SFPUC on an equal basis to ensure reliable operation of the regional system and collectively and efficiently meet local responsibilities.

Palo Alto is located in Santa Clara County. The Santa Clara Valley Water District (SCVWD) is the groundwater management agency in the County. The groundwater quality of the City's wells is considered fair to good quality, though significantly less desirable in comparison to the imported SFPUC supply (City of Palo Alto Utilities Urban Water Management Plant, June 2011). The groundwater is approximately six times higher in total dissolved solids (TDS) and hardness than the imported SFPUC supply (City of Palo Alto Utilities UWMP, June 2011).

In January 2011, the Palo Alto City Council approved a new Water Shortage Implementation Plan to allocate water between the BAWSCA members. This plan includes the ability to transfer water allocated to the BAWSCA agencies between BAWSCA members during drought periods. As of April 2011, all the BAWSCA agencies have unanimously adopted the plan. The City's wastewater is treated at the Regional Water Quality Control Plant (RWQCP). Some of this wastewater is recycled and used for activities such as irrigation, but does not meet the standards for potable use.

Table 4.5-1 shows the existing (2010) water supply and demand along with the City's supply and demand projections. As shown in Table 4.5-1, the City has sufficient supplies to meet demand through the year 2025. However, the City could potentially face a supply shortage in year 2030. As is discussed in the City's UWMP, the need for supplemental supplies may be less than anticipated depending on further implementation of water conservation measures and the supply reliability of San Francisco's RWS (June 2011). The City is continuing to evaluate other water supply alternatives as part of its ongoing Water Integrated Resource Plan. Currently, the City is in the construction phase of the Emergency Water Supply and Storage Project and is in the environmental review phase of the Palo Alto Phase 3 recycled water project (City of Palo Alto Utilities UWMP, June 2011) which would increase the City's supply for years beyond 2025.



**Table 4.5-1
 Water Supply and Demand Projections for the City of Palo Alto**

Year	Supply (AFY)	Demand (AFY)
2010	13,065	11,236
2015	15,103	14,201
2020	15,007	14,970
2025	15,203	14,970

*Source: City of Palo Alto Utilities, 2010 UWMP, June 2011.
 AFY=acre-feet per year*

Water Use for Checkout Bags. Various studies have estimated water use related to manufacturing of the different checkout bags (single-use plastic, paper or reusable bags) to determine a per bag water use rate. In order to provide metrics to determine environmental impacts associated with the proposed Bag Ordinance, reasonable assumptions based upon the best available sources of information have been established and are utilized in this EIR. Specific metrics that compare impacts on a per bag basis are available for single-use plastic, single-use paper and low density polyethylene (LDPE) reusable bags. However, water use for paper bags varies depending on which Life Cycle Assessment (LCA) data is utilized. The Ecobilan LCA study determined that per 9,000 liters of groceries, manufacturing of plastic bags use 52.5 liters of water, paper bags use 173 liters of water, and reusable bags (used 52 times) use 1.096 liters of water (Ecobilan, 2004; County of Los Angeles Final EIR, 2010). Similarly, using slightly different assumptions and data, the Boustead LCA study determined that water use from manufacturing checkout bags would require approximately 58 gallons of water for 1,500 plastic bags and approximately 1,004 gallons of water for 1,000 paper bags. The Boustead data does not include estimates for reusable bags. Utilizing the data from these two different studies, tables 4.5-1 and 4.5-2 summarize the existing water use from manufacturing of plastic bags used in Palo Alto.

As shown in Table 4.5-2, based on the Ecobilan LCA data, the water demand from manufacturing facilities that currently supply the approximately 25.9 million plastic checkout bags used in the City is approximately 0.56 million gallons per year, or 1,535 gallons per day [0.002 million gallons per day (MGD)]. As shown in Table 4.5-3, based on the Boustead LCA data water demand for the plastic bags used in Palo Alto is approximately one million gallons per year or 2,746 gallons per day (0.003 MGD). Although water use is calculated below, because no plastic bag manufacturing facilities are located within Palo Alto or Santa Clara County, these facilities would not affect the existing water supply in the City.



**Table 4.5-2
 Water Consumption Due to Existing Plastic Checkout Bags Based on Ecobilan Data**

Number of Plastic Bags	Water Consumption		
	Liters of Water per 9,000 liters of Groceries	Gallons of Water Per Day*	Millions of Gallons per Year
25,923,864 ¹	52.5	1,535	0.56

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

Source: Ecobilan. February 2004. *Environmental Impact Assessment of Carrefour Bags: An Analysis of the Life Cycle of Shopping Bags of Plastic, Paper, and Biodegradable Material*. Prepared for: Carrefour Group. Neuilly-sur-Seine, France.

¹ Reduction is based on the Existing Ordinance applying to six supermarkets, which would have utilized approximately 1.48 million plastic bags per year per store (City of Santa Monica Nexus Study contained in the Santa Monica Single Use Carryout Bag Ordinance Final EIR, January 2011). These six stores do not include Trader Joe's store as it is their store policy to only distribute paper bags, and thus they did not use plastic bags prior to the existing ordinance. Two new grocery stores—Fresh Market and Miki's Farm Fresh Produce—are currently being built and have not yet opened for business and are therefore not currently distributing plastic bags.

**Table 4.5-3
 Water Consumption Due to Existing Plastic Checkout Bags Based on Boustead Data**

Number of Plastic Bags	Water Consumption		
	Gallons of Water per 1,500 plastic bags	Gallons of Water Per Day*	Millions of Gallons per Year
25,923,864 ¹	58	2,746	1.00

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

Source: 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 Progressive Bag Affiliates.

¹ See Table 4.5-2 for further clarification on the existing number of plastic bags in Palo Alto.

b. Wastewater Collection and Treatment.

City Wastewater System. The City operates the Regional Water Quality Control Plant (RWQCP), a wastewater treatment plant, which serves the East Palo Alto Sanitary District, the cities of Los Altos, Los Altos Hills, Mountain View, and Palo Alto; and Stanford University. The RWQCP serves the entire City of Palo Alto. Wastewater from these communities is treated by the RWQCP prior to discharge to the San Francisco Bay. The RWQCP is an Environmental Protection Agency (EPA) award winning Class V tertiary treatment facility. The quality of the water leaving the Plant approaches the standards for drinking water, but requires an upgrade to meet established standards for potable drinking water (City of Palo Alto Utilities UWMP, June 2011).

The RWQCP has an average dry weather flow design capacity of 39 million gallons per day (MGD) with full tertiary treatment, and a peak wet weather flow capacity of 80 MGD with full secondary treatment. All of the wastewater treated at the RWQCP can potentially be recycled.



The Plant currently treats approximately 22 MGD of wastewater generated by the service area’s 220,000 residents (City of Palo Alto Public Works Department Wastewater Treatment Plant Homepage, June 28, 2012). The Plant already has some capability to produce recycled water that meets the Title 22 unrestricted use standard (approximately 4.5 MGD of capacity of which 4.5 MGD is presently available) (City of Palo Alto Utilities UWMP, June 2011). The RWQCP capacity is sufficient for current dry and wet weather loads and for future load projections. There are no plans to increase the capacity of the Plant.

Wastewater for Checkout Bags. Wastewater generation from checkout bags results from the manufacturing process as well as that which is generated by washing reusable bags. As discussed below in Section 4.5.2 (b), *Project Impacts and Mitigation Measures*, incremental amounts of wastewater are generated when washing reusable bags. Various studies have estimated wastewater related to manufacturing of the different checkout bags (single-use plastic, paper or reusable bags) to determine a per bag wastewater use rate. The Ecobilan LCA study determined that per 9,000 liters of groceries, the manufacturing of a plastic bag would generate 50 liters of wastewater, while a paper bag would generate 130.7 liters of wastewater and a reusable bag (used 52 times) would generate 2.63 liters of wastewater. Based on the Ecobilan LCA data, Table 4.5-4 displays the existing wastewater from manufacturing the approximately 25.9 million plastic bags used in Palo Alto. As shown therein, current manufacturing of plastic bags results in approximately 0.53 million gallons of wastewater per year or approximately 1,459 gallons per day (or 0.001 MGD). Similar to water use, since no manufacturing facilities are located in Palo Alto or Santa Clara County, wastewater currently generated by plastic checkout bag manufacturing is not treated at the Water Quality Control Plant.

**Table 4.5-4
Wastewater Due to Existing Plastic Checkout Bags Based on Ecobilan Data**

Number of Plastic Bags	Wastewater		
	Liters of Wastewater per 9000 liters of Groceries	Gallons of Water Per Day*	Millions of Gallons per Year
25,923,864 ¹	50	1,459	0.53

*Calculations are contained in the Utility Worksheets contained in Appendix C
Source: Ecobilan. February 2004. *Environmental Impact Assessment of Carrefour Bags: An Analysis of the Life Cycle of Shopping Bags of Plastic, Paper, and Biodegradable Material.* Prepared for: Carrefour Group. Neuilly-sur-Seine, France.
¹ See Table 4.5-2 for further clarification on the existing number of plastic bags in Palo Alto.

c. Solid Waste.

City Solid Waste Service. Source-separated municipal solid waste collected by the City of Palo Alto’s exclusive hauler, Green Waste, is transferred to the regional Sunnyvale Material and Recovery Transfer (SMaRT) Station. At the SMaRT Station, waste is sorted to remove recyclable goods for sale at market rates. Waste that cannot be recycled is deposited at the Kirby Canyon Landfill in San Jose. The Kirby Canyon Landfill takes in approximately 545 tons per day of solid waste (Sharon Clute, Environmental Inspector, Personal Communication, July 18, 2012). In addition to the solid waste hauled by Green Waste, a small fraction of solid waste from Palo Alto self-haulers dispose of materials at other regional landfills including the Altamont Landfill in Alameda County, the Keller Canyon Landfill in Contra Costa County, the Ox



Mountain Landfill in San Mateo County, and the Potrero Hills Landfill in Solano County (City of Palo Alto, June 2007). Table 4.5-5 summarizes the permitted throughput, estimated capacity, and estimated closure date for the landfill facilities serving the City.

**Table 4.5-5
Solid Waste Disposal Facilities**

Facility	Permitted Daily Throughput (tons/day)	Estimated Remaining Capacity (CY)*	Estimated Closure Date
SMaRT Station	1,500	N/A	N/A
Kirby Canyon Landfill	2,600	57,271,507	2022
Altamont Landfill	2,000	45,720,000	2025
Keller Canyon Landfill	3,500	63,408,410	2030
Ox Mountain Landfill	3,598	44,646,148	2018
Potrero Hills Landfill	4,330	13,877,000	2048

Source: California Department of Resources Recycling and Recovery Website (CalRecycle), accessed on June 28, 2011 <http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx>.

N/A = Not Available

* Remaining capacity estimates are based on reported estimated closure date minus the annual average throughput since date of reported remaining capacity.

cy=cubic yards

Palo Alto has embarked on a number of programs to reduce the amount of waste its citizens generate. Some of these programs became priorities after the State passed the California Integrated Waste Management Act in 1989 (AB 939). The City has completed a comprehensive Source Reduction and Recycling Element in compliance with AB 939, which required every city in California to reduce the waste it sends to landfills by 50% by the year 2000. As of 2010, the City was recycling or otherwise diverting 80% of its solid waste, thereby complying with the standards established by AB 939 (City of Palo Alto Public Works Department Diversion Rate, June 28, 2012). The City also adopted a Zero Waste Operational Plan in 2007, which identifies the policies, programs and facilities that will be needed to reach the goal of zero waste by 2021 (City of Palo Alto, June 2007).

Solid Waste Rates for Checkout Bags. Various studies have estimated solid waste rates related to the different checkout bags (single-use plastic, paper or reusable bags) to determine a per bag solid waste rate. Using EPA recycling rates and the Ecobilan data, it was determined that a plastic bag would generate 0.0065 kilograms (kg) of solid waste per bag, while a paper bag would generate 0.0087 kg of waste per bag, and a reusable bag (used 52 times) would generate 0.001 kg of waste per bag. Using the Boustead data along with EPA recycling rates, it was determined that plastic bags would produce 0.004 kg waste per bag, while a paper bag would result in 0.021 kg of waste per bag. The Boustead data does not estimate the solid waste from reusable bags. Tables 4.5-6 and 4.5-7 estimate the amount of solid waste associated with plastic bags currently used in Palo Alto based on the Ecobilan and Boustead studies.



**Table 4.5-6
Solid Waste Due to Existing Plastic Checkout Bags Based on Ecobilan Data**

Number of Plastic Bags	Solid Waste		
	Solid Waste per Bag per bag (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year
25,923,864 ¹	0.0065	0.51	186

**Calculations are contained in the Utility Worksheets contained in Appendix C
Source: Ecobilan. February 2004. Environmental Impact Assessment of Carrefour Bags: An Analysis of the Life Cycle of Shopping Bags of Plastic, Paper, and Biodegradable Material. Prepared for: Carrefour Group. Neuilly-sur-Seine, France.
¹ See Table 4.5-2 for further clarification on the existing number of plastic bags in Palo Alto.*

**Table 4.5-7
Solid Waste Due to Existing Plastic Checkout Bags Based on Boustead Data**

Number of Plastic Bags	Solid Waste		
	Solid Waste per Bag per bag (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year
25,923, ⁸⁶⁴¹	0.004	0.32	118

**Calculations are contained in the Utility Worksheets contained in Appendix C
Source: 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: Progressive Bag Affiliates.
¹ See Table 4.5-2 for further clarification on the existing number of plastic bags in Palo Alto.*

As shown in Table 4.5-6, based on current EPA recycling rates, the Ecobilan data determined that approximately 0.51 tons per day or 186 tons per year result from use of plastic bags used in Palo Alto. Based on the Boustead data (Table 4.5-7), plastic bags used in Palo Alto account for 0.32 tons of solid waste per day and approximately 118 tons of solid waste per year.

4.5.2 Impact Analysis

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

Based on the City of Palo Alto’s environmental checklist, a significant impact related to utilities and service systems would occur if the proposed Bag Ordinance:

1. Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board;
2. Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;



3. *Requires or results in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
4. *Has insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*
5. *Results in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*
6. *Is not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;*
7. *Does not comply with federal, state, and local statutes and regulations related to solid waste; or*
8. *Result in a substantial physical deterioration of a public facility due to increased use as a result of the project.*

The Initial Study (Appendix A) determined that all of the above criteria should be discussed in this EIR except impacts related to stormwater drainage facilities (item 3), were determined to have a no impact since by eliminating the potential for plastic bags to affect storm water flow, the proposed Bag Ordinance would incrementally improve the effectiveness of the stormwater drainage systems in Palo Alto. In addition, impacts related to water quality in storm water drainage systems are discussed in Section 4.4, *Hydrology and Water Quality*. Impacts related to water, wastewater, and solid waste are discussed below.

b. Project Impacts and Mitigation Measures

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

The proposed Bag Ordinance would increase the use of reusable bags as a result of banning plastic bags and requiring a mandatory charge for paper bags. Manufacturing facilities of checkout bags are not known to be located within Palo Alto or Santa Clara County. Therefore, manufacturing facilities would not utilize water supplies in Palo Alto.

In addition to water use from manufacturing checkout bags, reusable bags, as required by the Bag Ordinance, would be machine washable or made from a material that can be cleaned or disinfected. Washing reusable bags used in Palo Alto would utilize the City's water supplies. It is anticipated that most bag users would simply include reusable bags in wash loads that would occur with or without the bags. Nevertheless, for a conservative estimate, this analysis assumes that in order to maintain hygiene of reusable bags washing of bags (either by washing machine or rinsing) would increase the demand for water. This analysis assumes that approximately half of the reusable bags would be cleaned by rinsing and sanitizing and the other half would be machine washable. Assuming that all new reusable checkout bags require monthly cleaning in either a washing machine or by rinsing, the total increase in water demand (as shown in Table 4.5-8) would be approximately 18.52 AFY.



**Table 4.5-8
 Water Use From Reusable Bag Cleaning**

# of Additional Reusable Bags from proposed Bag Ordinance that Require Washing¹	Number of times washed per year (monthly)²	# bags per Wash Load³	# of Loads per Year	Gallons of Water per Wash Load*	Total Gallons per Year	Acre Feet Year (AFY)
162,024 (machine wash)	12	19	102,331	40	4,093,240	12.56
162,024 (hand wash)	12	1	162,024	1	1,944,288	5.96
Total						18.52

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

² Assumes that each bag is washed once a month.

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

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

Table 4.5-9 shows the proposed Bag Ordinance’s water demand, relative to the City’s existing and projected supply and demand.

**Table 4.5-9
 Proposed Bag Ordinance’s Percentage of the City’s
 Existing and Projected Supply and Demand**

	City’s Demand (AFY)	Proposed Bag Ordinance Water Demand Plus City’s Demand (AFY)	City’s Supply	Exceed Supply?
Existing (2010)	11,236	11,254.52	13,065	No
Projected (2025)	14,970	14,988.52	15,203	No

Source: City of Palo Alto Utilities, 2010 UWMP, June 2011 (refer to Table 4.5-1).

AFY=acre-feet per year

As shown in Table 4.5-9, the proposed Bag Ordinance would account for approximately 0.16% and 0.12% of the City’s existing and projected water supply, respectively. This incremental increase in the amount of water usage would not be anticipated to exceed the existing or projected supply of water and thus the proposed Bag Ordinance would not cause significant impacts to the City’s existing or projected water supplies. As mentioned in the *Setting*, the City has the water supply necessary to meet demand projections through the year 2025, but may experience a water supply shortage in 2030. However the need for supplemental supplies may



be less than anticipated depending on further implementation of water conservation measures and the supply reliability of San Francisco's RWS (City of Palo Alto Utilities UWMP, June 2011). Furthermore, the City is continuing to evaluate other water supply alternatives as part of its ongoing Water Integrated Resource Plan. Currently, the City is in the construction phase of the Emergency Water Supply and Storage Project and is in the environmental review phase of the Palo Alto Phase 3 recycled water project (City of Palo Alto Utilities UWMP, June 2011). Therefore, the City has the potential to develop water supply alternatives that may be sufficient to meet the 2030 demand projections. Thus, the potential incremental increase in water demand due to implementation of the proposed Bag Ordinance is within the capacity of the City's water supplies and impacts would be less than significant. It should again be noted that the estimated water demand associated with implementation of the Bag Ordinance is conservative insofar as it assumes that 50% of reusable bags would be washed in separate washing machine loads rather than included in existing wash loads.

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

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

Impact U-2 **Water use associated with washing reusable bags would incrementally increase wastewater generation in the City. However, projected wastewater flows would remain within the capacity of the City's wastewater collection and treatment system, and would not exceed applicable wastewater treatment requirements of the RWQCB. Impacts would be Class III, less than significant.**

The proposed Bag Ordinance would not require additional sewer connections or an increase in the service population; however, the proposed Bag Ordinance may increase water use associated with cleaning reusable bags and, therefore, would incrementally increase wastewater generation in the City. As stated in the *Setting*, the RWQCP has an average dry weather flow design capacity of 39 MGD with full tertiary treatment, and a peak wet weather flow capacity of 80 MGD with full secondary treatment. The RWQCP currently processes approximately 22 MGD of wastewater. As a conservative estimate, this analysis compares wastewater generation as a result of the proposed Bag Ordinance to the Plant's average dry weather flow design capacity of 39 MGD. Thus, the Plant has available capacity of 17 MGD.²

Manufacturing of checkout bags would produce wastewater (as described above in the *Setting*); however, because no manufacturing facilities are located within Palo Alto or Santa Clara County, there would be no impacts to the wastewater treatment requirements at the City's Regional Water Quality Control Plant. The use of reusable bags in the City would require periodic washing of bags for hygienic purposes by retail customers. Assuming that 100% of the water used to wash reusable bags would become wastewater, approximately 6,037,528 gallons (equal to 18.52 AFY) of wastewater, or approximately 16,541 gallons of wastewater per day, would require treatment at the Regional Water Quality Control Plant. This represents 0.10% of

² 39 MGD capacity – 22 MGD currently treated = 17 MGD capacity remaining



the remaining capacity (approximately 17 MGD) at the RWQCB. Thus, there is adequate capacity to treat the additional wastewater that would result from the proposed Bag Ordinance and no new facilities would be necessary. Impacts would be less than significant.

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

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

Impact U-3 The proposed Bag Ordinance would alter solid waste generation associated with bag use in Palo Alto. However, projected future solid waste generation would remain within the capacity of local landfills. Impacts would therefore be Class III, less than significant.

The majority of the solid waste generated within Palo Alto is taken to the SMaRT Station, which is owned and operated by the City of Sunnyvale. After separation of recyclable materials in the materials recovery facility (MRF), non-recyclable/solid waste are transferred to the Kirby Canyon Landfill in San Jose. As discussed in Section 4.5.1c, *Solid Waste*, the Kirby Canyon Landfill currently takes in approximately 545 tons per day of solid waste. As shown in Table 4.5-5, the Kirby Canyon Landfill has a maximum daily capacity of 2,600 tons/day. Therefore, the landfill has a surplus daily capacity of 2,055 tons/day. The proposed Bag Ordinance does not involve any physical development. However, use of checkout bags would require disposal at the end of use and would alter existing solid waste generation. Tables 4.5-10 and 4.5-11 estimate the anticipated change in solid waste generation that would result from the proposed Bag Ordinance based on the Ecobilan (Table 4.5-10) and the Boustead (Table 4.5-11) data.

As shown in Table 4.5-10, based on the Ecobilan data, the proposed Bag Ordinance would result in a reduction of approximately 99 tons per year of solid waste. However, based on the Boustead data shown in Table 4.5-11 there would be an increase of approximately 96 tons per year of solid waste, primarily due to the projected increase in paper bag use. Both studies are included in the analysis to provide a reasonable estimate of solid waste. However, as demonstrated below, the life cycle assessment models have some variability associated within them. Additionally, paper bags are easily recycled in the existing City recycling programs, composted in its current commercial program and will be accepted in future residential organics collection programs. For this analysis, the Ecobilan Data would represent a more likely scenario in Palo Alto as it takes into account reusable bag solid waste in addition to plastic and paper bags. As described above, under the Ecobilan Data, the proposed Bag Ordinance would reduce solid waste. However, the Boustead Data, which although unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. For the proposed Bag Ordinance, using the worst case scenario (the Boustead data in Table 4.5-9), the increase of solid waste (96 tons per year or 0.27 tons per day) represents 0.02% of the permitted daily throughput, and would not exceed the 1,500 tons per day capacity of the SMaRT Station. When disposed, this amount of solid waste would not exceed the surplus daily capacity of 2,055 tons/day, nor would it exceed the maximum daily capacity for the Kirby Canyon Landfill (daily capacity of 2,600 tons/day) or any of the other



potential landfills serving the City of Palo Alto. The impact to solid waste facilities as a result of the proposed Bag Ordinance would be less than significant.

**Table 4.5-10
Solid Waste Due to Checkout Bags Based on Ecobilan Data**

Type of Bags	Number of Bags	Solid Waste		
		Solid Waste per Bag per day (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
Plastic	0	0.0065	0	0
Paper	9,073,352	0.0087	0.24	87.31
Reusable (used 52 times)	324,048	0.001	0.00002	0.007
Total			0.24	87.32
Existing¹			0.51	186
Net Change			-0.27	-98.68

*Calculations are contained in the Utility Worksheets contained in Appendix C
Source: Ecobilan. February 2004. Environmental Impact Assessment of Carrefour Bags: An Analysis of the Life Cycle of Shopping Bags of Plastic, Paper, and Biodegradable Material. Prepared for: Carrefour Group. Neuilly-sur-Seine, France.
¹Existing figures from Table 4.5-6 above.

**Table 4.5-11
Solid Waste Due to Checkout Bags Based on Boustead Data**

Type of Bags	Number of Bags	Solid Waste		
		Solid Waste per Bag per day (kg)	Solid Waste Per Day (tons)*	Solid Waste per Year (tons)
Plastic	0	0.004	0	0
Paper	9,073,352	0.021	0.59	214.28
Total			0.59	214.28
Existing¹			0.32	118
Net Change			0.27	96.28

*Calculations are contained in the Utility Worksheets contained in Appendix C
Source: 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: Progressive Bag Affiliates.
**Please note that the Boustead data does not estimate solid waste from reusable bags.
¹Existing figures from Table 4.5-6 above.

Mitigation Measures. As specified above, impacts would be less than significant; therefore, mitigation is not required.

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

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



Water. Similar to the proposed Bag Ordinance, such ordinances would be expected to generally reduce the overall number of bags manufactured and associated water use from these facilities. Similar to the proposed Bag Ordinance, other adopted and pending ordinances could incrementally increase water use associated with cleaning reusable bags for hygienic purposes. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma. However, based on the incremental water use associated with the proposed Bag Ordinance (increase of approximately 18.52 AFY per year), the other ordinances are not anticipated to generate an increase in water that would exceed water supplies in their respective regions. Therefore, cumulative water impacts would not be significant.

Wastewater. Similar to the proposed Bag Ordinance, other checkout bag ordinances would be expected to generally reduce the overall number of bags manufactured and associated wastewater from these facilities. Similar to the proposed Bag Ordinance, other adopted and pending ordinances could incrementally increase wastewater associated with cleaning reusable bags. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma. However, based on the incremental increase in wastewater associated with the proposed Bag Ordinance (approximately 11,659 gallons per day), the other ordinances are not anticipated to generate an increase in wastewater that would exceed the capacity of a wastewater treatment plant or require new or expanded facilities within their respective regions. Therefore, cumulative wastewater impacts would not be significant.

Solid Waste. Similar to the proposed Bag Ordinance, other checkout bag ordinances would be expected to generally reduce the overall number of bags manufactured and associated wastewater from these facilities. Similar to the proposed Bag Ordinance, other adopted and pending ordinances could incrementally increase solid waste associated with checkout bags. Thirty-six agencies have either adopted or are considering such ordinances in the San Francisco Bay Area region including the Cities of Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Fairfax, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Cruz, South San Francisco, Sunnyvale, Watsonville, Woodside, Campbell, Cupertino, Los Altos, Los Gatos, Milpitas and Mountain View. Participating Counties include: Alameda, Marin, Santa Clara, San Mateo, Santa Cruz and Sonoma. As described in Impact U-3, these ordinances may actually result in a reduction of solid waste according to the Ecobilan study. However, using the more conservative Boustead data, based on the incremental increase in solid waste associated with



the proposed Bag Ordinance (approximately 0.27 tons per day), the other ordinances are not anticipated to generate an increase in solid waste that would exceed the capacity of a local landfill or require new or expanded facilities within their respective regions. Therefore, cumulative solid waste impacts would not be significant.



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5.0 OTHER CEQA DISCUSSIONS

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

5.1 GROWTH INDUCING IMPACTS

The *CEQA Guidelines* require a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. Therefore, the proposed Bag Ordinance's growth-inducing potential is 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 Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) for a recyclable paper or reusable checkout bag until one year after ordinance implementation and twenty-five cents (\$0.25) thereafter. Food service establishments would not be required to charge for a recyclable paper checkout bag. The intent of the proposed Bag Ordinance is to reduce the environmental impacts of pollution related to single-use plastic checkout bags in local creeks, San Francisco Bay, and the marine environment, and to promote a shift toward the use of reusable bags by retail customers in Palo Alto. The proposed Bag Ordinance would not include development of any physical structures or involve any construction activity.

Plastic checkout bag production and distribution would decline as a result of the proposed Bag Ordinance. However, employment patterns in Palo Alto would not be affected as there are no known plastic bag manufacturing facilities in the City. In addition, recyclable paper bag use is anticipated to increase incrementally. However, similar to plastic checkout bag manufacturing, employment patterns in the region would not be affected by the proposed Bag Ordinance as there are no known paper bag manufacturing plants in Palo Alto. There is a paperbag manufacturing plant in Buena Park, California (County of San Mateo Draft EIR, June 2012).

Demand for reusable bags is anticipated to increase. Nevertheless, incremental increases in the use of paper and reusable bags in the region is not anticipated to significantly affect long-term employment at reusable bag manufacturing facilities or increase the region's population.

Revenues generated by the sale of paper bags would remain with the affected stores and are intended to offset the costs of implementing the proposed Bag Ordinance. The Bag Ordinance is not expected to generate substantial economic growth.



Based on the above, the proposed Bag Ordinance would not be growth-inducing as it would not affect significantly long-term local or regional employment patterns or increase the region's population.

5.1.2 Removal of Obstacles to Growth

The proposed Bag Ordinance would not involve any physical development. As such, it would not necessitate any improvements to water, sewer, and drainage connection infrastructure. No new roads would be required as the only change in traffic patterns would involve deliveries of paper and reusable bags to existing businesses. Because the proposed Bag Ordinance would not include any physical development or construction 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 Bag Ordinance, and irreversible impacts associated with the proposed Bag Ordinance.

As an ordinance, the project would not include development of any physical structures or involve any construction activity. Therefore, the proposed Bag 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 Bag Ordinance is to reduce the wasteful use of resources and associated environmental impacts.

As discussed in Section 4.1, *Air Quality*, air pollutant emissions would not be increased beyond BAAQMD thresholds and with anticipated reductions in the overall number of plastic bags used in Palo Alto, emissions would be reduced compared to existing conditions. Similarly, as discussed in Section 4.3, *Greenhouse Gas Emissions*, although the proposed Ordinance would result in net increase of GHG emissions (approximately 0.006 CO₂e/person/year) compared to existing conditions, this increase would not exceed any thresholds of significance and the proposed Bag Ordinance would be consistent with applicable plans, policies and regulations related to reducing GHG emissions, including the Palo Alto Climate Protection Plan. Thus, the proposed 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 seven alternatives are evaluated:

- *Alternative 1: No Project*
- *Alternative 2: Food Service Establishments (FSE) Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely*
- *Alternative 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at Food Service Establishments, No Plastic at Either*
- *Alternative 4: \$0.10 for Paper Bags at Both Retail Services and Food Service Establishments, No Plastic at Either*
- *Alternative 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and Food Service Establishments, No Plastic at Either*
- *Alternative 6: Food Service Establishments Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*
- *Alternative 7: No Plastic or Paper at Either Retail or Food Service Establishments*

This section also includes a discussion of the “environmentally superior alternative” among those studied and a discussion of alternatives considered but ultimately rejected.

6.1 ALTERNATIVE 1: NO PROJECT

6.1.1 Description

The No Project alternative assumes that the proposed Bag Ordinance would not be adopted. Thus, the use of checkout bags at retail stores in Palo Alto would not change compared to current conditions. The City’s existing Plastic Bag Restriction Ordinance would still be in place and would continue to require “supermarkets” to provide only reusable bags and/or recyclable paper bags to customers at the point of sale (but would not require them to charge for reusable or paper bags). However, under the No Project alternative, only seven stores (plus two stores under construction at the time of this analysis as described in Section 2.0, *Project Description*) would be required to adhere to the existing ordinance. Thus, under this alternative, single-use plastic and paper carryout bags would continue to be available free-of-charge to customers at most retail stores in Palo Alto.

This alternative assumes that the existing plastic bags used in Palo Alto, including the reductions of plastic bags as result of the existing ordinance, would remain the same (including approximately 5% of the total plastic bags used at food service establishments). Thus this alternative (as described in Table 2-1), would result in a reduction of 8,880,000 plastic bags per year compared to previous conditions where there was no bag ordinance. Under this alternative, it is assumed that of the 8,880,000 plastic bags that would be reduced, 65% would shift to reusable, and 35% would shift to single-use paper bags, respectively. These assumptions are based on the rates used in the County of San Mateo Reusable Bag Ordinance Final Program EIR, SCH#2012042013, October 2012, the Sunnyvale Single-Use Carryout Bag Ordinance Final Environmental Impact Report, SCH#2011062032, December 2011, and the City of San Jose Final



EIR, SCH # 2009102095, October 2010. Table 6-1 summarizes the changes in bag distribution as a result of this alternative compared to the proposed Bag Ordinance.

**Table 6-1
 Estimated Bag Use: Proposed Bag Ordinance versus No Project
 Alternative**

Bag Type	Bags Used Annually	
	Proposed Ordinance*	No Project**
Single-use Plastic	0	25,923,864*
Recyclable Paper ¹	9,073,352	3,108,000
Reusable	324,048	111,000
Total	9,397,400	29,142,864

* Refer to Table 2-2 in Section 2.0, Project Description.

** Based on the assumption that 65%, and 35% of the 8,880,000 reduction in plastic bag use would shift to reusable, and would shift to paper bags, respectively.

¹It should be noted that the No Project alternative would continue the distribution of single-use paper bags, as opposed to the proposed Bag Ordinance which requires that paper bags be recyclable.

6.1.2 Impact Analysis

No change in environmental conditions would occur under this alternative because the existing ordinance would not be expanded to include all retail services and food service establishments in Palo Alto. In addition, a mandatory charge for carryout bags would not be imposed. Thus, Palo Alto retail customers would have no incentive to alter their existing checkout bag preferences. Because conditions would not change under this alternative, none of the impacts or benefits in the studied issue areas associated with the proposed Bag Ordinance would occur. This alternative would not result in the change in truck trips associated with delivering reusable and recyclable paper bags that would occur with implementation of the proposed Bag Ordinance and would therefore eliminate impacts associated with such trips. In addition, because the No Project alternative would not facilitate a shift to reusable bags, the proposed Bag Ordinance's less than significant impacts related to water and wastewater demand from washing reusable bags would be eliminated. On the other hand, this alternative would not achieve the proposed Bag 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 Bag Ordinance. Solid waste generation would not change from existing conditions and there would therefore be no impact related to solid waste.



6.2 ALTERNATIVE 2: FOOD SERVICE ESTABLISHMENTS (FSE) EXEMPT: PROPOSED BAG ORDINANCE IN PLACE FOR RETAIL, BUT EXCLUDES FOOD SERVICE ESTABLISHMENTS ENTIRELY.

6.2.1 Description

This alternative assumes the proposed Bag Ordinance would prohibit all Palo Alto retail services (including supermarkets) from providing single-use plastic bags to customers at the point of sale and would require retail services to charge a minimum of ten cents (\$0.10) during the first year of the ordinance and twenty-five cents (\$0.25) thereafter for a recyclable paper or reusable checkout bag. However, under this alternative, food service establishments would be exempt from the Ordinance. In other words, food service establishments would be permitted to distribute single-use plastic bags and paper bags free-of-charge to customers in Palo Alto. As a result of the exclusion of food service establishments from the ban on single-use plastic bags, it is anticipated that this alternative would increase the use of single-use plastic bags and decrease the use of recyclable paper compared to the proposed Bag Ordinance, since food service establishment customers would be more likely to use a single-use plastic or paper bag at no cost as they currently do under existing conditions.

As this alternative would not apply to food service establishments, it is assumed that 5% of existing single-use plastic bags (approximately 1,296,193 plastic bags per year) would remain in use and that the remaining 95% of plastic bags currently used in Palo Alto (approximately 24,627,671 plastic bags per year) would be replaced by approximately 30% paper bags (compared to 0% plastic and 35% paper assumed for the proposed Bag Ordinance). The number of reusable bags would remain unchanged compared to the proposed Bag Ordinance (65% of the total number of plastic bags used in the City or 324,048 reusable bags). These assumptions are based on the rates used in the County of San Mateo Reusable Bag Ordinance Final Program EIR, SCH#2012042013, October 2012, the Sunnyvale Single-Use Carryout Bag Ordinance Final Environmental Impact Report, SCH#2011062032, December 2011, and the City of San Jose Final EIR, SCH # 2009102095, October 2010. Table 6-2 summarizes the changes in bag distribution as a result of this alternative compared to the proposed Bag Ordinance.

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

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 2**
Single-use Plastic	0	1,296,193
Recyclable Paper	9,073,352	7,777,159
Reusable	324,048	324,048
Total	9,397,400	9,397,400

* Refer to Table 2-2 in Section 2.0, Project Description.

** Based on an assumption of 5% existing plastic bag use in Palo Alto (approximately 1,296,193 plastic bags per year) to remain, 30% conversion of the volume of existing plastic bag use in Palo Alto to paper bags and 65% conversion to reusable bags (based on 52 uses per year).



6.2.2 Impact Analysis

a. Air Quality. As described in Section 4.1, *Air Quality*, it is estimated that the proposed Bag Ordinance would replace the total volume of single-use plastic bags currently used in Palo Alto with approximately 35% paper bags and 65% reusable bags (as shown in Table 6-2 above). This alternative would permit food service establishments in Palo Alto to continue the distribution of single-use plastic bags to their customers free-of-charge, and would therefore promote a smaller shift toward recyclable paper bags. Consequently, this alternative would increase the number of single-use plastic bags, decrease the number of recyclable paper bags, and result in the same number of reusable bags used compared to the proposed Bag Ordinance. Overall bag use under Alternative 2 would be the same as under the proposed Bag Ordinance (approximately 9,397,400 single-use plastic, recyclable paper, and reusable bags). As described in Section 4.1, *Air Quality*, emissions associated with recyclable paper bag production result in 1.9 times the impact on atmospheric acidification as a single-use plastic bag. As Alternative 2 would result in fewer recyclable paper bags, air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be decreased when compared to the proposed Bag Ordinance. Table 6-3 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 2, as compared to the proposed Bag Ordinance.

**Table 6-3
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 2**

Bag Type	# of Bags Used per Year*	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	1,296,193	1.0	0.023	30	1.0	1.084	1,405
Recyclable Paper	7,777,159	1.3	0.03	233	1.9	2.06	16,021
Reusable	324,048	1.4	0.032	10	3.0	3.252	1,054
Alternative 2 Total				273	Alternative 2 Total		18,480
Proposed Bag Ordinance				282	Proposed Bag Ordinance		19,745
Difference				(9)	Difference		(1,265)
Current Total (with Existing Ordinance)				596	Current Total (with Existing Ordinance)		28,101
Net Change of Alternative 2 (Alternative 2 Total minus Existing Total)				(323)	Net Change		(9,621)

Source: Refer to Table 4.1-4 in Section 4.1, *Air Quality*.



As shown in Table 6-3, because this alternative would decrease the number of recyclable paper bags used in the City, the contribution to ground level ozone would decrease by approximately 9 kg per year (a 3% decrease) and the contribution to atmospheric acidification would decrease by approximately 1,265 kg per year (a 6% decrease) when compared to the proposed Bag Ordinance.

To estimated mobile emissions resulting from Alternative 2, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-4, Alternative 2 would result in an estimated 39.33 truck trips per year, or 0.11 truck trips per day, which is lower than under the proposed Bag Ordinance.

**Table 6-4
 Estimated Truck Trips per Day Following Implementation of Alternative 2**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	1,296,193	2,080,000	0.62	0.002
Recyclable Paper	7,777,159	217,665	35.73	0.10
Reusable	324,048	108,862	2.98	0.008
Alternative 2 Total			39.33	0.11
Truck Trips from Proposed Bag Ordinance			45	0.123
Difference			(5.67)	(0.013)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 2 (Alternative 2 Total minus Current Total)			26.33	0.07

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

Based on the estimated truck trips for Alternative 2, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-5, this alternative would reduce daily emissions compared to the proposed Bag Ordinance. As with the proposed Bag Ordinance, mobile emissions associated with this alternative would not exceed BAAQMD thresholds.

Based on the above and Table 6-5 below, Alternative 2 would slightly reduce air quality impacts compared to the proposed Bag Ordinance. Impacts resulting from bag manufacture and use (ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to an increase in truck trips would continue to be Class III, *less than significant*.



**Table 6-5
Operational Emissions Associated with Alternative 2**

	Emissions (lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Mobile Emissions: Proposed Ordinance	<0.01	0.02	<0.01	<0.01
Mobile Emissions: Alternative 2	<0.01	0.01	<0.01	<0.01
<i>BAAQMD Thresholds</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Threshold Exceeded?	No	No	No	No

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

b. Biological Resources. Unlike the proposed Bag Ordinance, this alternative would permit food service establishments in Palo Alto to continue the distribution of single-use plastic bags to customers free-of-charge, thereby incrementally increasing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the proposed Bag Ordinance, however, this alternative would slightly decrease the amount of paper bag litter that could enter the marine environment. As discussed in Section 4.2, *Biological Resources*, paper bags are less likely to become litter compared to single-use plastic bags. Therefore, the increase in single-use plastic bags associated with this alternative would result in more overall litter entering the marine environment. As a result, impacts to marine species from Alternative 2 would incrementally increase as compared to the proposed Bag Ordinance, but would still be reduced as compared to existing conditions. Impacts would remain Class IV, *beneficial*.

c. Greenhouse Gas Emissions. Compared to the proposed Bag Ordinance, this alternative would be expected to increase the number of single-use plastic bags by approximately 1.3 million bags and decrease the number of recyclable paper bags by the same number (approximately 1.3 million bags). As noted in Section 4.3, *Greenhouse Gases*, the manufacture, transport, and disposal of each recyclable paper bag results in 3.3 times the emissions of a single-use plastic bag, while the manufacturing, transportation, and disposal of each reusable bag results in approximately 2.6 times the emissions of a single-use plastic bag. Therefore, this alternative would slightly reduce GHG emissions as compared to the proposed Bag Ordinance.

Table 6-6 on the following page provides an estimate of GHG emissions that would result from implementation of Alternative 2.

Compared to the proposed Bag Ordinance, GHG emissions under Alternative 2 would decrease by approximately 0.002 metric tons CO₂e per person per year and would not exceed the 4.6 metric tons CO₂e per person per year threshold. Thus, the GHG impacts from Alternative 2 would be slightly reduced as compared to the proposed Bag Ordinance and would continue to be Class III, *less than significant*.



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

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person
Single-use Plastic	1,296,193	1.0	0.04 per 1,500 bags	35	0.0005
Recyclable Paper	7,777,159	2.97	0.1188 per 1,000 bags	924	0.014
Reusable	324,048	2.6	0.104 per 1,000 bags	34	0.0005
Alternative 2 Total				993	0.015
Proposed Bag Ordinance				1,112	0.017
Difference				(119)	(0.002)
Existing Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 2 (Alternative 2 Total minus Existing Total)				302	0.004

*CO₂e = Carbon Dioxide Equivalent units
 Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.*

d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in Palo Alto, thereby incrementally reducing the amount of plastic litter and waste entering storm drains compared to existing conditions. Compared to the proposed Bag Ordinance, however, this alternative would slightly increase the number of single-use plastic bags (by approximately 1.3 million bags), and would reduce the number of recyclable paper bags by the same number (approximately 1.3 million bags). As a result, this alternative would result in a proportional increase in litter compared to the proposed Bag Ordinance. As with the proposed Bag Ordinance, an incremental reduction in the amount of litter that could enter storm drains and local waterways (compared to existing conditions) would improve water quality and reduce the potential for storm drain blockage. Therefore, like the proposed Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat reduced under this alternative.

This alternative would be expected to result in the use of more single-use plastic carryout bags in Palo Alto than implementation of the proposed Bag Ordinance. As with the proposed Bag Ordinance, single-use plastic 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 Bag Ordinance and would be Class III, *less than significant*.



e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to increase the number of single-use plastic bags by approximately 1.3 million and reduce the number of recyclable paper bags by the same number (approximately 1.3 million bags). The number of reusable bags would not change under this alternative. Because the number of reusable bags would be the same under this alternative as compared to the proposed Bag Ordinance, water demand and wastewater generation related to washing reusable bags would also be the same as under the proposed Bag Ordinance. This equates to an estimated 18.52 AFY of water and 16,541 gallons per day of wastewater. As noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies available to meet this demand, and sufficient capacity within the City's wastewater distribution and treatment system. Therefore, impacts would be the same as those of the proposed Bag Ordinance and would be Class III, *less than significant*.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. However, as noted, the life cycle assessment models have some variability associated within them. For this analysis, the Ecobilan Data, which would show a reduction of solid waste compared to existing conditions, would represent a more likely scenario in Palo Alto as it takes into account solid waste from reusable bags in addition to plastic and paper bags. However, the Boustead Data, which, although is unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Using the solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate 0.50 tons/day of solid waste (calculations are contained in Appendix C). In comparison, the proposed Bag Ordinance would generate 0.59 tons/day. Therefore, Alternative 2 would generate 0.09 tons/day less solid waste than the proposed Bag Ordinance (a 15% decrease). Therefore, solid waste impacts would be slightly reduced when compared to the proposed Bag Ordinance. As with the proposed Bag Ordinance, impacts would be Class III, *less than significant*.

6.3 ALTERNATIVE 3: \$0.25 STORE CHARGE FOR PAPER BAGS AT RETAIL BUT NO PAPER CHARGE AT FOOD SERVICE ESTABLISHMENTS

6.3.1 Description

This alternative would prohibit all Palo Alto retail services (including supermarkets) and food service establishments from providing single-use plastic bags to customers at the point of sale, but would increase the mandatory charge for a recyclable paper bag at retail services from \$0.10 to \$0.25 initially rather than one year after the ordinance implementation date. As a result of the \$0.15 increase in the mandatory charge per paper bag at retail services, it is anticipated that this alternative would further promote the use of reusable bags, since customers would be deterred from purchasing paper bags due to the additional cost. Please note that similar to the proposed Bag Ordinance, under this alternative food service establishments would not be required to charge for paper bags.

Based on a cost requirement of \$0.25 per recyclable paper bag at retail services, it is assumed that the total volume of plastic bags currently used in Palo Alto (approximately 25,923,864 plastic bags per year) would be replaced by approximately 11% paper bags and 89% reusable



bags¹ under Alternative 3 (compared to 35% paper and 65% reusable assumed for the proposed Bag Ordinance). Table 6-7 summarizes the anticipated changes in bag distribution as a result of a \$0.25 mandatory charge under this alternative compared to the \$0.10 charge under the proposed Bag Ordinance.

**Table 6-7
 Estimated Bag Use: Proposed Ordinance versus Alternative 3**

Bag Type	Bags Used Annually	
	Proposed Ordinance* (Initial \$0.10 Charge for Recyclable Paper Bags at Retail Services)	Alternative 3** (Initial \$0.25 Charge for Recyclable Paper Bags at Retail Services)
Single-Use Plastic	0	0
Recyclable Paper	9,073,352	2,851,625
Reusable	324,048	443,697
Total	9,397,400	3,295,322

* Refer to Table 2-2 in Section 2.0, Project Description.

** Based on an assumption of 100% replacement of plastic bag use in Palo Alto (approximately 25,923,864 plastic bags per year) with 11% conversion of the volume of existing plastic bag use in Palo Alto to paper bags and 89% conversion to reusable bags (based on 52 uses per year).

6.3.2 Impact Analysis

a. Air Quality. As shown in Table 6-7, Alternative 3 would result in approximately 6.10 million fewer bags (including paper and reusable) than the proposed Bag Ordinance. Air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be reduced when compared to the proposed Bag Ordinance.

Table 6-8 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 3, as compared to the proposed Bag Ordinance. Because this alternative would reduce the number of paper bags in Palo Alto, the contribution to ground level ozone would decrease by approximately 182 kg per year (a 65% decrease) and the contribution to atmospheric acidification would decrease by approximately 12,428 kg per year (a 63% decrease) when compared to the proposed Bag Ordinance.

¹ Rates from City of San Jose Final EIR, SCH # 2009102095, October 2010.



**Table 6-8
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 3**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	0	1.0	0.023	0	1.0	1.084	0
Recyclable Paper	2,851,625	1.3	0.03	86	1.9	2.06	5,874
Reusable	443,697	1.4	0.032	14	3.0	3.252	1,443
Alternative 3 Total				100	Alternative 3 Total		7,317
Proposed Bag Ordinance Total				282	Proposed Bag Ordinance Total		19,745
Difference				(182)	Difference		(12,428)
Current Total (with the Existing Ordinance)				596	Current (with Existing Ordinance)		28,101
Net Change of Alternative 3 (Alternative 3 Total minus Existing Total)				(496)	Net Change		(20,784)

Source: Refer to Table 4.1-4 in Section 4.1, Air Quality.

To estimate mobile emissions resulting from Alternative 3, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-9, Alternative 3 would result in an estimated 17.1 truck trips per year, or 0.05 truck trips per day, which is lower than the proposed Bag Ordinance. Compared to existing conditions (with the existing ordinance), this alternative would result in an estimated 4.1 net new truck trips per year or approximately 0.01 truck trips per day.

Based on the estimated truck trips for Alternative 3, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-10, this alternative would reduce daily emissions compared to the proposed Bag Ordinance. Like the proposed Bag Ordinance, mobile emissions associated with this alternative would not exceed BAAQMD thresholds.

Based on the above, Alternative 3 would reduce air quality impacts compared to the proposed Bag Ordinance. Impacts resulting from bag manufacturing and use (ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to a truck trips would continue to be Class III, *less than significant*.



**Table 6-9
 Estimated Truck Trips per Day
 Following Implementation of Alternative 3**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	0	2,080,000	0	0
Recyclable Paper	2,851,625	217,665	13.1	0.04
Reusable	443,697	108,862	4	0.01
Alternative 3 Total			17.1	0.05
Proposed Bag Ordinance Total			45	0.123
Difference			(27.9)	(0.073)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 3 (Alternative 3 Total minus Current Total)			4.1	0.01

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

**Table 6-10
 Operational Emissions Associated with Alternative 3**

	Emissions (lbs/day)			
	ROG	NO_x	PM₁₀	PM_{2.5}
Mobile Emissions: Proposed Bag Ordinance	<0.01	0.02	<0.01	<0.01
Mobile Emissions: Alternative 3	<0.01	<0.01	<0.01	<0.01
<i>BAAQMD Thresholds</i>	54	54	82	54
Threshold Exceeded?	No	No	No	No

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

b. Biological Resources. Similar to the proposed Bag Ordinance, this alternative would prohibit all Palo Alto retailers (including supermarkets and food service establishments) from distributing single-use plastic carryout bags, thereby incrementally reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the proposed Bag Ordinance, this alternative would also further reduce the amount of paper bag litter that could enter the marine environment. Although paper bags are less likely to become litter compared to single-use plastic bags (refer to Section 4.2, *Biological*



Resources), the net reduction of all bag types associated with this alternative would result in overall less litter entering the marine environment. As a result, the Class IV, *beneficial*, effects to marine species from Alternative 3 would be increased as compared to the proposed Bag Ordinance.

c. Greenhouse Gas Emissions. As compared to the proposed Bag Ordinance, this alternative would increase the number of reusable bags used in the City by an estimated 119,649. This would slightly increase GHG emissions. On the other hand, this alternative would reduce the number of paper bags to a greater extent (approximately 6.22 million bags), which would reduce GHG emissions associated with paper bag use.

Table 6-11 provides an estimate of GHG emissions that would result from the reduction of checkout bags as a result of implementation of Alternative 3. Compared to the proposed Bag Ordinance, GHG emissions under Alternative 3 would decrease by approximately 0.0113 CO₂e per person per year. In addition, compared to existing conditions, this alternative would reduce GHG emissions by approximately 306 metric tons per year, or approximately 0.0053 CO₂e per person per year. Therefore GHG impacts from Alternative 3 would be reduced when compared to the proposed Bag Ordinance and would be Class IV, *beneficial*, compared to existing conditions.

**Table 6-11
 Estimated Greenhouse Gas Emissions from Alternative 3**

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO ₂ e (metric tons)	CO ₂ e per year (metric tons)	CO ₂ e per Person
Single-use Plastic	0	1.0	0.04 per 1,500 bags	0	0
Recyclable Paper	2,851,625	2.97	0.1188 per 1,000 bags	339	0.005
Reusable	443,697	2.6	0.104 per 1,000 bags	46	0.0007
Alternative 3 Total				385	0.0057
Proposed Bag Ordinance Total				1,112	0.017
Difference				(727)	(0.0113)
Current Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 3 (Alternative 3 Total minus Current Total)				(306)	(0.0053)

CO₂e = Carbon Dioxide Equivalent units
 Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.



d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in Palo Alto, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would further reduce the number of paper bags compared to the proposed Bag Ordinance (by approximately 6.22 million bags), replacing them instead with approximately 119,649 reusable bags. As a result, this alternative would reduce overall litter compared to the proposed Bag Ordinance. As with the proposed Bag 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 Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative, since fewer paper bags would be used in Palo Alto.

As noted above, this alternative would be expected to result in the use of fewer recyclable paper carryout bags in Palo Alto as compared to the proposed Bag Ordinance. However, it would not completely eliminate paper bags. As with the proposed Bag Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, AB 258 and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same under as the proposed Bag Ordinance and would be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 6.22 million and increase the number of reusable bags by approximately 119,649. The number of single-use plastic bags would not change under this alternative. Because 37% more reusable bags would be used under this alternative as compared to the proposed Bag Ordinance, water demand and wastewater generation related to washing reusable bags would also increase by 37%. This equates to a net increase of an estimated 7.03 AFY of water and a net increase of an estimated 6,120 gallons per day of wastewater. As noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater facility capacity to meet this demand. Therefore, impacts would be slightly greater than those of the proposed Bag Ordinance, but would remain Class III, *less than significant*.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. However, as noted, the life cycle assessment models have some variability associated within them. For this analysis, the Ecobilan Data which would show a reduction of solid waste compared to existing conditions would represent a more likely scenario in Palo Alto, as it takes into account solid waste from reusable bags in addition to plastic and paper bags. However, the Boustead Data, which, although is unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Nevertheless, using the solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a net decrease of 0.14 tons/day of solid waste (calculations are contained in Appendix C) compared to existing conditions. In comparison, the proposed Bag Ordinance would generate a net increase of 0.27 tons/day compared to existing conditions. Therefore, Alternative 3 would generate less solid waste than the proposed Bag Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing



capacity at area landfills. Solid waste impacts would be reduced when compared to the proposed Bag Ordinance and would be a Class IV, *beneficial* impact.

6.4 ALTERNATIVE 4: \$0.10 FEE FOR PAPER BAGS AT BOTH RETAIL SERVICES AND FOOD SERVICE ESTABLISHMENTS, NO PLASTIC AT EITHER

6.4.1 Description

Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, under this alternative, the mandatory charge of \$0.10 for recyclable paper bags would apply to food service establishments as well as retail establishments in the City. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. As a result of the mandatory charge for paper bags at all retailers and food service establishments, it is anticipated that this alternative would further promote the use of reusable bags (or no use of bags²) since customers at all retail establishments (including food service establishments) would be deterred from purchasing paper bags due to the cost.

Based on a cost requirement of \$0.10, it is assumed that the total volume of plastic bags currently used in Palo Alto (approximately 25,923,864 plastic bags per year) would be replaced by approximately 30% paper bags and 70% reusable bags under Alternative 4 (compared to 35% paper and 65% reusable assumed for the proposed Bag Ordinance). The total estimate of bag use under this alternative, compared to the proposed Bag Ordinance, is summarized in Table 6-12.

**Table 6-12
 Estimated Bag Use: Proposed Bag Ordinance versus Alternative 4**

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 4**
Single-use Plastic	0	0
Recyclable Paper	9,073,352	7,777,159
Reusable	324,048	348,975
Total	9,397,400	8,126,134

*Refer to Table 2-2 in Section 2.0, Project Description.

** Based on assumptions of 30% conversion of the volume of existing plastic bag use in Palo Alto to paper bags and 70% conversion to reusable bags (based on 52 uses per year).

² While it is possible that some consumers would choose not to purchase a bag, this alternative conservatively assumes that consumers would shift to reusable bags, rather than choose to use no bag at all.



6.4.2 Impact Analysis

a. Air Quality. This alternative would apply a \$0.10 mandatory charge for recyclable paper bags at all retail services and food service establishments in Palo Alto and would therefore eliminate an additional 1.3 million recyclable paper bags as compared to the proposed Bag Ordinance. However, it would increase reusable bag use by an estimated 24,927. In total, Alternative 4 would result in approximately 1.3 million fewer bags used in the City as compared to the proposed Bag Ordinance. Air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be reduced when compared to the proposed Bag Ordinance.

Table 6-13 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 4, as compared to the proposed Bag Ordinance. As shown, because this alternative would reduce the use of recyclable paper bags in the City, the contribution to ground level ozone would decrease by approximately 38 kg per year (a 13% decrease) and the contribution to atmospheric acidification would decrease by approximately 2,589 kg per year (a 13% decrease) when compared to the proposed Bag Ordinance.

**Table 6-13
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 4**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	0	1.0	0.023	0	1.0	1.084	0
Recyclable Paper	7,777,159	1.3	0.03	233	1.9	2.06	16,021
Reusable	348,975	1.4	0.032	11	3.0	3.252	1,135
Total				244	Total		17,156
Proposed Bag Ordinance				282	Proposed Bag Ordinance		19,745
Difference				(38)	Difference		(2,589)
Current Total (with Existing Ordinance)				596	Current Total (with Existing Ordinance)		28,101
Net Change of Alternative 4 (Alternative 4 Total minus Current Total)				(352)	Net Change		(10,945)

Source: Refer to Table 4.1-4 in Section 4.1, Air Quality.

To estimate mobile emissions resulting from Alternative 4, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in



Table 6-14, Alternative 4 would result in 39 truck trips per year (0.11 trips per day), which is a 13% reduction in truck trips as compared to the proposed Bag Ordinance.

**Table 6-14
 Estimated Truck Trips per Day Following Implementation of Alternative 4**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	0	2,080,000	0	0
Recyclable Paper	7,777,159	217,665	36	0.10
Reusable	348,975	108,862	3	0.01
Alternative 4 Total			39	0.11
Truck Trips from Proposed Bag Ordinance			45	0.123
Difference			(6)	(0.013)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 4 (Alternative 4 Total minus Current Total)			26	0.07

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

Based on the estimated truck trips for Alternative 4, mobile emissions were calculated using the URBEMIS model. As shown in Table 6-15, this alternative would reduce daily emissions compared to the proposed Bag Ordinance. Similar to the proposed Bag Ordinance, mobile emissions would not exceed BAAQMD thresholds.

**Table 6-15
 Operational Emissions Associated with Alternative 4**

	Emissions (lbs/day)			
	ROG	NO_x	PM₁₀	PM_{2.5}
Mobile Emissions: Proposed Ordinance	<0.01	0.02	<0.01	<0.01
Mobile Emissions: Alternative 4	<0.01	<0.01	<0.01	<0.01
<i>BAAQMD Thresholds</i>	54	54	82	54
Threshold Exceeded?	No	No	No	No

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



Based on the above, impacts resulting from bag manufacturing and use (including ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to an increase in truck trips would continue to be Class III, *less than significant*.

b. Biological Resources. Similar to the proposed Bag Ordinance, this alternative would prohibit all retail establishments and food service establishments from providing single-use plastic checkout bags, thereby reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the proposed Bag Ordinance, this alternative would also further reduce the amount of paper bag litter that could enter the marine environment. Moreover, this alternative would require both retail services and food service establishments to charge \$0.10 for recyclable paper bags, thereby further promoting the use of reusable bags (or doing without bags) within the City. Reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to single-use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 125 times (as defined in the proposed Bag Ordinance), reusable bags would be disposed of less often than single-use carryout bags. Therefore, the impact to sensitive species as a result of litter entering the marine environment from Alternative 4 would be reduced compared to the proposed Bag Ordinance. Similar to the proposed Bag Ordinance, impacts would be Class IV, *beneficial*. Overall benefits would be somewhat greater than those of the proposed Bag Ordinance.

c. Greenhouse Gas Emissions. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of recyclable paper bags by approximately 1.3 million bags and increase the number of reusable bags by approximately 24,927. The decrease in the number of recyclable paper bags would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance. However, this alternative would result in a net increase in reusable bag use as a result of the reduction in the number of recyclable paper bags.

Table 6-16 provides an estimate of GHG emissions associated with implementation of Alternative 4.

As discussed in Section 4.3, *Greenhouse Gases*, if used 20 times, a reusable low density polyethylene (LDPE) carryout bag results in 10% the GHG emissions of a single-use high density polyethylene (HDPE) plastic bag (AEA Technology, 2005). Alternative 4 would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance and an incremental increase in GHG emissions compared to existing conditions. Compared to the proposed Bag Ordinance, GHG emissions under Alternative 4 would decrease by approximately 0.002 CO₂e per person per year. Therefore, GHG impacts from Alternative 4 would be reduced when compared to the proposed Bag Ordinance, and would be a Class III, *less than significant*, impact compared to existing conditions.



**Table 6-16
 Estimated Greenhouse Gas Emissions
 from Alternative 4**

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person
Single-use Plastic	0	1.0	0.04 per 1,500 bags	0	0
Recyclable Paper	7,777,159	2.97	0.1188 per 1,000 bags	924	0.014
Reusable	348,975	2.6	0.104 per 1,000 bags	36	0.001
Alternative 4 Total				960	0.015
Proposed Bag Ordinance				1,112	0.017
Difference				(152)	(0.002)
Current Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 4 (Alternative 4 Total minus Current Total)				269	0.004

CO₂e = Carbon Dioxide Equivalent units
 Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.

d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in the City, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would further reduce the number of paper bags compared to the proposed Bag Ordinance (by approximately 1.3 million bags), replacing them instead with approximately 24,927 reusable bags. However, 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). As a result, this alternative would reduce overall litter compared to the proposed Bag Ordinance. As with the proposed Bag 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 Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative since fewer paper bags would be used in the City.

As noted above, this alternative would be expected to result in the use of fewer recyclable paper carryout bags in the City as compared to the proposed Bag Ordinance. However, it would not completely eliminate paper bags. As with the proposed Bag Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, AB 258 and the California Health and Safety Code reducing impacts to water quality. Impacts to water



quality from altering bag processing activities would be the same as under the proposed Bag Ordinance and would be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 1.3 million and increase the number of reusable bags by approximately 24,927. Because 8% more reusable bags would be used under this alternative as compared to the proposed Bag Ordinance, water demand and wastewater generation related to washing reusable bags would also increase by 8%. This equates to a net increase of 2 AFY of water and a net increase of 1,323 gallons per day of wastewater. However, as noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater facility capacity to meet this demand. Therefore, impacts would be slightly greater than those of the proposed Bag Ordinance, but would remain Class III, *less than significant*.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. However, as noted, the life cycle assessment models have some variability associated within them. For this analysis, the Ecobilan Data, which would show a reduction of solid waste compared to existing conditions, would represent a more likely scenario in Palo Alto, as it takes into account solid waste from reusable bags in addition to plastic and paper bags. However, the Boustead Data, which although is unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Using the solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a net increase of 0.18 tons/day of solid waste (calculations are contained in Appendix C) compared to existing conditions. In comparison, the proposed Bag Ordinance would generate a net increase of 0.27 tons/day. Therefore, Alternative 4 would generate less solid waste than the proposed Bag Ordinance and would not exceed the existing capacity at area landfills. Solid waste impacts would be reduced when compared to the proposed Bag Ordinance and would remain Class III, *less than significant*.

6.5 ALTERNATIVE 5: \$0.25 FEE FOR RECYCLABLE PAPER BAGS AT BOTH RETAIL SERVICES AND FOOD SERVICE ESTABLISHMENTS, NO PLASTIC AT EITHER

6.5.1 Description

Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, under this alternative, a mandatory charge of \$0.25 for recyclable paper bags would apply to food serve establishments as well as retail establishments in the City. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. As a result of the \$0.25 mandatory charge for recyclable paper bags at all retailers and food service establishments, it is anticipated that this alternative would further promote the use of reusable bags (or not using a bag), since customers at all retail services and at food service establishments would be deterred from purchasing paper bags due to the cost.



Based on a cost requirement of \$0.25 at both retail services and food service establishments, it is assumed that the total volume of plastic bags currently used in Palo Alto (approximately 25,923,864 plastic bags per year) would be replaced by approximately 8.5% paper bags and 91.5%³ reusable bags under Alternative 5 (compared to 35% paper and 65% reusable assumed for the proposed Bag Ordinance). The total estimate of bag use under this alternative, compared to the proposed Bag Ordinance, is summarized in Table 6-17.

Table 6-17
Estimated Bag Use: Proposed Bag Ordinance versus Alternative 5

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 5**
Single-use Plastic	0	0
Recyclable Paper	9,073,352	2,203,528
Reusable	324,048	456,160
Total	9,397,400	2,659,688

*Refer to Table 2-2 in Section 2.0, Project Description.

** Based on assumptions of 8.5% conversion of the volume of existing plastic bag use in Palo Alto to paper bags and 91.5% conversion to reusable bags (based on 52 uses per year).

6.5.2 Impact Analysis

a. Air Quality. This alternative would apply a \$0.25 mandatory charge for recyclable paper bags at all retail services and food service establishments in Palo Alto and would therefore eliminate an additional 6.87 million recyclable paper bags as compared to the proposed Bag Ordinance. However, it would increase reusable bag use by an estimated 132,112. In total, Alternative 5 would result in approximately 6.73 million fewer bags used in the City as compared to the proposed Bag Ordinance. Air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be reduced, when compared to the proposed Bag Ordinance.

Table 6-18 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 5, as compared to the proposed Bag Ordinance. As shown, because this alternative would reduce the use of recyclable paper bags in the City, the contribution to ground level ozone would decrease by approximately 201 kg per year (a 71% decrease) and the contribution to atmospheric

³ Please note that this breakdown utilizes the Rates from City of San Jose Final EIR, SCH # 2009102095, October 2010 and assumes that approximately 5% of total bag use in the City is from food service establishments and that by applying a \$0.25 fee on recyclable paper bags at both retail services and food service establishments approximately half of the total takeout bags at food service establishments (2.5% of 25,923,864 total bag use) would be recyclable paper bags and the other half would be purchased reusable bags.



acidification would decrease by approximately 13,723 kg per year (a 70% decrease) when compared to the proposed Bag Ordinance.

To estimate mobile emissions resulting from Alternative 5, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-19, Alternative 5 would result in 14 truck trips per year (0.039 trips per day), which is a 69% reduction in truck trips as compared to the proposed Bag Ordinance.

**Table 6-18
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 5**

Bag Type	# of Bags Used per Year	Ozone Emission Rate per Bag	Ozone Emissions (kg) per 1,000 bags	Ozone Emissions per year (kg)	AA Emission Rate per Bag	AA Emissions (kg) per 1,000 bags	AA Emissions per year (kg)
Single-use Plastic	0	1.0	0.023	0	1.0	1.084	0
Recyclable Paper	2,203,528	1.3	0.03	66	1.9	2.06	4,539
Reusable	456,160	1.4	0.032	15	3.0	3.252	1,483
Total				81	Total		6,022
Proposed Bag Ordinance				282	Proposed Bag Ordinance		19,745
Difference				(201)	Difference		(13,723)
Current Total (with Existing Ordinance)				596	Current Total (with Existing Ordinance)		28,101
Net Change of Alternative 5 (Alternative 5 Total minus Current Total)				(515)	Net Change		(22,079)

Source: Refer to Table 4.1-4 in Section 4.1, Air Quality.

Based on the estimated truck trips for Alternative 5, mobile emissions were calculated using the URBEMIS model. As shown in Table 6-20, this alternative would reduce daily emissions compared to the proposed Bag Ordinance. Similar to the proposed Bag Ordinance, mobile emissions would not exceed BAAQMD thresholds.

Based on the above and the tables below, impacts resulting from bag manufacturing and use (including ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to an increase in truck trips would continue to be Class III, *less than significant*.



**Table 6-19
 Estimated Truck Trips per Day Following Implementation of Alternative 5**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	0	2,080,000	0	0
Recyclable Paper	2,203,528	217,665	10	0.028
Reusable	456,160	108,862	4	0.011
Alternative 5 Total			14	0.039
Truck Trips from Proposed Bag Ordinance			45	0.123
Difference			(31)	(0.084)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 5 (Alternative 5 Total minus Current Total)			1	0.0027

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

**Table 6-20
 Operational Emissions Associated with Alternative 5**

	Emissions (lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Mobile Emissions: Proposed Ordinance	<0.01	0.02	<0.01	<0.01
Mobile Emissions: Alternative 5	<0.01	<0.01	<0.01	<0.01
<i>BAAQMD Thresholds</i>	54	54	82	54
Threshold Exceeded?	No	No	No	No

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

b. Biological Resources. Similar to the proposed Bag Ordinance, this alternative would prohibit all retail establishments and food service establishments from providing single-use plastic checkout bags, thereby reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the proposed Bag Ordinance, this alternative would further reduce the amount of paper bag litter that could enter the marine environment, because both retail services and food service establishments would be required to charge \$0.25 per recyclable paper bag. Moreover, this alternative would also



promote the use of reusable bags within the City. Reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from landfills by wind as litter compared to single-use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 125 times (as defined in the proposed Bag Ordinance), reusable bags would be disposed of less often than single-use carryout bags. Therefore, the impact to sensitive species as a result of litter entering the marine environment from Alternative 5 would be reduced compared to the proposed Bag Ordinance. Similar to the proposed Bag Ordinance, impacts would be Class IV, *beneficial*. Overall benefits would be somewhat greater than those of the proposed Bag Ordinance.

c. Greenhouse Gas Emissions. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of recyclable paper bags by approximately 6.87 million bags and increase the number of reusable bags by approximately 132,112. The decrease in the number of recyclable paper bags would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance. However, this alternative would result in a net increase in reusable bag use as a result of the reduction in the number of recyclable paper bags. Table 6-21 provides an estimate of GHG emissions associated with implementation of Alternative 5.

**Table 6-21
 Estimated Greenhouse Gas Emissions
 from Alternative 5**

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person
Single-use Plastic	0	1.0	0.04 per 1,500 bags	0	0
Recyclable Paper	2,203,528	2.97	0.1188 per 1,000 bags	262	0.004
Reusable	456,160	2.6	0.104 per 1,000 bags	47	0.0007
Alternative 5 Total				309	0.0047
Proposed Bag Ordinance				1,112	0.017
Difference				(803)	(0.012)
Current Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 5 (Alternative 5 Total minus Current Total)				(382)	(0.006)

CO₂e = Carbon Dioxide Equivalent units
 Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.



As discussed in Section 4.3, *Greenhouse Gases*, if used 20 times, a reusable low density polyethylene (LDPE) carryout bag results in 10% the GHG emissions of a single-use high density polyethylene (HDPE) plastic bag (AEA Technology, 2005). Alternative 5 would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance and decrease in GHG emissions compared to existing conditions. Compared to the proposed Bag Ordinance, GHG emissions under Alternative 5 would decrease by approximately 0.017 CO₂e per person per year. In addition, compared to existing conditions, this alternative would reduce GHG emissions by approximately 382 metric tons per year, or approximately 0.006 CO₂e per person per year. Therefore GHG impacts from Alternative 5 would be reduced when compared to the proposed Bag Ordinance and would be Class IV, *beneficial*, compared to existing conditions.

d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in the City, thereby incrementally reducing the amount of plastic litter and waste entering storm drains. In addition, this alternative would further reduce the number of paper bags compared to the proposed Bag Ordinance (by approximately 6.87 million bags), replacing them instead with approximately 132,112 reusable bags. However, 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). As a result, this alternative would reduce overall litter compared to the proposed Bag Ordinance. As with the proposed Bag 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 Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative since fewer paper bags would be used in the City.

As noted above, this alternative would be expected to result in the use of fewer recyclable paper carryout bags in the City as compared to the proposed Bag Ordinance. However, it would not completely eliminate paper bags. As with the proposed Bag Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, AB 258 and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as under the proposed Bag Ordinance and would be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 6.87 million and increase the number of reusable bags by approximately 132,112. Because 41% more reusable bags would be used under this alternative as compared to the proposed Bag Ordinance, water demand and wastewater generation related to washing reusable bags would also increase by 41%. This equates to a net increase of 7.55 AFY of water and a net increase of 6,744 gallons per day of wastewater. However, as noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater facility capacity to meet this demand. Therefore, impacts would be slightly greater than those of the proposed Bag Ordinance, but would remain Class III, *less than significant*.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. However, as noted,



the life cycle assessment models have some variability associated within them. For this analysis, the Ecobilan Data, which would show a reduction of solid waste compared to existing conditions, would represent a more likely scenario in Palo Alto, as it takes into account solid waste from reusable bags in addition to plastic and paper bags. However, the Boustead Data, which, although is unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Nevertheless, using the solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate a net decrease of 0.18 tons/day of solid waste (calculations are contained in Appendix C) compared to existing conditions. In comparison, the proposed Bag Ordinance would generate a net increase of 0.27 tons/day. Therefore, Alternative 5 would generate less solid waste than the proposed Bag Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing capacity at area landfills. Solid waste impacts would be reduced when compared to the proposed Bag Ordinance and would be a Class IV, *beneficial* impact.

6.6 ALTERNATIVE 6: FOOD SERVICE ESTABLISHMENTS ONLY: BAN PLASTIC BAGS AT FOOD SERVICE ESTABLISHMENTS ONLY, NO BAN AT RETAIL (EXCEPT SUPERMARKETS), NO FEE FOR PAPER BAGS.

6.6.1 Description

This alternative was provided to clarify bag contribution assumptions resulting from food service establishments and to address a request that arose during the EIR scoping meetings. This alternative assumes that the Bag Ordinance would restrict food service establishments from providing single-use plastic checkout bags at the point of sale but would not apply to other retail services (except supermarkets as they are already prohibited from providing single-use plastic bags under the existing ordinance). In addition, similar to the proposed Bag Ordinance, under this alternative, food service establishments would not be required to charge a fee for the use of paper bags. In other words, food service establishments would not be permitted to distribute single-use plastic bags, but would be permitted to distribute paper bags free-of-charge to customers in Palo Alto. As a result of the inclusion of food service establishments from the ban on single-use plastic bags, it is anticipated that this alternative would decrease the use of single-use plastic bags at food service establishments and increase the use of recyclable paper bags, since food service establishment customers would be more likely to use a paper bag at no cost.

As this alternative would only apply to food service establishments, it is assumed that 5% of existing single-use plastic bags (approximately 1,296,193 plastic bags per year) would be replaced by 100% paper bags and 0% reusable bags (compared to 0% plastic and 35% paper assumed for the proposed Bag Ordinance). In addition, since other retailers would not be required to ban single-use plastic bags, approximately 95% of the plastic bags currently used in Palo Alto would remain in use. The number of reusable bags would be reduced compared to the proposed Bag Ordinance, since customers would not have to pay a fee for paper bags and thus have no financial incentive to bring their own reusable bag.

Table 6-22 summarizes the changes in bag distribution as a result of this alternative compared to the proposed Bag Ordinance.



**Table 6-22
 Estimated Bag Use: Proposed Bag Ordinance versus Alternative 6**

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 6**
Single-use Plastic	0	24,627,671
Recyclable Paper	9,073,352	1,296,193
Reusable	324,048	0
Total	9,397,400	25,923,864

* Refer to Table 4.1-4 in Section 4.1, Air Quality.

** Based on an assumption of 5% existing plastic bag use at food service establishments in Palo Alto (approximately 1,296,193 plastic bags per year) to be converted to paper bags and 95% plastic bags used at other retail services to remain in use. Please note this is the incremental change compared to existing conditions.

6.6.2 Impact Analysis

a. Air Quality. As described in Section 4.1, *Air Quality*, it is estimated that the proposed Bag Ordinance would replace the total volume of single-use plastic bags currently used in Palo Alto with approximately 35% paper bags and 65% reusable bags (as shown in Table 6-2 above). This alternative would restrict food service establishments in Palo Alto from distributing single-use plastic bags to their customers, and would therefore promote a shift toward recyclable paper bags. Consequently, this alternative would decrease the number of single-use plastic bags, increase the number of recyclable paper bags, and result in the same number of reusable bag use compared to existing conditions (incremental change is zero as shown in the table). Overall bag use under Alternative 6 would be the same as under the current conditions (approximately 25,923,864 single-use plastic, recyclable paper, and reusable bags). As described in Section 4.1, *Air Quality*, emissions associated with recyclable paper bag production result in 1.9 times the impact on atmospheric acidification as a single-use plastic bag. As Alternative 6 would result in more recyclable paper bags, air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be increased when compared to existing conditions.

Table 6-23 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 6, as compared to the proposed Bag Ordinance and to existing conditions. As shown in Table 6-23, because this alternative would increase the number of recyclable paper bags used in the City compared to existing conditions, the contribution to ground level ozone would increase by approximately 9 kg per year (a 2% increase) and the contribution to atmospheric acidification would increase by approximately 1,538 kg per year (a 5% increase) when compared to existing conditions. Therefore under this alternative, there would not be beneficial impacts related to ozone and atmospheric acidification. The impact would be less than significant as the increase in emissions compared to existing conditions would be minimal.



**Table 6-23
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 6**

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	24,627,671	1.0	0.023	566	1.0	1.084	26,696
Recyclable Paper	1,296,193	1.3	0.03	39	1.9	2.06	2,670
Reusable	0	1.4	0.032	0	3.0	3.252	0
Alternative 6 Total				605	Alternative 6 Total		29,639
Proposed Bag Ordinance				282	Proposed Bag Ordinance		19,745
Difference				323	Difference		9,894
Current Total (with Existing Ordinance)				596	Current Total (with Existing Ordinance)		28,101
Net Change of Alternative 6 (Alternative 6 Total minus Existing Total)				9	Net Change		1,538

Source: Refer to Table 4.1-4 in Section 4.1, Air Quality.

To estimate mobile emissions resulting from Alternative 6, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-24, Alternative 6 would result in an estimated 39.33 truck trips per year, or 0.11 truck trips per day, which is lower than under the proposed Bag Ordinance.

Based on the estimated truck trips for Alternative 6, mobile emissions were calculated using the URBEMIS model. As indicated in Table 6-25, this alternative would reduce daily emissions compared to the proposed Bag Ordinance. As with the proposed Bag Ordinance, mobile emissions associated with this alternative would not exceed BAAQMD thresholds.

Based on the above and the tables below, Alternative 6 would slightly increase air quality impacts compared to the proposed Bag Ordinance. Impacts resulting from bag manufacture and use (ground level ozone and atmospheric acidification) would slightly increase from a beneficial impact to a Class III, *less than significant*, impact, while impacts relating to an increase in truck trips would continue to be Class III, *less than significant*.



**Table 6-24
 Estimated Truck Trips per Day Following Implementation of Alternative 6**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	24,627,671	2,080,000	12	0.03
Recyclable Paper	1,296,193	217,665	6	0.016
Reusable	0	108,862	0	0
Alternative 6 Total			18	0.049
Truck Trips from Proposed Bag Ordinance			45	0.123
Difference			(27)	(0.073)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 6 (Alternative 6 Total minus Current Total)			5	0.014

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

**Table 6-25
 Operational Emissions Associated with Alternative 6**

	Emissions (lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Mobile Emissions: Proposed Ordinance	<0.01	0.02	<0.01	<0.01
Mobile Emissions: Alternative 6	<0.01	0.01	<0.01	<0.01
<i>BAAQMD Thresholds</i>	54	54	82	54
Threshold Exceeded?	No	No	No	No

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

b. Biological Resources. Similar to the proposed Bag Ordinance, this alternative would restrict food service establishments in Palo Alto from distributing single-use plastic bags to customers, thereby incrementally reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. However, compared to the existing conditions, this alternative would slightly increase the amount of paper bag litter that could enter the marine environment. As discussed in Section 4.2, *Biological Resources*, paper bags are



less likely to become litter compared to single-use plastic bags. Therefore, the decrease in single-use plastic bags associated with this alternative would result in less overall litter entering the marine environment compared to the existing conditions. As a result, impacts to marine species from Alternative 6 would incrementally reduce as compared to the existing conditions, though not to the level of reduction associated with the proposed Bag Ordinance. Impacts would remain Class IV, *beneficial*.

c. Greenhouse Gas Emissions. Compared to existing conditions, this alternative would be expected to increase the number of recyclable paper bags by approximately 1.3 million bags. As noted in Section 4.3, *Greenhouse Gases*, the manufacture, transport, and disposal of each recyclable paper bag results in 3.3 times the emissions of a single-use plastic bag. Therefore, this alternative would slightly increase GHG emissions as compared to the existing conditions. Table 6-26 provides an estimate of GHG emissions that would result from implementation of Alternative 6.

**Table 6-26
 Estimated Greenhouse Gas Emissions from Alternative 6**

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person
Single-use Plastic	24,627,671	1.0	0.04 per 1,500 bags	657	0.01
Recyclable Paper	1,296,193	2.97	0.1188 per 1,000 bags	154	0.002
Reusable	0	2.6	0.104 per 1,000 bags	0	0
Alternative 6 Total				811	0.012
Proposed Bag Ordinance				1,112	0.017
Difference				(301)	(0.005)
Existing Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 6 (Alternative 6 Total minus Existing Total)				120	0.001

CO₂e = Carbon Dioxide Equivalent units
Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.

Compared to the existing conditions, GHG emissions under Alternative 6 would increase by approximately 0.001 metric tons CO₂e per person per year and would not exceed the 4.6 metric tons CO₂e per person per year threshold. Thus, the GHG impacts from Alternative 6 would be slightly increased as compared to the existing conditions and would continue to be Class III, *less than significant*.

d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in Palo Alto, thereby



incrementally reducing the amount of plastic litter and waste entering storm drains and local waterways compared to existing conditions. Compared to the proposed Bag Ordinance, however, this alternative would proportionally increase the number of single-use plastic bags (as it would not apply to retail services other than supermarkets and food service establishments), and would increase the number of recyclable paper bags by approximately 1.3 million bags. As a result, this alternative would result in an overall slight decrease in litter compared to the existing conditions. As with the proposed Bag Ordinance, an incremental reduction in the amount of litter that could enter storm drains and local waterways (compared to existing conditions) would improve water quality and reduce the potential for storm drain blockage. Therefore, like the proposed Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat reduced under this alternative.

This alternative would be expected to result in fewer single-use plastic carryout bags in Palo Alto than existing conditions but would increase the number of paper bags used in Palo Alto. As with the proposed Bag Ordinance, paper bag manufacturing facilities would be required to adhere to NPDES Permit requirements, AB 258 and the California Health and Safety Code reducing impacts to water quality. Impacts to water quality from altering bag processing activities would be the same as the proposed Bag Ordinance and would be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to increase the number of recyclable paper bags by approximately 1.3 million bags compared to existing conditions. The increase in the number of reusable bags used under this alternative would be zero (0) since it is assumed that because there would be no fee for recyclable paper bags at food service establishments, customers would not have an incentive to use a reusable bag and therefore would simply use a free recyclable paper bag. Because there would be no increase in the number of reusable bags under this alternative compared to existing conditions, water demand and wastewater generation related to washing reusable bags would be the same as under the existing conditions. Thus there would be no increase in water or wastewater as a result of this alternative. Therefore, there would be no impact.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. However, as noted, the life cycle assessment models have some variability associated within them. For this analysis, the Ecobilan Data, which would show a reduction of solid waste compared to existing conditions, would represent a more likely scenario in Palo Alto as it takes into account solid waste from reusable bags in addition to plastic and paper bags. However, the Boustead Data, which, although is unlikely for Palo Alto, represents a conservative worst case scenario under CEQA and therefore is included in this analysis. Using the solid waste generation rates from Boustead (as shown in Table 4.5-11 in Section 4.5, *Utilities and Service systems*), this alternative would generate 0.39 tons/day of solid waste (calculations are contained in Appendix C). In comparison, the proposed Bag Ordinance would generate 0.59 tons/day and existing conditions generate approximately 0.32 tons/day. Therefore, Alternative 6 would generate 0.07 tons/day more solid waste than existing conditions. However, like the proposed Bag Ordinance, this



slight increase would not exceed the daily capacity of any area landfills. As with the proposed Bag Ordinance, impacts would be Class III, *less than significant*.

6.7 ALTERNATIVE 7: NO PLASTIC OR PAPER AT EITHER RETAIL OR FOOD SERVICE ESTABLISHMENTS

6.7.1 Description

Similar to the proposed Bag Ordinance, this alternative would prohibit retailers and food service establishments from providing single-use plastic carryout bags to customers at the point of sale. However, this alternative would also prohibit retailers and food service establishments from providing paper carryout bags to customers at the point of sale. Similar to the proposed Bag Ordinance, under this alternative, no plastic bags would be distributed at the point of sale in Palo Alto. In addition, because paper bags would also be prohibited from being distributed at all retailers and food service establishments, it is anticipated that this alternative would further promote the use of reusable bags (or not using a bag), since customers at all retail services and at food service establishments would be required to either bring their own bag, purchase a reusable bag or simply not use a bag at all.

While it is possible that some consumers would choose not to purchase or use a reusable bag, this alternative conservatively assumes that consumers would shift to reusable bags, rather than choose to use no bag at all. Thus all the existing plastic bags currently used in Palo Alto would be replaced by reusable bags. The total estimate of bag use under this alternative, compared to the proposed Bag Ordinance, is summarized in Table 6-27.

Table 6-27
Estimated Bag Use: Proposed Bag Ordinance versus Alternative 7

Bag Type	Bags Used Annually	
	Proposed Ordinance*	Alternative 7**
Single-use Plastic	0	0
Recyclable Paper	9,073,352	0
Reusable	324,048	498,536
Total	9,397,400	498,536

*Refer to Table 2-2 in Section 2.0, Project Description.

** Based on assumptions of 100% conversion of the volume of existing plastic bag use in Palo Alto to reusable bags (based on 52 uses per year).



6.5.2 Impact Analysis

a. Air Quality. This alternative would replace the plastic bags currently used at all retail services and food service establishments in Palo Alto with reusable bags and would therefore eliminate an additional 9.07 million recyclable paper bags as compared to the proposed Bag Ordinance. However, it would increase reusable bag use by an estimated 174,488 bags. In total, Alternative 7 would result in approximately 8.9 million fewer bags used in the City as compared to the proposed Bag Ordinance. Air pollutant emissions associated with bag manufacture, transport, and disposal would therefore be reduced, when compared to the proposed Bag Ordinance.

Table 6-28 estimates emissions that contribute to the development of ground level ozone and atmospheric acidification that would result from implementation of Alternative 7, as compared to the proposed Bag Ordinance. As shown, because this alternative would reduce the use of both plastic and recyclable paper bags in the City, the contribution to ground level ozone would decrease by approximately 266 kg per year (a 94% decrease) and the contribution to atmospheric acidification would decrease by approximately 18,124 kg per year (a 92% decrease) when compared to the proposed Bag Ordinance.

**Table 6-28
 Estimated Emissions that Contribute to Ground Level Ozone and
 Atmospheric Acidification (AA) from Alternative 7**

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
Recyclable Paper	0	1.3	0.03	0	1.9	2.06	0
Reusable	498,536	1.4	0.032	16	3.0	3.252	1,621
Total				16	Total		1,621
Proposed Bag Ordinance				282	Proposed Bag Ordinance		19,745
Difference				(266)	Difference		(18,124)
Current Total (with Existing Ordinance)				596	Current Total (with Existing Ordinance)		28,101
Net Change of Alternative 7 (Alternative 7 Total minus Current Total)				(580)	Net Change		(26,480)

Source: Refer to Table 4.1-4 in Section 4.1, Air Quality.



To estimate mobile emissions resulting from Alternative 7, the number of truck trips per day was calculated using the assumptions outlined in the Initial Study (Appendix A). As shown in Table 6-29, Alternative 7 would result in 5 truck trips per year (0.012 trips per day), which is a 89% reduction in truck trips as compared to the proposed Bag Ordinance. This alternative would also reduce truck trips compared to existing conditions by approximately 8 trips per year or approximately 62%. Because Alternative 7 would actually reduce truck trips compared to existing conditions, this alternative would therefore reduce mobile emissions compared to existing conditions and thus would not exceed BAAQMD thresholds.

**Table 6-29
 Estimated Truck Trips per Day Following Implementation of Alternative 7**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load*	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	0	2,080,000	0	0
Recyclable Paper	0	217,665	0	0
Reusable	498,536	108,862	5	0.012
Alternative 7 Total			5	0.012
Truck Trips from Proposed Bag Ordinance			45	0.123
Difference			(40)	(0.11)
Current Total for Plastic Bags (with Existing Ordinance)			13	0.04
Net Change of Alternative 7 (Alternative 7 Total minus Current Total)			(8)	0.02

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

Based on the above, impacts resulting from bag manufacturing and use (including ground level ozone and atmospheric acidification) would continue to be Class IV, *beneficial*, while impacts relating to truck trips would be improved to Class IV, *beneficial*, since truck trips and the associated mobile emissions would actually be reduced compared to existing conditions.

b. Biological Resources. Similar to the proposed Bag Ordinance, this alternative would prohibit all retail establishments and food service establishments from providing single-use plastic checkout bags, thereby reducing the amount of single-use plastic bag litter that could enter the marine environment and affect sensitive species. Compared to the proposed Bag Ordinance, this alternative would also reduce the amount of paper bag litter that could enter the marine environment, because both retail services and food service establishments would be prohibited from providing both plastic and paper carryout bags to customers at the point of sale. Moreover, this alternative would also promote the use of reusable bags within the City. Reusable bags can also be released into the environment as litter. However, because of the weight and sturdiness of these bags, reusable bags are less likely to be littered or carried from



landfills by wind as litter compared to single-use plastic and paper bags (Green Cities California MEA, 2010). In addition, since reusable bags can be used up to 125 times (as defined in the proposed Bag Ordinance), reusable bags would be disposed of less often than single-use carryout bags. Therefore, the impact to sensitive species as a result of litter entering the marine environment from Alternative 7 would be reduced compared to the proposed Bag Ordinance. Similar to the proposed Bag Ordinance, impacts would be Class IV, *beneficial*. Overall benefits would be greater than those of the proposed Bag Ordinance.

c. Greenhouse Gas Emissions. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of recyclable paper bags by approximately 9.07 million bags and increase the number of reusable bags by approximately 174,488 bags. The decrease in the number of recyclable paper bags would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance. However, this alternative would result in a net increase in reusable bag use as a result of the reduction in the number of recyclable paper bags. Table 6-30 provides an estimate of GHG emissions associated with implementation of Alternative 7.

**Table 6-30
 Estimated Greenhouse Gas Emissions
 from Alternative 7**

Bag Type	Estimated Number of Bags Used per Year	GHG Impact Rate per Bag	CO₂e (metric tons)	CO₂e per year (metric tons)	CO₂e per Person
Single-use Plastic	0	1.0	0.04 per 1,500 bags	0	0
Recyclable Paper	0	2.97	0.1188 per 1,000 bags	0	0
Reusable	498,536	2.6	0.104 per 1,000 bags	52	0.0008
Alternative 7 Total				52	0.0008
Proposed Bag Ordinance				1,112	0.017
Difference				(1,060)	(0.016)
Current Total (with Existing Ordinance)				691	0.011
Net Change of Alternative 7 (Alternative 7 Total minus Current Total)				(639)	(0.01)

CO₂e = Carbon Dioxide Equivalent units
 Source: Refer to Table 4.3-2 in Section 4.3, Greenhouse Gas Emissions.

As discussed in Section 4.3, *Greenhouse Gases*, if used 20 times, a reusable low density polyethylene (LDPE) carryout bag results in 10% of the GHG emissions of a single-use high density polyethylene (HDPE) plastic bag (AEA Technology, 2005). Alternative 7 would result in a net decrease of GHG emissions compared to the proposed Bag Ordinance and a net decrease



in GHG emissions compared to existing conditions. Compared to the proposed Bag Ordinance, GHG emissions under Alternative 7 would decrease by approximately 0.016 CO₂e per person per year. In addition, compared to existing conditions, this alternative would reduce GHG emissions by approximately 639 metric tons per year, or approximately 0.01 CO₂e per person per year. Therefore GHG impacts from Alternative 7 would be reduced when compared to the proposed Bag Ordinance and would be Class IV, *beneficial*, compared to existing conditions.

d. Hydrology and Water Quality. Similar to the proposed Bag Ordinance, this alternative would reduce the number of single-use plastic bags used in the City, thereby incrementally reducing the amount of plastic litter and waste entering storm drains and local waterways. In addition, this alternative would further reduce the number of paper bags compared to the proposed Bag Ordinance (by approximately 9.07 million bags), replacing them instead with approximately 174,488 reusable bags. However, 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). As a result, this alternative would reduce overall litter compared to the proposed Bag Ordinance. As with the proposed Bag 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 Bag Ordinance, this alternative would result in Class IV, *beneficial*, effects to water quality. Overall benefits would be somewhat greater under this alternative since fewer paper bags would be used in the City.

As noted above, this alternative would be expected to result in the use of fewer recyclable paper carryout bags in the City as compared to the proposed Bag Ordinance since both plastic and paper bags would be banned in the City. This alternative would eliminate paper bags and thus impacts related to paper bag manufacturing facilities would be improved under this alternative compared to the proposed Bag Ordinance. However, this alternative would increase the manufacturing and production of reusable bags. Like the proposed Bag 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, under this alternative, would be similar to those of the proposed Bag Ordinance and would be Class III, *less than significant*.

e. Utilities and Service Systems. Compared to the proposed Bag Ordinance, this alternative would be expected to reduce the number of paper bags by approximately 9.07 million and increase the number of reusable bags by approximately 174,488. Because more reusable bags would be used under this alternative as compared to the proposed Bag Ordinance, water demand and wastewater generation related to washing reusable bags would also increase. This equates to a net increase of 9.98 AFY of water and a net increase of 8,907 gallons per day of wastewater. However, as noted in Section 4.5, *Utilities and Service Systems*, there are sufficient water supplies and wastewater facility capacity to meet this demand. Therefore, impacts would be slightly greater than those of the proposed Bag Ordinance, but would remain Class III, *less than significant*.

As described in Section 4.5, *Utilities and Service systems*, both the Ecobilan and Boustead studies are included in the analysis to provide a reasonable estimate of solid waste. As noted, the life cycle assessment models have some variability associated within them. For this analysis, the



Ecobilan Data, which would show a reduction of solid waste compared to existing conditions, would represent a more likely scenario in Palo Alto, as it takes into account solid waste from reusable bags in addition to plastic and paper bags. For this particular alternative, the Boustead Data would not be warranted since it only calculates solid waste associated with plastic and paper bags and therefore shows a reduction simply because of the reduction of plastic and paper bags since this alternative would ban both plastic and paper bags at retailers and food service establishments in Palo Alto. Thus, using the solid waste generation rates from Ecobilan which does calculate solid waste from reusable bags (as shown in Table 4.5-10 in Section 4.5, *Utilities and Service Systems*), this alternative would generate 0.011 tons per year (0.00003 tons per day) a net decrease of 0.319 tons/day of solid waste (calculations are contained in Appendix C) compared to existing conditions. In comparison, the proposed Bag Ordinance would generate a net increase of 0.27 tons/day. Therefore, Alternative 7 would generate less solid waste than the proposed Bag Ordinance, would reduce solid waste compared to existing conditions, and would not exceed the existing capacity at area landfills. Solid waste impacts would be reduced when compared to the proposed Bag Ordinance and would be a Class IV, *beneficial* impact.

6.8 SUMMARY OF ENVIRONMENTAL IMPACTS FOR PROJECT ALTERNATIVES

Considerations:

The total bag numbers assumed for the proposed Bag Ordinance are first year estimates only. In the second year, the bag numbers and positive impacts for Alternative 3 apply. Charging a larger fee on paper checkout bags typically results in a more significant decrease in the use of single-use checkout bags and resulting decrease in potential impacts.

Air Quality:

Air quality impacts from the various alternatives are related to bag manufacture and truck trips for delivery of bags. Except for No Project alternative and Alternative 6, the alternatives have a beneficial impact on ozone and atmospheric acidification. While there is some minor variation among the alternatives for the number of truck trips, neither the proposed Bag Ordinance nor any of the alternatives exceed any Bay Area Air Quality Management District thresholds of significance.

Biological Resources:

The impact on biological resources relates to single-use bag litter entering the environment and causing impacts, including ingestion by and entanglement of wildlife. The proposed Bag Ordinance and all alternatives except the No Project alternative, have a beneficial impact on biological resources. The alternatives that ban plastic bags have a greater beneficial impact (proposed Bag Ordinance, Alternative 3, 4, 5 and 7).

Greenhouse Gas Emissions:

Greenhouse gas emissions relate to the manufacture, use, and disposal of bags. The proposed Bag Ordinance and all alternatives have less than significant impacts on greenhouse gas emissions. As paper bags have a higher per bag estimate of greenhouse gas impacts, increase in paper bag use results in slight increases of greenhouse gas emissions. As a result, Alternative 3 (also the second year of the proposed Bag Ordinance) and Alternative 5, both of which increase



the checkout bag fee to \$0.25, as well as Alternative 7 which bans both plastic and paper bags, show a net decrease in greenhouse gas emissions. The proposed ordinance results in 0.006 metric tons CO₂E per person per year. In comparison, one car produces 4.6 metric tons of GHG emissions per year.⁴

Hydrology/Water Quality:

Hydrology/Water Quality impacts relate both to the production of bags and the potential for litter. All alternatives have less than significant impacts on water quality relating to the production of bags. With respect to litter, the proposed Bag Ordinance and Alternatives 3, 4, 5 and 7 have a beneficial impact on water quality by reducing plastic bag litter and its impacts on water quality.

Water and Wastewater:

Water and Wastewater impacts relate to the water demand and increase in wastewater from washing reusable bags. The impacts for the proposed Bag Ordinance and the alternatives that increase reusable bag use (alternatives 2, 3, 4, 5 and 7) slightly increase water demand and wastewater discharge due to bag washing, however, the impacts are less than significant.

Solid Waste:

The estimate of solid waste generation changes, resulting from the proposed Bag Ordinance and the alternatives, is based on two data sets. One of the datasets estimates a reduction in solid waste, while the other estimates an increase in solid waste, both incorporating recycling rates but including different estimates of bag weights. The EIR is based on the worst case scenario from the data set that shows a potential increase in solid waste from the proposed Bag Ordinance. Even using the conservative data and assumptions, the proposed Bag Ordinance and the alternatives have a less than significant impact on solid waste generation. Alternatives 3 (also second year of proposed ordinance) and 5 result in an estimated net decrease of solid waste due to the reduction of paper bag use caused by the higher checkout fee of \$0.25. And, Alternative 7 results in an estimated net decrease of solid waste due to prohibiting both plastic and paper carryout bags at all retailers and food service establishments.

6.9 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.

Three alternatives that were considered were rejected. The first alternative involved a suggestion from a commenter that would charge \$1.00 for customers who use paper bags at retail services. *CEQA Guidelines* § 15126.6 requires that an EIR consider a range of reasonable

⁴ The annual use of an automobile driving an average of 12,000 miles per year and with an average 22.9 miles per gallon (MPG) consumption emits 4.6 metric tons of CO₂E per year (one metric ton is equivalent to 2,205 pounds). Households that have a sport utility vehicle (SUV) or light duty truck drive and drive an average of 14,500 miles per year with an average MPG of 16.2 emit 7.9 metric tons per year (SAIC, *Public Transportation's Contribution to U.S. Greenhouse Gas Reduction*, September 2007).



alternatives to a proposed project, which would feasibly obtain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. While this alternative would achieve the objectives of the proposed Bag Ordinance as outlined in Section 2.0, *Project Description*, this alternative was rejected, because it was found to be infeasible due to cost. A "\$1.00" charge for paper bags would put a heavy financial burden on the customers and retail services would generate revenue on the sale of paper bags. Further, as discussed above, this analysis considers two different alternatives (Alternative # 3 and Alternative #5 that evaluate a \$0.25 fee on paper bags) which demonstrate at least a 90% reduction of paper bag use compared to the proposed Bag Ordinance.

The second alternative that was considered but ultimately rejected was to apply a fee to single-use plastic bags and paper bags. However, California Assembly Bill (AB) 2449, passed in 2006, forbids cities from requiring stores that comply with AB 2449 to charge for single-use plastic bags. Such a fee would be legally infeasible, and was therefore rejected as a viable alternative to the proposed Bag Ordinance.

A third alternative, which was considered but ultimately rejected, was the specific exclusion of compostable single-use plastic check-out bags from the proposed Bag Ordinance. Compostable plastic bags are designed to biodegrade as part of compost in an anaerobic digester. While these bags ultimately will biodegrade in the natural environment, this process is not immediate. Therefore, compostable single-use plastic bags will present the same impacts as conventional single-use plastic bags to storm drain systems, local creeks and waterways, and aquatic life. Additionally, compostable single-use plastic bags present handling challenges for recyclers since these bags are incompatible with other plastic film and cannot be recycled. Compostable bags used to contain yard waste and/or food scraps destined for municipal compost facilities are available, for purchase at grocery and other supply stores but are not used as check-out bags. Under the proposed Bag Ordinance, compostable plastic product bags could still be used for loose fruits and vegetables, meats and bulk food items at grocery stores, farmers and produce markets so long as they were not used as checkout bags.

6.10 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This subsection identifies the environmentally superior alternative. Alternative 7, the "*No Plastic or Paper at Either Retail or Food Service Establishments*" alternative would be considered environmentally superior among the alternatives, as it would have more environmental benefits compared to the proposed Bag 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 utilities (solid waste). This alternative would also meet the project objectives, including:

- *Promote a shift toward the use of long-lasting, durable, reusable bags by retail customers in Palo Alto*
- *Reduce the number of single-use plastic distributed by retailers and used by customers in Palo Alto*
- *Deter the use of paper bags by customers in Palo Alto*



- *Reduce the environmental impacts of pollution in local creeks, in San Francisco Bay and in the marine environment related to single-use plastic checkout bags*

Please note that the proposed Bag Ordinance would not have any significant impacts; therefore, adopting Alternative 7 (No Plastic or Paper at Either Retail or Food Service Establishments) rather than the proposed project would not avoid any significant environmental effects.

Table 6-32 compares the impacts for each of the alternatives.



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Table 6-31
Impact Comparison and Ranking of Project Alternatives
Compared with Current Ordinance/"No Project" Alternative

Issue	Proposed Bag Ordinance <i>Retail: No plastic bags, 10 cent store charge for paper, 25 cent after one year;¹ FSE: No plastic, no charge for paper</i> <i>Values below show absolute value and net change (either increase or decrease) compared to existing conditions</i>	Alt 1: No Project <i>Current ordinance remains, i.e., no plastic bags at grocery stores, no charge for paper. FSE exempt</i> <i>Values below are all existing conditions.</i>	Alt 2: FSE Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely*	Alt 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at FSE, No Plastic at Either* <i>Foregoes first step \$0.10 cent retail charge</i>	Alt 4: \$0.10 for Paper Bags at Both Retail Services and FSE, No Plastic at Either* <i>No increase to \$0.25 for retail or FSE</i>	Alt 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and FSE, No Plastic at Either*	Alt 6: FSE Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*	Alt 7: No Plastic or Paper at Either Retail or FSE *
Air Quality	Ozone 282 kg per year Atmospheric Acidification 19,745 kg per year Reduces emissions from existing conditions for Ozone by 314 kg and Atmospheric Acidification by 8,356 kg Net increase of truck trips (32) and thus mobile emissions	Ozone 596 kg per year Atmospheric Acidification 28,101 kg per year 13 Truck Trips per Year	Ozone 273 kg per year Atmospheric Acidification 18,480 kg per year Reduces emissions from existing conditions for Ozone by 323 kg and Atmospheric Acidification by 9,621 Net increase of truck trips (26) and thus mobile emissions	Ozone 100 kg per year Atmospheric Acidification 7,317 kg per year Reduces emissions from existing conditions for Ozone by 496 kg and Atmospheric Acidification by 20,784 kg Net increase of truck trips (4) and thus mobile emissions	Ozone 244 kg per year Atmospheric Acidification 17,156 kg per year Reduces emissions from existing conditions for Ozone by 352 kg and Atmospheric Acidification by 10,945 kg Net increase of truck trips (26) and thus mobile emissions	Ozone 81 kg per year Atmospheric Acidification 6,022 kg per year Reduces emissions from existing conditions for Ozone by 515 kg and Atmospheric Acidification by 22,079 kg Net increase of truck trips (1) and thus mobile emissions	Ozone 605 kg per year Atmospheric Acidification 29,639 kg per year Increases emissions from existing conditions for Ozone by 9 kg and Atmospheric Acidification by 1,538 kg Net increase of truck trips (5) and thus mobile emissions	Ozone 16 kg per year Atmospheric Acidification 1,621 kg per year Reduces emissions from existing conditions for Ozone by 580 kg and Atmospheric Acidification by 26,480 kg Net decrease of truck trips (8) and thus decrease mobile emissions
Biological Resources	No plastic bags allowed, thus no plastic bag litter affecting marine resources.	Plastic bag litter from both retail services and food service establishments Approximately 26 million plastic bags used which if littered may affect marine resources.	Although fewer than existing conditions, would allow FSEs to distribute plastic bags (estimated 1,296,193 per year) which may become litter and affect marine resources.	No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (6.22 million fewer paper bags). Thus less paper litter.	No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (1.3 million fewer paper bags). Thus less paper litter.	No plastic bags allowed. Fewer paper bags than proposed Bag Ordinance (6.87million fewer paper bags). Thus less paper litter.	No plastic bags allowed at FSEs. Increase of paper bags compared to existing conditions 1.3 million more paper bags.	No plastic bags allowed. No paper bags allowed (9.07 million fewer paper bags allowed than proposed Bag Ordinance). Thus less paper litter.
Greenhouse Gas Emissions	1,112 metric tons CO ₂ e A net increase of 421 metric tons CO ₂ e compared to existing conditions.	691 metric tons CO ₂ e	993 metric tons CO ₂ e A net increase of 302 metric tons CO ₂ e compared to existing conditions.	385 metric tons CO ₂ e A net decrease of 306 metric tons CO ₂ e compared to existing conditions.	960 metric tons CO ₂ e A net increase of 269 metric tons CO ₂ e compared to existing conditions.	309 metric tons CO ₂ e A net decrease of 382 metric tons CO ₂ e compared to existing conditions.	811 metric tons CO ₂ e A net increase of 120 metric tons CO ₂ e compared to existing conditions.	52 metric tons CO ₂ e A net decrease of 639 metric tons CO ₂ e compared to existing conditions.
Hydrology/Water Quality	No plastic bag litter thus improvement to litter/waste that enters storm drains. Increased production of paper bags (9,073,352 additional paper bags) which may increase water quality impacts associated with production and manufacturing.	Some plastic bag litter and waste enters storm drains. Production of plastic and paper bags has some less than significant water quality impacts.	Some plastic bag litter as 1,296,193 plastic bags per year would still be in City. Increased production of paper bags (7,777,159 additional paper bags) which may increase water quality impacts associated with production and manufacturing.	No plastic bag litter thus improvement to litter/waste that enters storm drains. Increased production of paper bags (2,851,625 additional paper bags) which may increase water quality impacts associated with production and manufacturing.	No plastic bag litter thus improvement to waste that enters storm drains. Increased production of paper bags (7,777,159 additional paper bags) which may increase water quality impacts associated with production and manufacturing.	No plastic bag litter thus improvement to waste that enters storm drains. Increased production of paper bags (2,203,528 additional paper bags) which may increase water quality impacts associated with production and manufacturing.	No plastic bag litter from FSEs thus improvement to waste that enters storm drains compared to existing conditions. Increased production of paper bags (1.3 million additional paper bags) which may increase impacts associated with production and manufacturing.	No plastic bag litter thus improvement to waste that enters storm drains. Decreased production of paper bags as none would be distributed within City. However, increased production of reusable bags (174,488 additional reusable bags) which may increase impacts associated with production and manufacturing.

Table 6-31
Impact Comparison and Ranking of Project Alternatives
Compared with Current Ordinance/"No Project" Alternative

Issue	Proposed Bag Ordinance <i>Retail: No plastic bags, 10 cent store charge for paper, 25 cent after one year;¹ FSE: No plastic, no charge for paper</i> <i>Values below show absolute value and net change (either increase or decrease) compared to existing conditions</i>	Alt 1: No Project <i>Current ordinance remains, i.e., no plastic bags at grocery stores, no charge for paper. FSE exempt</i> <i>Values below are all existing conditions.</i>	Alt 2: FSE Exempt: Proposed Bag Ordinance in Place for Retail, But Excludes FSE Entirely*	Alt 3: \$0.25 Store Charge for Paper Bags at Retail But No Paper Charge at FSE, No Plastic at Either* <i>Foregoes first step \$0.10 cent retail charge</i>	Alt 4: \$0.10 for Paper Bags at Both Retail Services and FSE, No Plastic at Either* <i>No increase to \$0.25 for retail or FSE</i>	Alt 5: \$0.25 Fee for Recyclable Paper Bags at Both Retail Services and FSE, No Plastic at Either*	Alt 6: FSE Only: Ban Plastic Bags at FSE Only, No Ban At Retail (except Supermarkets), No Fee for Paper Bags*	Alt 7: No Plastic or Paper at Either Retail or FSE *	
Utilities and Service Systems									
Water and Wastewater <i>AFY = Acre feet per year</i>	Water: 18.52 AFY Wastewater: 16,541 gallons per day	Water: 0 AFY Wastewater: 0 gallons per day <i>(no increase in the number of reusable bags, therefore no increase in water/wastewater)</i>	Water: 18.52 AFY Wastewater: 16,541 gallons per day	Water: 25.55 AFY Wastewater: 22,661 gallons per day	Water: 20.52 AFY Wastewater: 17,864 gallons per day	Water: 26.07 AFY Wastewater: 23,285 gallons per day	Water: 0 AFY Wastewater: 0 gallons per day <i>(zero (0) increase in the number of reusable bags, therefore no increase in water/wastewater compared to existing conditions)</i>	Water: 28.5 AFY Wastewater: 25,448 gallons per day	
Solid Waste <i>Estimates utilize the more conservative Boustead data as a worst case scenario</i>	0.59 tons per day Net increase of 0.27 tons per day <i>99 more tons per year</i>	0.32 tons per day 128 tons per year	0.5 tons per day Net increase of 0.18 tons per day <i>66 tons per year</i>	0.18 tons per day Net decrease of 0.14 tons per day <i>51 less tons per year</i>	0.5 tons per day Net increase of 0.179 tons per day <i>65 more tons per year</i>	0.14 tons per day Net decrease of 0.18 tons per day <i>66 less tons per year</i>	0.39 tons per day Net decrease of 0.07 tons per day <i>26 less tons per year</i>	0.00003 tons per day Net decrease of 0.319 tons per day <i>117 less tons per year</i>	
Bags	Plastic Paper Reusable Total	0 9,073,352 324,048 9,397,400	25,923,864 3,108,000 111,000 29,142,864	1,296,193 7,777,159 324,048 9,397,400	0 2,851,625 443,697 3,295,322	0 7,777,159 348,975 812,6134	0 2,203,528 456,160 2,659,688	24,627,671 1,296,193 0 25,923,864	0 0 498,536 498,536

¹After the first year this alternative would have benefits of Alternative 3
All numbers are annual unless otherwise noted. Impacts assume results after one year of ordinance implementation.
FSE=Food Service Establishment (e.g., restaurants, food trucks, etc.)
* Values show absolute value and net change (either increase or decrease) compared to existing conditions

7.0 EIR ASSUMPTIONS

This EIR is based on existing and best available data. A detailed study of Palo Alto would have been cost-prohibitive and was not performed because existing sets results contain conservative assumptions intended as a general assessment of potential impacts. Even with conservative assumptions, the EIR concludes that impacts of the proposed Bag Ordinance are either beneficial or not significant. Specifically, the EIR is conservative in its assumptions in the following ways:

1. **No Bag Option:** The EIR does not account for customers choosing not to use a bag, which may be a common occurrence when faced with a fee and not having a reusable bag at their disposal. Preliminary surveys at Palo Alto grocery stores indicate that approximately 21% percent of customers do not use a bag (City of Palo Alto Annual Survey of Paper, Plastic and Reusable Bag Use, Updated 2012) . It is also likely that restaurant customers would forgo a bag if charged. Due to limited scientifically accepted data, however, the EIR does not address these issues and conservatively assumes a shift towards reusable bag use. As a result, the water use impact, air quality and GHG emissions impacts for reusable bags may be overstated.
2. **Bag Washing:** The EIR assumes that reusable bags are washed separately weekly from other laundry, which may not actually occur, as consumers would likely include bags with regular washes. This results in a conservative estimate of water used for bag washing.
3. **Reusable bag use:** While the definition in the ordinance includes a statement that reusable bags must be able to be used 125 times, the EIR assumes 52 uses to be conservative. This conservative assumption would overestimate solid waste and other impacts as a result of reusable bags.
4. **Bag Sizes:** The EIR assumes a standard grocery paper checkout bag as the size for all paper checkout bags, as well as a one-to-one replacement ratio of plastic bags with paper checkout bags for approximately 35% of the bags. Paper bags used at food service establishments and retail stores may vary considerably in size, however, no data exists to reliably estimate the impact of these various sizes. In addition, plastic checkout bags are smaller than paper grocery bags and the one-to-one replacement assumption overestimates the number of paper bags used. The bag size assumption results in a very conservative and likely overestimated solid waste generation, greenhouse gas emissions, and air quality emissions impact analyses as a result of paper bags usage.
5. **Existing Bag Use:** Based on an informal survey of food service establishments, about one third of Palo Alto food service establishments already use paper bags, as do many retail stores. This results in a higher estimate of future paper bag use in the EIR, which affects the air quality, greenhouse gas, and solid waste estimates.



6. Paper Bag Recycling and Composting: Paper bags in Palo Alto are likely recycled or, as part of the commercial and future residential program, may be composted and would not increase solid waste estimates. Plastic bags, however, while accepted in the Palo Alto's recycling program, are not as likely to be recycled or composted and cause operational issues for solid waste handling equipment. Assuming that paper bags become solid waste, results in the solid waste impacts of the project and the alternatives to be very conservative and likely overstated.
7. Food Service Establishment use of Plastic Bags: Plastic bag use by food service establishments was assumed to be approximately 5% of total plastic bag use. This assumption is consistent with the rates used in the County of San Mateo Reusable Bag Ordinance Final Program EIR, SCH#2012042013, October 2012 and the Sunnyvale Single-Use Carryout Bag Ordinance. Final Environmental Impact Report, SCH#2011062032, December 2011.



8.0 REFERENCES AND REPORT PREPARERS

8.1 REFERENCES

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8.2 AGENCIES/INDIVIDUALS CONTACTED

Clute, Sharon. Environmental Inspector. City of San Jose. Department of Planning, Building, and Code Enforcement. Personal Communication. July 18, 2012.

8.3 REPORT PREPARERS

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

Rincon Consultants, Inc.

Joe Power, AICP, Principal

Matt Maddox, MESM, Senior Program Manager

Megan Jones, Senior Planner

Jessica Tibbett Hamill, MAIEP, Associate Environmental Planner

Carie Wingert, Associate Biologist

Kathy Babcock, Graphics Technician

Katherine Warner, Graphics Technician

Katie Stanulis, Production Coordinator





Appendix A

NOP

Initial Study

NOP Comment Letters

**NOTICE OF PREPARATION
OF A DRAFT ENVIRONMENTAL IMPACT REPORT
CITY OF PALO ALTO
EXPANDED PLASTIC BAG RESTRICTION ORDINANCE**

DATE: June 12, 2012

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

LEAD AGENCY: City of Palo Alto

The City of Palo Alto intends to prepare an Environmental Impact Report (EIR) for an expansion of the Plastic Bag Restriction Ordinance (Municipal Code 5.35, Ordinance 5032). In accordance with Section 15082 of the State CEQA Guidelines, the City of Palo Alto 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 environmental factors that the City has determined would potentially be affected by the project include:

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

PROJECT SPONSOR: City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303
Contact: Julie Weiss, Environmental Specialist
(650) 329-2117

PROJECT LOCATIONS: The expansion of the Plastic Bag Restriction Ordinance would apply to retail services and food service establishments located throughout the City of Palo Alto's corporate limits.

PROJECT DESCRIPTION: The existing Plastic Bag Restriction Ordinance became effective on September 18, 2009 and requires that "supermarkets," as defined by the ordinance, shall provide only reusable bags and/or recyclable paper bags to customers at the point of sale. Thus, currently in Palo Alto, supermarkets are restricted from providing single-use plastic checkout bags. The existing ordinance also requires that all retail establishments within the city shall provide the following to customers: paper bags only, or a choice between paper or plastic bags. The proposed expansion of the Plastic Bag Restriction Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. Food service establishments would not be required to charge for a recyclable paper checkout bag. It would also revise the definition of "reusable bag" to make them longer-lasting and more durable.

The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in San Francisco Bay and in the marine environment. It is anticipated that by prohibiting single-use plastic checkout bags and requiring a mandatory charge for each paper bag distributed by retailers, the proposed expanded ordinance would provide a disincentive to customers to request paper bags when shopping at regulated retailers and food service establishments and promote a shift to the use of reusable bags by retail customers, while reducing the number of single-use plastic and paper checkout bags within the city.

Single-use plastic checkout bags are defined as bags made from petroleum or bio-based plastic¹ that are less than 2.25 mils thick (0.00225 inches). The proposed expanded ordinance would prohibit retail services and food service establishments in Palo Alto from distributing both petroleum and bio-based single-use checkout plastic bags at the point of sale. The proposed expanded ordinance would not prohibit the distribution of bags provided solely for produce, bulk food or meat at a produce, bulk food or meat department within a grocery store, supermarket, produce or other similar retail service.

As noted above, the proposed expanded Plastic Bag Restriction Ordinance would require regulated retailer services to impose a mandatory charge for each paper checkout bag provided. Food service establishments would not be required to charge for each recyclable paper checkout bag. The checkout bag charge would be separately stated on the receipt and provided to the customer at the time of sale and shall be identified as the "Checkout Bag Charge." Any other transaction fee charged by the retailer in relation to providing a checkout bag shall be identified separately from the Checkout Bag Charge. The Checkout Bag Charge would be completely retained by the affected retailers to compensate for increased costs related to compliance with the ordinance, actual costs associated with providing recyclable paper checkout bags or reusable bags, and costs associated with a store's educational materials or education campaign encouraging the use of reusable bags.

REVIEW PERIOD: As specified by the State CEQA Guidelines, the Notice of Preparation will be circulated for a 30-day review period. The Lead Agency welcomes agency and public input during this period regarding the scope and content of environmental information that must be included in the Draft EIR. **Responses to this Notice of Preparation may be submitted, in writing, by 5:30 p.m. on July 11, 2012, to:**

Julie Weiss, Environmental Specialist
City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303
(650) 329-2598
email: plastics@cityofpaloalto.org
www.cityofpaloalto.org/plastics

PUBLIC SCOPING MEETINGS: Scoping meetings will be held during the comment period to take comments related to the scope of the environmental issues to be analyzed within the Draft EIR. The dates, times, and locations of the scoping meeting are listed below.

Tuesday June 26 10:00 A.M. - Noon	Cubberley Community Center, Room H-5 4000 Middlefield Road Palo Alto, CA
Thursday June 28 6:00 P.M. – 8:00 P.M.	Cubberley Community Center, Room H-5 4000 Middlefield Road Palo Alto, CA



Julie Weiss
Environmental Specialist
City of Palo Alto

6/11/12

Date

¹ 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.

Disposable Checkout Bag Ordinance

Initial Study



Prepared for the
City of Palo Alto

June 19, 2012

ENVIRONMENTAL CHECKLIST
City of Palo Alto
Department of Planning and Community Environment

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ENVIRONMENTAL CHECKLIST
Department of Planning and Community Environment

PROJECT DESCRIPTION

1. PROJECT TITLE

Disposable Checkout Bag Ordinance

2. LEAD AGENCY NAME AND ADDRESS

City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303

3. CONTACT PERSON AND PHONE NUMBER

Julie Weiss, Environmental Specialist
City of Palo Alto
(650) 329-2117

4. PROJECT SPONSOR'S NAME AND ADDRESS

City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303

5. APPLICATION NUMBER

TBD

6. PROJECT LOCATION

The Disposable Checkout Bag Ordinance (the “Bag Ordinance”) would apply to retail services and food service establishments located throughout the City of Palo Alto’s corporate limits. Palo Alto is located in Santa Clara County and is approximately 26 square miles in size, of which approximately one-third is open space. The City’s boundaries extend from San Francisco Bay on the east to the Skyline Ridge of the coastal mountains on the west, with Menlo Park to the north and Mountain View to the south.

7. GENERAL PLAN DESIGNATION

The Disposable Checkout Bag Ordinance (the “Bag Ordinance”) would apply to retail services and food service establishments located throughout the City of Palo Alto’s corporate limits. As such, the proposed Bag Ordinance would not involve any development that would be subject to a specific general plan designation within the City’s 2010 Comprehensive Plan.

8. ZONING

The study area is the City of Palo Alto. Similarly to that of a General Plan designation, the proposed Bag Ordinance would not involve any development that would be subject to specific zoning codes.

9. PROJECT DESCRIPTION

Background

Palo Alto adopted an ordinance restricting single-use plastic bags on March 30, 2009 (CMR 138:09). This existing Plastic Bag Restriction Ordinance became effective on September 18, 2009 and requires that “supermarkets,” as defined by the ordinance, shall provide only reusable bags and/or recyclable paper bags to customers at the point of sale. Thus, currently in Palo Alto, supermarkets are restricted from providing single-use plastic checkout bags. There are currently seven full service grocery stores that meet the Supermarket definition: JJ&F Food Store, Piazza's Fine Foods, Mollie Stone's Supermarkets, Whole Foods Market, Country Sun, Trader Joe’s and Safeway. In addition, two new stores (the Fresh Market and Miki’s Farm Fresh Produce) are currently being built, though as of June 2012 they are not yet complete and open for business. The existing ordinance also requires that all retail establishments within the city shall provide the following to customers: paper bags only, or a choice between paper or plastic bags. In November 2009, Council then directed that Staff return to with a recommendation of implementing a fee system for single-use paper bags (CMR:401:09).

Based on existing conditions, it is estimated that the proposed Bag Ordinance would apply to approximately 1400 retailers and 300 restaurants located within Palo Alto (also known as the “Study Area”). Table 1 shows the estimated use of single-use plastic checkout bags within the City of Palo Alto.

**Table 1
Estimated Single-Use Plastic Checkout Bag Use in Palo Alto**

Area	Population*	Number of Plastic Bags Used per Person**	Total Bags Used Annually
City of Palo Alto	65,544	531	34,803,864
Reduction of Plastic Bag Use as a Result of Existing Plastic Bag Restriction Ordinance (6 stores total)¹			(8,880,000)
Total			25,923,864

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

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

¹ Reduction is based on Existing Ordinance applying to six supermarkets which would have utilized approximately 1.48 million plastic bags per year per store (City of Santa Monica Nexus Study contained in the Santa Monica Single Use Carryout Bag Ordinance Final EIR, January 2011). Please note that this does not take into account the Trader Joe's store as it is store policy to only distribute paper bags (thus prior to the existing ordinance Trader Joe's did not use plastic bags and the two stores currently (as of June 2012) being built (the Fresh Market and Miki's Farm Fresh Produce) since these supermarkets have not yet opened for business and therefore are not currently distributing plastic bags.

Based on statewide data, currently almost 20 billion plastic grocery bags (or approximately 531 bags per person) are consumed annually in California (Green Cities California MEA, 2010; and CIWMB, 2007). As shown in Table 1, without the existing Plastic Bag Restriction Ordinance (in other words, prior to when the Plastic Bag Restriction Ordinance went into effect in September of 2009) retail customers in the City of Palo Alto would use about 34.8 million plastic bags per year. However, since the existing Plastic Bag Restriction Ordinance bans the use of plastic bags at seven supermarkets¹ in the city (which would use an estimated 1.48 million plastic bags per year per store if not restricted), it is anticipated that the existing plastic checkout bag use in Palo Alto is approximately 25.92 million bags per year. Retail customers in Palo Alto may include residents of other communities and residents of Palo Alto may not necessarily be customers of retailers in the City. However, for this analysis, in order to estimate the existing number of plastic bags used per year in Palo Alto, the statewide data was utilized to apply the number of bags used per person per year rate to the number of residents in Palo Alto. This estimate is considered reasonable and conservative for the purposes of this analysis.

Proposed Project

The proposed Disposable Checkout Bag Ordinance (the "Bag Ordinance") would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. Food service establishments would not be required to charge

¹ Please note that prior to the implementation of the existing Ordinance, the Trader Joe's store did not distribute plastic bags as part of the in-store policy. Therefore since plastic bags were not used at this store, the existing Ordinance did not reduce plastic bags at this store. Therefore the existing Ordinance reduced plastic bag use at six stores as described further in Table 2-1.

for a recyclable paper checkout bag. It would also revise the definition of “reusable bag” to make them longer-lasting and more durable.

The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in San Francisco Bay and in the marine environment. It is anticipated that by prohibiting single-use plastic checkout bags and requiring a store charge for each paper bag distributed by retailers, the proposed Bag Ordinance would promote a shift to the use of reusable bags by retail customers and reduce the number of single-use plastic and paper checkout bags within the city.

10. SURROUNDING LAND USES AND SETTING

Palo Alto contains a variety of land uses, including residential (single- and multi-family), commercial, industrial, office, and public facilities.

11. OTHER PUBLIC AGENCY APPROVALS REQUIRED

The Expanded Ordinance would require an amendment to the Palo Alto Municipal Code (CMR 138:09) with discretionary approval by the Palo Alto City Council. The following approvals would be required:

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

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

ENVIRONMENTAL CHECKLIST AND DISCUSSION OF IMPACTS

EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. **[A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e. g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e. g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).]**
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "(Mitigated) Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (C)(3) (D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

DISCUSSION OF IMPACTS

The following Environmental Checklist was used to identify environmental impacts, which could occur if the proposed Bag Ordinance is implemented. The left-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of the checklist. Discussions of the basis for each answer and a discussion of mitigation measures that are proposed to reduce potential significant impacts are included.

A. AESTHETICS

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially degrade the existing visual character or quality of the site and its surroundings?	1,2,4				X
b) Have a substantial adverse effect on a public view or view corridor?	1,2,4				X
c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	1,2,4				X
d) Violate existing Comprehensive Plan policies regarding visual resources?	1,2,4				X
e) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	1,2,4				X
f) Substantially shadow public open space (other than public streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21?	1,2,4				X

DISCUSSION:

The proposed Disposable Checkout Bag Ordinance (the “Bag Ordinance”) would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development or construction activities. As such, the ordinance would not create new sources of light, glare, or shadows. In addition, the proposed Bag Ordinance would not have an adverse effect on a public view or view corridor as it would not involve development of any kind. As such, the ordinance would be consistent with policies related to visual resources such as Policy L-3 of the City’s 2010 Comprehensive plan, which calls for the preservation of views of the foothills and East Bay hills. Moreover, as a result of the proposed Bag Ordinance, it is anticipated that litter associated with plastic bags would be reduced which would improve the visual character, natural scenic qualities and/or scenic views of areas within the Study

Area compared to existing conditions. Therefore, there would be *no impact* related to these issues and further analysis in an EIR is not warranted.

Mitigation Measures: None Required.

B. AGRICULTURAL AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board.

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or 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?	1,4				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	1, 2-Land Use Designation Map				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g) ²) or timberland (as defined in Public Resources Code section 4526 ³)?	1,4				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	1,4				X
e) Involve other changes in the existing environment which, due to their location or	1,4				X

² PRC 12220(g): "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

³ PRC 4526: "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others.

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The ordinance would not include any physical development or change any existing land uses currently protected under the Williamson Act. Furthermore, the ordinance would not involve any development that would conflict with existing zoning for forest land, timberland, or result in the loss or conversion of forest land to non-forest use. **No impact would** occur and further discussion of this issue in an EIR is not warranted.

Mitigation Measures: None Required

C. AIR QUALITY

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct with implementation of the applicable air quality plan (1982 Bay Area Air Quality Plan & 2000 Clean Air Plan)?	1,4				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation indicated by the following:					
i. Direct and/or indirect operational emissions that exceed the Bay Area Air Quality Management District (BAAQMD) criteria air pollutants of 80 pounds per day and/or 15 tons per year for nitrogen oxides (NO), reactive organic gases (ROG), and fine particulate matter of less than 10 microns in diameter (PM ₁₀);	1,4	X			
ii. Contribute to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours or 20 ppm for one hour(as demonstrated by CALINE4 modeling, which would be performed when a) project CO emissions exceed 550 pounds per day or 100 tons per year; or b) project traffic would impact intersections or roadway links operating at Level of Service (LOS)	1,4				X

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
D, E or F or would cause LOS to decline to D, E or F; or c) project would increase traffic volumes on nearby roadways by 10% or more)?					
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)?	1,4	X			
d) Expose sensitive receptors to substantial levels of toxic air contaminants?	1,4				X
i. Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million	1				X
ii. Ground-level concentrations of non-carcinogenic TACs would result in a hazard index greater than one (1) for the MEI	1				X
e) Create objectionable odors affecting a substantial number of people?	1				X
f) Not implement all applicable construction emission control measures recommended in the <i>Bay Area Air Quality Management District CEQA Guidelines</i> ?	1				X

DISCUSSION:

The proposed project involves minimal construction activity and therefore will not conflict with any applicable air quality plans, expose any sensitive receptors to substantial pollutants, add any objectionable odors to the neighborhood, nor would it be required to implement construction emission control measures. Palo Alto is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), this regional agency regulates air pollutant emissions from stationary sources and through its planning and review process. All development in Palo Alto is subject to the BAAQMD regulations.

Although the proposed Bag Ordinance is intended to reduce the amount of single-use plastic and paper bags in Palo Alto, a potential change in the number of truck trips associated with delivering carryout bags to retailers and the additional use of reusable bags could generate pollutants that will violate existing air quality standards and increase long-term operational emissions. In addition, although overall carryout bag use is anticipated to decline as a result of the proposed Bag Ordinance, the EIR will also analyze whether the shift toward reusable bags could potentially alter processing activities in Palo Alto related to bag production, which may increase air emissions. Impacts related to long-term emissions are *potentially significant* and will be further analyzed in an EIR.

D. BIOLOGICAL RESOURCES

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	1,2,4	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, including 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?	1,2,4				X
c) 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?	1			X	
d) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10)?	1,2,3,4				X
e) Conflict with any applicable Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	1,2,4				X

DISCUSSION:

- a) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. Although there is low potential for adverse effects to wildlife resources or their habitat, by promoting a shift toward the use of reusable bags, the proposed Bag Ordinance could potentially affect wildlife species or sensitive habitats 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 Bag Ordinance's impact related to sensitive species or habitats is *potentially significant* and will be further analyzed in an EIR.

- b) The proposed Bag Ordinance would not include any physical development or construction activity and; therefore, would not alter or remove any existing riparian habitat or natural communities in the Study Area. As such, the proposed Bag Ordinance would not adversely affect any state listed or any federally listed rare or endangered species of plant life, nor would it affect any federally protected wetlands. **No impact** would occur and further analysis of this issue in an EIR is not warranted.
- c) The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. As such, it is anticipated that litter associated with plastic bags would be reduced which would be beneficial to the movement of any native resident or migratory fish or wildlife species. Impacts would be **less than significant** and further analysis of this issue in an EIR is not warranted.
- d) The proposed Bag Ordinance is intended to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development or construction activities that would conflict with the City of Palo Alto Tree Preservation Ordinance (Municipal Code Section 8.10). **No impact** would occur and further analysis of this issue in an EIR is not warranted.
- e) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. As such, the ordinance would not involve any development that would conflict with any applicable 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.

E. CULTURAL RESOURCES

Issues and Supporting Information Resources	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a) Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution?	1,2,4				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?	1,2,4				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	1,2,4				X
d) Disturb any human remains, including those interred outside of formal cemeteries?	1,2,4				X

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City's Historic Inventory?	1,2,4				X
f) Eliminate important examples of major periods of California history or prehistory?	1,2,4				X

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development or construction activities that would require grading. As such, the ordinance would either directly or indirectly destroy a local cultural resource or destroy a unique paleontological resource or geologic feature. In addition, the proposed Bag Ordinance would not involve any development activities that would disturb human remains, cause a substantial adverse change in the significance of an archaeological resource, adversely affect a historic resource within the City, or eliminate important examples of major periods of California history. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required

F. GEOLOGY, SOILS AND SEISMICITY

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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? Refer to Division of Mines and Geology Special Publication 42.	4,6				X
ii) Strong seismic ground shaking?	1,2,4				X
iii) Seismic-related ground failure, including liquefaction?	1,2,4				X
iv) Landslides?	1,2,4				X

b) Result in substantial soil erosion or the loss of topsoil?	1,2,4				X
c) Result in substantial siltation?	1,2,4				X
d) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	1,2,4				X
e) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	1,2,4				X
f) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	1,2,4				X
g) Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques?	1,2,4				X

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development or construction activities. As such, the ordinance would not involve activities that would expose people or structures to rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides.

Additionally, the proposed Bag Ordinance would not involve physical development that would be located on a geologic unit or soil that is unstable, be located on expansive soil, be located on soils that are incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems. Moreover, the proposed Bag Ordinance would not involve physical development that would expose people or property to major geologic hazards. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required

G. GREENHOUSE GAS EMISSIONS

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	1,4	X			
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	1,4	X			

DISCUSSION:

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 Palo Alto 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 analyze whether the shift toward reusable bags could potentially alter traffic patterns in Santa Clara County related to transport of single-use and reusable bags as well as processing activities in Santa Clara County related to bag production and disposal of carryout bags which may increase greenhouse gas emissions.

The EIR will analyze whether a shift toward reusable bags in Palo Alto 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.

H. HAZARDS AND HAZARDOUS MATERIALS

Note: Some of the thresholds can also be dealt with under a topic heading of Public Health and Safety if the primary issues are related to a subject other than hazardous material use.

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routing transport, use, or disposal of hazardous materials?	1,2,4				X
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?	1,2,4				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	1,4				X
d) Construct a school on a property that is subject to hazards from hazardous materials	1,4				X

contamination, emissions or accidental release?					
e) Be located on a site which is included on a list of hazardous materials 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?	1,2,4				X
f) 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?	1,4				X
g) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working the project area?	1,4				X
h) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	1,2,4				X
i) 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?	1,2,4				X
j) Create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination in excess of soil and ground water cleanup goals developed for the site?	1,4				X

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development or construction activities; therefore, the ordinance would not transport, use, dispose of, emit, or handle hazardous materials. In addition, the proposed Bag Ordinance would not involve physical development that would be located on a site which is included on a list of hazardous materials sites, be located within an airport land use plan, be located within the vicinity of a private air strip. Moreover, the ordinance would not involve physical development or construction activities that would expose people of structures to a significant risk involving wildland fires, nor would it involve physical development that would create a significant hazard to the public or the environment from existing hazardous materials contamination. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required

I. HYDROLOGY AND WATER QUALITY

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	1,2,4	X			
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	2-MapN2	X			
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?	1,4				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	1,4				X
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?	1,4				X
f) Otherwise substantially degrade water quality?	1,4	X			
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?	2,4				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	2-MapN6				X
i) Expose people or structures to a significant risk of loss, injury or death involve flooding, including flooding as a result of the failure of a levee or dam or being located within a 100-year flood hazard area?	2-MapN8				X
j) Inundation by seiche, tsunami, or mudflow?	2-MapN6				X
k) Result in stream bank instability?	1,4				X

DISCUSSION:

A,f) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25)

on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. It is anticipated that the reduction of single-use carryout bags would incrementally reduce the amount of litter in the City that enters storm drains, thereby improving water quality. However, the increased use of reusable bags could also potentially affect water quality if reusable bags are improperly disposed of and become litter that enters the storm drain system. In addition, although overall carryout bag use is anticipated to decline as a result of the proposed ordinance, the EIR will also analyze whether the shift toward reusable bags and paper bags could potentially affect water quality as a result of processing activities related to bag production. Consequently, impacts related to water quality standards and waste discharge requirements are considered *potentially significant* and will be further analyzed in an EIR.

b) The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed Bag Ordinance would not involve any physical development or construction activities. However, the proposed Bag Ordinance would be expected to lead to an increase in the number of reusable bags consumed in the City of Palo Alto. Washing reusable bags for sanitary purposes (either in a washing machine or rinsing and wiping) by customers may incrementally increase wastewater generation in the City and could result in adverse impacts to water quality. The impact to water supply and any impacts associated with groundwater supplies as a result of the increase in water use associated with the proposed Bag Ordinance is *potentially significant* and will be analyzed in an EIR.

c-e) The proposed Bag Ordinance would not involve any physical development or construction activities. As such, the ordinance would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The proposed Bag Ordinance would not alter the course of any stream or other drainage and would not increase the potential for flooding. Because the proposed 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. Therefore, there would be *no impact* and further analysis of these issues in an EIR is not warranted.

g-k) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The proposed Bag Ordinance would not involve any physical development or construction activities. As such, the ordinance would not place housing or structures within a 100-year flood hazard area, expose people or structures to a significant risk related to flooding, inundation by seiche, tsunami, mudflow, nor would it result in stream bank instability. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

J. LAND USE AND PLANNING

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	1,4				X
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?	1,2,3,4				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	1,2				X
d) Substantially adversely change the type or intensity of existing or planned land use in the area?	1,4				X
e) Be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height?	1,4				X
f) Conflict with established residential, recreational, educational, religious, or scientific uses of an area?	1,4				X
g) Convert prime farmland, unique farmland, or farmland of statewide importance (farmland) to non-agricultural use?	1,2 Map L-9,3				X

DISCUSSION:

a-b) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The ordinance would require an amendment to the Palo Alto Municipal Code. However, it would not involve any new development or construction activities. No new through-streets are proposed and no through-streets would be abandoned. As a result, the proposed ordinance would not divide an established community or conflict with any land use plan or policy, including the general plan, specific plan, and zoning ordinance. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

c-g) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The proposed Bag Ordinance would not include any physical development or change any existing land uses. As such, the ordinance would not change the type or intensity of existing or planned land uses, be incompatible with adjacent land uses, nor would it conflict with established residential, recreational, educational, religious, or scientific uses. Furthermore, the proposed Bag Ordinance would not introduce new development that would conflict with any applicable habitat conservation plan or natural community plan. Moreover, the proposed Bag Ordinance would not conflict with existing zoning for agricultural use, or convert prime

farmland, unique farmland, or farmland of statewide importance to a non-agricultural use. *No impact* would occur and further discussion of these issues in an EIR is not warranted.

Mitigation Measures: None Required

K. MINERAL RESOURCES

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	1,2				X
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?	1,2				X

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The proposed Bag Ordinance would not involve any physical development or construction activities that would result in the loss of availability of a known or locally important mineral resource that would be of value to the region and the residents of the state. Moreover, as discussed in the Natural Environment Element of the City’s Comprehensive Plan, Palo Alto does not contain any mineral deposits of regional significance. *No impact* would occur and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required.

L. NOISE

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	1,2,7			X	
b) Exposure of persons to or generation of excessive ground borne vibrations or ground borne noise levels?	1,2,7			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	1,2,7			X	
d) A substantial temporary or periodic increase in	1,2,7			X	

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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, would the project expose people residing or working in the project area to excessive noise levels?	1				X
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 levels?	1				X
g) Cause the average 24 hour noise level (Ldn) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the Ldn would remain below 60 dB?	1				X
h) Cause the Ldn to increase by 3.0 dB or more in an existing residential area, thereby causing the Ldn in the area to exceed 60 dB?	1				X
i) Cause an increase of 3.0 dB or more in an existing residential area where the Ldn currently exceeds 60 dB?	1				X
j) Result in indoor noise levels for residential development to exceed an Ldn of 45 dB?	1				X
k) Result in instantaneous noise levels of greater than 50 dB in bedrooms or 55 dB in other rooms in areas with an exterior Ldn of 60 dB or greater?	1				X
l) Generate construction noise exceeding the daytime background Leq at sensitive receptors by 10 dBA or more?	1,7				X

DISCUSSION:

a-d) The proposed Bag Ordinance would apply throughout the City of Palo Alto. However, the ordinance would not involve any physical development or construction activities. As such, the proposed ordinance would not create new noise sources that would expose persons to noise levels in excess of existing noise standards. The 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 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, *impacts* related to noise levels would be *less than significant* and further analysis of these issues in the EIR is not warranted.

e-f) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The proposed Bag Ordinance would

not involve any physical development or construction activities that would be located within the vicinity of a private air strip or within an airport land use plan. As such the proposed Bag Ordinance would not expose people residing or working in the project area to excessive noise levels resulting from a nearby airport. Therefore, *no impact* would occur and further analysis of these issues in an EIR is not warranted.

g-l) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed Bag Ordinance would not involve any physical development or construction activities of any kind. As such, the ordinance would not generate construction noise exceeding the background Leq by ten dBA or more, nor would it cause the existing Ldn to increase by three dBA or more in an existing residential area. Moreover, the proposed Bag Ordinance would not result in residential development that would exceed interior noise standards of 45 dBA or exterior noise standards as established in the City of Palo Alto Municipal Code. Therefore, *no impact* would occur and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required

M. POPULATION AND HOUSING

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	1,4				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	1,4				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	1,4				X
d) Create a substantial imbalance between employed residents and jobs?	1,4				X
e) Cumulatively exceed regional or local population projections?	1,4				X

DISCUSSION:

The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to

increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The ordinance would not involve any physical development, such as residential units, and would not alter any existing land uses. As such, the ordinance would not induce population growth, displace existing housing, displace existing residents, create a substantial imbalance between employed residents and jobs, or cumulatively exceed regional or local population projections. There would be *no impact* related to population and housing and further analysis of these issues in an EIR is not warranted.

Mitigation Measures: None Required

N. PUBLIC SERVICES

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:					
a) Fire protection?	1,2,4				X
b) Police protection?	1,2,4				X
c) Schools?	1,2,4				X
d) Parks?	1,2,4				X
e) Other public facilities?	1,2,4				X

DISCUSSION:

a-b) Police and fire protection services in Palo Alto are provided by the Palo Alto Police Department and the Palo Alto Fire Department, respectively. The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed 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 City’s Police or Fire Departments. The ordinance would not result in the need to construct new or altered fire protection or police facilities. There would be *no impact* and further analysis of these issues in an EIR is not warranted.

c) Palo Alto’s public schools are operated by the Palo Alto Unified School District (PAUSD). PAUSD operates one preschool, 11 elementary schools, two middle schools, two high schools, a continuation school, a self-supporting adult school, the Children’s Hospital School at Lucile Salter

Packard Children’s Hospital, and a summer school. The proposed Bag Ordinance would not involve any new development or land use changes within the City. In addition, the 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 PAUSD. The proposed Bag 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.

d) The City owns and operates 29 neighborhood and district parks that total approximately 190 acres. The proposed Bag Ordinance would not involve the construction of residences or other facilities that would directly affect parks or increase demand for recreational services; therefore, the ordinance would not increase the demand for parks in the 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.

e) The proposed Bag Ordinance would not involve any new development or land use changes within the City. In addition, it would not result in an increase in population or employment; therefore, the project would not require the provision of new or physically altered government facilities. There would be *no impact* and further analysis of this issue in an EIR is not warranted.

Mitigation Measures: None Required

O. RECREATION

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	1,4				X
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?	1,4				X

DISCUSSION:

Police and fire protection services in Palo Alto are provided by the Palo Alto Police Department and the Palo Alto Fire Department, respectively. The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed 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 these issues in an EIR is not warranted.

Mitigation Measures: None Required

P. TRANSPORTATION AND TRAFFIC

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	1,4			X	
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	1,4				X
c) Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	1,4				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	1,4				X
e) Result in inadequate emergency access?	1,4				X
f) Result in inadequate parking capacity?	1,4				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., pedestrian, transit & bicycle facilities)?	1,2,4				X
h) Cause a local (City of Palo Alto) intersection to deteriorate below Level of Service (LOS) D and cause an increase in the average stopped delay for the critical movements by four seconds or more and the critical volume/capacity ratio (V/C) value to increase by 0.01 or more?	1,4			X	
i) Cause a local intersection already operating at LOS E or F to deteriorate in the average	1,4			X	

stopped delay for the critical movements by four seconds or more?					
j) Cause a regional intersection to deteriorate from an LOS E or better to LOS F or cause critical movement delay at such an intersection already operating at LOS F to increase by four seconds or more and the critical V/C value to increase by 0.01 or more?	1,4			X	
k) Cause a freeway segment to operate at LOS F or contribute traffic in excess of 1% of segment capacity to a freeway segment already operating at LOS F?	1,4				X
l) Cause any change in traffic that would increase the Traffic Infusion on Residential Environment (TIRE) index by 0.1 or more?	1,4				X
m) Cause queuing impacts based on a comparative analysis between the design queue length and the available queue storage capacity? Queuing impacts include, but are not limited to, spillback queues at project access locations; queues at turn lanes at intersections that block through traffic; queues at lane drops; queues at one intersection that extend back to impact other intersections, and spillback queues on ramps.	1,4				X
n) Impede the development or function of planned pedestrian or bicycle facilities?	1,4				X
o) Impede the operation of a transit system as a result of congestion?	1,4				X
p) Create an operational safety hazard?	1,4				X

DISCUSSION:

The intent of the proposed Bag Ordinance is to reduce the environmental impacts related to the use of single-use plastic bags, and to promote a shift toward the use of reusable bags by retail customers. The ordinance would not involve any physical development or construction activities. As such, the proposed Bag Ordinance would not cause or result in noticeable changes in pedestrian patterns, vehicular traffic patterns or volumes, nor would the ordinance cause a noticeable increase in pedestrian traffic. Implementation of the proposed Bag Ordinance would not reduce, sever, or eliminate pedestrian or bicycle circulation or access, or preclude future planned and approved bicycle or pedestrian circulation.

A Bag permanent increase in recyclable paper bag and reusable bag use might lead to an increase in the frequency of truck trips needed to deliver a greater number of these bags to stores in Palo Alto. However, any increase in truck trips related to recycled paper and reusable bag delivery would be partially offset by the reduction in truck trips related to single-use plastic carryout bag delivery since under the proposed Bag Ordinance, single-use plastic carryout bags would be banned and therefore truck delivery would not be required. Nevertheless, as shown in Table 1, assuming a worst-case scenario that as a result of the proposed Bag Ordinance the volume of existing single-use plastic bags would be replaced by approximately 35% recycled paper bags and 65% reusable bags, the net increase in truck traffic resulting from the change in bag use would be less than one truck trip per day.

Truck trips would be expected to primarily utilize major regional transportation facilities (such as the Bayshore Freeway (U.S. 101), Junipero Serra Freeway (Interstate 280), and major arterials in Palo Alto (such as El Camino Real). Delivery trucks may periodically travel on residential streets, but an increase of less than one truck trip per day in the entire region (in Palo Alto and the surrounding Bay Area) would not cause a significant traffic impact at any existing intersections or street segments in Palo Alto. Therefore, impacts related to the existing traffic load and the carrying capacity of the street systems would be *less than significant* and further analysis in an EIR is not warranted.

**Table 1
Estimated Truck Trips per Day
Following Implementation of the Proposed Single-use Bag Ban Ordinance**

Bag Type	Number of Bags per Year	Number of Bags per Truck Load**	Truck Trips Per Year	Truck Trips per Day
Single-use Plastic	0*	2,080,000	0	0
Single-use Paper	9,073,352*	217,665	42	0.11
Reusable	324,048*	108,862	3	0.008
Total			45	0.123
Existing Truck Trips for Plastic Bags			13	0.04
Net New Truck Trips			32	0.09

*Based on worst case scenario estimate of 35% conversion of the volume of existing plastic bag use to recyclable paper bags and 65% conversion to reusable bags (based on 52 uses per year). Based on City of San Jose Final EIR, SCH # 2009102095, October 2010

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

Mitigation: None Required

Q. UTILITIES AND SERVICE SYSTEMS

Issues and Supporting Information Resources	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	1,2,4		X		
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?	1,2,4		X		
c) Require or result in the construction of new	1,4				X

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
storm water drainage facilities or expansion of existing facilities, the construction of which could cause 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?	1,2,4		X		
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	1,2,4		X		
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	1,2,4		X		
g) Comply with federal, state, and local statutes and regulations related to solid waste?	1,2,4		X		
h) Result in a substantial physical deterioration of a public facility due to increased use as a result of the project?	1,4	X			

DISCUSSION:

a,b,e) The City operates the Regional Water Quality Control Plant (RWQCP), a wastewater treatment plant, for the East Palo Alto Sanitary District, Los Altos, Los Altos Hills, Mountain View, Palo Alto, and Stanford University. Wastewater from these communities is treated by the RWQCP prior to discharge to the San Francisco Bay. The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The proposed Bag Ordinance would not involve any new buildings or other physical development and, therefore, would not directly cause an increase in the amount of wastewater generated. However, increased washing of reusable bags (for sanitary purposes) by City residents may incrementally increase wastewater generation. This increase of wastewater may exceed the City's contractual entitlement for flows to the RWQCP. Therefore, the ordinance could significantly affect the City's wastewater conveyance system. Impacts related to wastewater conveyance and treatment would be *potentially significant* and will be further analyzed in an EIR.

c) The proposed Bag Ordinance would not involve any physical development or construction activities. As such, it would not increase impervious surface area that would create or contribute runoff water exceeding the capacity of existing or planned stormwater drainage systems. Further, by eliminating the use of plastic bags in Palo Alto, the ordinance would incrementally reduce the amount of plastic bag litter that enters the storm drain systems. Plastic bags that enter the storm drain system may affect storm water flow by clogging drains and redirecting flow. By eliminating the potential for plastic bags to affect storm water flow, the proposed Bag Ordinance would incrementally improve the

effectiveness of the stormwater drainage systems in Palo Alto. Therefore, the proposed Bag 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) Palo Alto receives water from various sources: the City and County of San Francisco’s Regional Water System (RWS), operated by the San Francisco Public Utilities Commission (SFPUC), local groundwater, and recycled water produced at the Regional Water Quality Control Plant for non-potable use. The first two sources meet all State and Federal drinking water quality standards. Recycled water is used to meet strict State requirements for non-potable use wherever feasible to irrigate landscaping and meet any other acceptable watering needs under our permit with the Regional Water Quality Control Board.

The proposed Bag Ordinance would be expected to lead to an increase in the number of reusable bags consumed in Palo Alto. Washing reusable bags for sanitary purposes (either in a washing machine or rinsing and wiping) by customers may incrementally increase water use in the City. The impact to water supply would be **potentially significant** and the potential for the increase in water use to exceed available supplies will be analyzed in an EIR.

f-h) The majority of the City’s waste stream is transferred to the regional Sunnyvale Material and Recovery Transfer (SMaRT) Station. There, waste is sorted to remove recyclable goods for sale at market rates. Waste that can not be recycled is deposited at the Kirby Canyon Landfill in San Jose.

The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. The proposed Bag Ordinance does not involve any physical development or construction activities. The shift toward reusable bags would reduce the amount of single-use plastic carryout bags sent to local landfills. However, the ordinance may result in a temporary increase in the number of paper bags and a permanent increase in the number of reusable bags that are currently used in the City. As such, the proposed Bag Ordinance may incrementally increase the amount of solid waste generated related to these types of bags. Impacts to the City’s solid waste collection and disposal system would be **potentially significant** and this issue will be further analyzed in an EIR.

R. MANDATORY FINDINGS OF SIGNIFICANCE

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	1,2,3,4	X			

Issues and Supporting Information Resources Would the project:	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	1,4	X			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	1,4				X

DISCUSSION:

- a) As discussed in Section D, *Biological Resources*, the proposed Bag Ordinance could potentially affect wildlife species or sensitive habitats 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 Bag Ordinance’s impact related to sensitive species or habitats is ***potentially significant*** and will be further analyzed in an EIR.

- b) As discussed above, the proposed Bag Ordinance could have potentially significant impacts related to air quality, biological resources, greenhouse gas emissions, hydrology and water quality, and utilities and service systems. The proposed Bag Ordinance’s impacts related to the aforementioned issue areas is ***potentially significant*** and will be further analyzed in an EIR.

- c) The proposed Bag Ordinance would restrict all retail services (including supermarkets) and food service establishments from providing single-use plastic checkout bags and would require retail services to charge a minimum of ten cents (\$0.10) until April 21, 2014 and twenty-five cents (\$0.25) on or after April 22, 2014 for a recyclable paper checkout bag. The intent of the ordinance is to increase the use of reusable bags and decrease the use of single-use plastic and paper bags to reduce pollution in local creeks, in the San Francisco Bay and in the marine environment. However, as discussed above, the proposed Bag Ordinance could have potentially significant impacts related to air quality, greenhouse gas emissions, and hydrology and water quality which could affect human beings. The proposed Bag Ordinance’s impacts related to the aforementioned issue areas is ***potentially significant*** and will be further analyzed in an EIR.

SOURCE REFERENCES

1. Project Planner's knowledge of the study area and the proposed project
2. Palo Alto Comprehensive Plan, 1998-2010
3. Palo Alto Municipal Code
4. Draft Ordinance
5. Alquist-Priolo Earthquake Fault Zoning Map 10
6. Palo Alto Municipal Code, Section 9.10-Noise Ordinance
7. City of Santa Monica. January 2011. "Santa Monica Single-use Carryout Bag Ordinance." Final Environmental Impact Report. October 2010.
8. County of Santa Clara. October 2010. Initial Study for Single-use Carryout Bag
9. California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 and 2012, with 2010 Benchmark*. Sacramento, California. May 2012.

DETERMINATION

On the basis of this initial evaluation:

<p>I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.</p>	
<p>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.</p>	
<p>I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.</p>	X
<p>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.</p>	
<p>I find that although the proposed project could have a significant effect on the environment, because all potentially 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.</p>	

Project Planner

Date



July 10, 2012

Honorable Mayor and Council Members
c/o Julie Weiss
City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303

DELIVERED ELECTRONICALLY

Re: **Ordinance to expand plastic bags ordinance to include all retail establishments and food establishments located in the city of Palo Alto and– Oppose unless Restaurants are Exempted.**

Dear Mayor and City Council:

The California Restaurant Association is the definitive voice of the food service industry in California and is the oldest restaurant trade association in the nation. On behalf of our restaurant members in Palo Alto, we submit this letter of opposition regarding a proposed ordinance to ban the use of plastic bags in all retail and food establishments. As providers of prepared food, restaurants take their responsibility to provide food in a safe and unadulterated manner seriously and devote a tremendous amount of effort to ensure food safety. If plastic bags are banned the only bag options left for restaurants are reusable bags or paper bags. These options pose serious public health and safety risks as well as operational challenges for restaurants. For these reason as well as the reasons explained below, we ask the City Council to exempt restaurants and other food service establishments from this ban.

Restaurants are generally exempted from bag ordinances due to food safety concerns with using reusable bags for prepared food to-go. Most recently, the City of San Jose and Santa Clara County have exempted restaurants from their ordinances.

- Other California jurisdictions that have passed bag ordinances with an exemption for restaurants include Calabasas, Long Beach, Los Angeles County, City of Los Angeles, Marin County, Oakland, San Jose, Santa Clara County, and Santa Monica. For example:
 - Santa Monica's ordinance provides: "5.45.040 Exemptions (a)(1): Single-use plastic carry out bags may be distributed to customers by food providers for the purpose of safeguarding public health and safety during the transportation of prepared take-out foods and liquids intended for consumption away from the food provider's premises."¹

¹ City of Santa Monica Bag Ordinance at http://qcode.us/codes/santamonica/view.php?topic=5-5_44-5_45-5_45_040&frames=on

² City of San Jose Bag Ordinance Development, February 2010.

- San Jose provided that “Restaurants and food establishments would not be subject to the ban for public health reasons. Reusable bags are considered impractical for these purposes.”²
- According to the US Department of Health and Human Services, “Harmful bacteria are the most common cause for food poisoning” or foodborne illness.³ To safeguard against foodborne illness, restaurants must follow strict food safety standards in food handling under Cal Code, the California retail food code. Restaurants are regularly inspected by their county environmental health department under these guidelines.
- Food safety and food borne illness prevention is a top priority for restaurants, but no matter what precautions are taken by the restaurant to prevent cross contamination, it can all be in vain if people use contaminated reusable bags to transport restaurant food.
- People use reusable bags for various purposes, not just to transport food. They use reusable bags to carry dirty clothes, shoes, pet items and any number of personal items. The co-mingling of non-food items with perishable, food items can expose food to germs and bacteria. Additionally, many people do not wash their reusable bags. Bags are often kept in car trunks for convenience; an environment that can be a breeding ground for bacteria.
- Any potential risk of cross contamination is taken very seriously and cause for concern. This risk exists with reusable bags. (See research by University of Arizona and Loma Linda University, Center for Food Industry Excellence at Texas Tech University, and Health Canada).
 - Health Canada warns: “When you are using reusable bags and bins, the biggest food safety concern is cross-contamination. Because these kinds of grocery bags and bins are used frequently, they can pick up bacteria from foods they carry.”⁴
 - In a study by University of Arizona and Loma Linda University, a total of 84 reusable bags were collected from consumers (25 Los Angeles, 25 San Francisco, and 34 from Tucson). 97% of persons interviewed did not clean their reusable bags on a regular basis. Coliform bacteria were detected in 51% of bags tested; E.coli was identified in 12% of bags tested.⁵
 - International Center for Food Industry Excellence at Texas Tech University tested 11 reusable bags – 8 used and 3 new. Half of the used bags indicated coliform contamination, while a quarter of the used bags tested positive for generic E. coli contamination.⁶

² City of San Jose Bag Ordinance Development, February 2010.

³ US Department of Health and Human Services at www.FoodSafety.org

⁴ Health Canada at <http://www.hc-sc.gc.ca/fn-an/securit/kitchen-cuisine/reusable-bags-sacs-reutilisables-eng.php> and <http://www.halifax.ca/districts/dist08/documents/BeaconSept09.pdf>.

⁵ *Assessment of the Potential for Cross Contamination of Food Products by Reusable Shopping bags*, Charles P. Gerba, David Williams and Ryan G. Sinclair (June 9, 2010) at http://uanews.org/pdfs/GerbaWilliamsSinclair_BagContamination.pdf

⁶ Research by the International Center for Food Industry Excellence at Texas Tech University at http://www.wpri.com/dpp/news/12_for_action/reusable-bags-may-carry-contamination

- The use of reusable bags by restaurant patrons increases the owner's/operator's liability because there is a potential for cross-contamination.
- Any allegation of suspected foodborne illness is detrimental to a restaurant's reputation. These allegations can be easily spread by word of mouth, social media (e.g. Facebook), customer reviews (e.g. Yelp, Trip Advisor), and coverage by traditional media, not to mention an investigation by Environmental Health. Even if it turns out the restaurant was not responsible, the stigma that goes along with such allegations can irreversibly hurt a restaurant's reputation and hurt the business.
- Unlike food purchased at the grocery store, restaurant food is typically not prepackaged or sealed. There can be spills and not all food is completely wrapped up or enclosed in a container (e.g. fries at quick service restaurants).
- Using a new, clean bag is the best way to ensure food is safely transported from the restaurant.

Restaurants should have the freedom of choice to determine what type of bag works best to maintain the integrity of their product. Paper bags are not always the most practical choice for restaurants.

- Plastic bags are superior to paper bags in protecting against accidental spills and leaks during transport, whereas the content would just seep through a paper bag. Customers become disgruntled when food from the bag leaks onto their car, carpet, clothes, etc.
- In addition, some types of containers don't fit as well in paper bags. Whereas plastic bags conform to the size of the container, paper bags do not. The bottom of paper bags is generally rectangular-shaped which doesn't work when you have a standard, large square container.
- Restaurants will tightly pack up food in a plastic bag and use the handles to tie the bag so as to prevent the food from moving around and spilling. You can't do this with a paper bag.

We respectfully urge the City Council to carefully consider these public health reasons for why restaurants are in a unique situation and exempt restaurants and other food service establishments from the ordinance. Should you have any questions, please contact me at 408.416.6344 or jgonzalez@calrest.org.

Sincerely,



Javier M. González

Director, Local Government Affairs

Government Affairs + Public Policy

California Restaurant Association



Roplast Industries, Inc.

3155 South 5th Avenue

Oroville, CA 95965

1-800-767-5278

www.roplast.com

Darrell Costello

Grocery Sales Manager

dcostello@roplast.com

7/10/12

To: Julie Weiss
City of Palo Alto

From: Darrell Costello
Roplast Industries Inc.

Re: EIR and Bag Ordinance Response/Feedback

- 1) We request that retail stores that do not sell a "limited line of food" be categorized and reviewed separately in the EIR process, similar to how restaurants are being separated. This would give you three types of businesses: Grocery/Pharmacy (stores that sell lines of food), Restaurants, and General Merchandise/Department stores that do not carry food to be sold as grocery.
 - a. This request is made because we believe that the business practices and types of transactions of these stores are substantially different than stores that sell grocery items which have a high number of daily transactions and bag usage.
 - b. By separating out this classification of business, it will allow them to be addressed separately and specifically in the writing of the ordinance, if they are to be included.
 - c. By not separating them in the EIR process, it will make it more difficult to address the difference among businesses once the EIR data is compiled.
 - d. Since restaurants are being categorized as a "type" of business, we think the EIR would be more accurate and valuable in the writing of the ordinance if stores that do not sell food were also separated.
 - e. Many municipalities have excluded stores that do not sell food, as well as restaurants, from their bag ordinances. Alameda County, L.A. County, Long Beach, and Santa Monica (modified) are among the largest municipalities to do so. The proposed State of California bag bill (Brownley) also does not include stores that do not sell food or restaurants. There is a clear recognition of the difference between grocery and non grocery stores.

- 2) If nonfood stores were separated from grocery stores, it would allow the option to apply a separate standard/rule for these stores in the ordinance under the premise that bags do not need to hold 22 pounds for nonfood transactions. To require a bag this heavy is a waste of natural resources and requires more transportation/emissions. It stands to reason that a bag used to protect and conceal clothing would not need to be of the same thickness as a bag used to carry heavy groceries. A lower gauged bag would still be highly reusable for clothing and future shopping trips to the clothing stores. If it was determined that nonfood stores needed to be included in the bag ordinance at all, we would argue that a minimum fee would be just as effective in reducing bag usage as would any increase in bag strength. If nonfood stores were

separated and included in the ordinance, and if the definition of a reusable bag were changed, these stores could have a separate requirement of:

- a. No single use plastic or paper for free, reusable bags must be a minimum of 2.25 mil., and sold for a minimum fee (same fee as paper, likely 10 cents).
 - i. This would accomplish your goal of eliminating single use bags at all stores, and would not allow free bags, would reduce bag usage, encourage reuse and not require over engineering of bags to hold lightweight or many small items.
- 3) We recommend that there is a sunset date on WIC/SNAP customers being provided free bags. This is an undue burden on stores to provide a higher priced bag to a percentage of customers, does not encourage reuse among these same customers, and does not decrease the number of bags being distributed to a percentage of the population. This is contrary to the goals of the ordinance. The San Jose bag ordinance has a sunset date for free bags to WIC/SNAP customers.
- 4) We discourage a minimum size/volume placed on reusable bags. A bag can be reusable at any size and using extra raw materials to make a bag larger than it needs to be is simply a waste of raw materials, energy, emissions, and is an unnecessary regulation of a consumer product.
- 5) If “alternatives” that will be evaluated will include changing the definition of a reusable bag, such as the “walk test” (22 lbs, over 175 feet, 125 times) we highly recommend fully understanding the meaning of a new definition in terms of: 1. bag engineering (such as gauge), 2. explaining why these particular targets are being selected, and 3. explaining how the City will certify bags that meet these standards. If a reusable bag would have to be thicker to pass the new requirements, shouldn’t the environmental effects of this be outlined or addressed in the EIR? If not, they definitely should be defended or justified in a proposed ordinance. We are opposed to vague definitions such as the walk test that does not have testing that correlates to the language of the ordinance. Such important interpretations should not be left to staff to determine at a later date, but should be properly vetted through the public process. Considering this now, will force foresight as to how the ordinance is to be monitored, policed and written.

If a City chooses to regulate bags, each has a duty to write a fair, balanced and comprehensive ordinance, as the language of your laws will surely be replicated in other geographic areas, just as you are using language from ordinances that passed before yours. The diligence of each process is crucial to consistency among bordering cities, national store chains, legal challenges and the validity of bag ordinances in general. We encourage you to write the best and most comprehensive ordinance to date.

We appreciate the opportunity to give feedback and offer our assistance and expertise going forward.

From: Stephen L. Joseph [\[mailto:savetheplasticbag@earthlink.net\]](mailto:savetheplasticbag@earthlink.net)
Sent: Thursday, June 14, 2012 3:03 PM
To: Plastics
Subject: Restaurant bags

Mr. Bobel:

We object to any ordinance that bans or imposes a fee on plastic bags at other restaurants and food facilities. Such bans are preempted and prohibited by the California Retail Food Code.

See attached legal memorandum.

See also attached decision of the Santa Barbara Superior Court. Although it is labeled a "Tentative Decision," it was adopted as the final decision of the court on May 15, 2012.

We will file a lawsuit to invalidate any ordinance that bans or imposes a fee on plastic bags at other restaurants and food facilities.

Please confirm that you have received this e-mail.

Regards,

Stephen L. Joseph, Counsel
SAVE THE PLASTIC BAG COALITION
350 Bay Street, Suite 100-328
San Francisco, CA 94133
Phone: (415) 577-6660
Fax: (415) 869-5380
Website: www.savetheplasticbag.com
E-mail: savetheplasticbag@earthlink.net

FOLLOW US ON TWITTER:

<http://twitter.com/saveplasticbag#>

SUBSCRIBE TO OUR RSS FEED:

<http://tinyurl.com/4vlc9cr>

NOTE: This e-mail and any attachments are confidential and privileged. If you are not the intended recipient, you may not use, copy or disclose them to anyone. Please notify the sender and delete them.
Thank you.

SAVE THE PLASTIC BAG COALITION

350 Bay Street, Suite 100-328

San Francisco, CA 94133

Phone: (415) 577-6660

Fax: (415) 869-5380

E-mail: savetheplasticbag@earthlink.net

Website: www.savetheplasticbag.com

MEMORANDUM

FROM: Stephen L. Joseph, Counsel

TO: California cities and counties

RE: Restaurant bags

DATE: April 27, 2012

SUMMARY

The California Retail Food Code preempts any local regulation or ban of plastic bags at restaurants and other “food facilities.” Save The Plastic Bag Coalition (“STPB”) will sue every city or county that adopts an ordinance that bans, restricts, limits, or requires a charge for plastic bags at any restaurant or “food facility.”

The City and County of San Francisco and the City of Carpinteria have adopted ordinances banning plastic bags at restaurants. STPB has filed lawsuits against San Francisco and Carpinteria to invalidate their restaurant bag bans.

All other cities and counties that have banned plastic bags have exempted restaurants, including Alameda County, Los Angeles County, Marin County, Santa Clara County, the City of Dana Point, the City of Laguna Beach, the City of Long Beach, the City of Ojai, the City of San Jose, and the City of Santa Monica. Santa Cruz County and the City of Manhattan Beach initially banned plastic bags at restaurants, but they have amended their ordinances and now exempt restaurants.

THE SAFETY ISSUE

The City of Santa Monica [explained](#) its restaurant exemption as follows:

Restaurants and other food vendors may provide single-use plastic carryout bags to customers only for the transportation of take-out food and liquids intended for consumption off of the food provider’s premises. This exemption 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 City of San Jose [explained](#) its restaurant exemption as follows:

Restaurants and food establishments would not be subject to the ban for public health reasons. Reusable bags are considered impractical for these purposes.

Restaurants sell freshly cooked foods that may contain extremely hot liquid, grease, oil, sauce, or soup. Oil is heated in fryers to 375 degrees. Hot soup and other foods may be served at 180 degrees or more. Plastic is obviously safer than paper for transporting such foods.

- Plastic is a waterproof and greaseproof material. Paper is not.
- Plastic bag handles can be tightly tied. Paper bags cannot be tied at the top. Liquids are far less likely to seep out of tied plastic bags. Chinese food is often placed in cardboard containers that are placed in plastic carryout bags that are tied at the top to prevent hot soups and juices from spilling and causing scalding or burns.
- When liquids spill inside a paper bag, the bag can break. That does not happen to a plastic bag.
- Plastic bags may be transparent. Paper bags cannot be transparent. It may be important for consumers to be able to see what is inside a bag without opening it, especially if there are hot liquids or grease that could cause scalding or burns.
- Checkout bags from food establishments are often opened in moving vehicles, so proper packaging is essential. One can imagine the impact on a child of hot liquid or hot oil seeping or spilling from a paper bag in a vehicle onto his or her lap or legs.

The Burn Center at the University of Florida states: **(Exh. 1)**

Examples of hot liquids which can cause burns include hot water, coffee, grease and hot soup.

The Burn Center at Saint Francis Memorial Hospital in San Francisco states as follows on its website: **(Exh. 2)**

Hot liquids can cause life threatening burn injuries and are the leading cause of burn injuries in children under the age of 4 years. The experts in burn treatment at Saint Francis Memorial Hospital's Both Burn Center want you to know:

Coffee, tea, soup and hot tap water can be hot enough to cause serious burn injury...

60-70% of all pediatric patients seen in the Bothin Burn Center have a scald injury.

The lady who sued in the McDonald's hot coffee case was burned so severely that her doctors didn't think she would live. The movie about the hot coffee case shows horrific photographs of her injuries. <http://hotcoffeethemovie.com/>. **Photographs of the her injuries are contained in Exhibit 3. They may cause distress to people sensitive to such images.**

The plaintiff's cotton sweatpants absorbed the coffee and held it against her skin, burning her thighs, buttocks, and groin. She suffered third-degree burns on 6% of her skin and lesser burns over 16%. She remained in the hospital for eight days while she underwent skin grafting. During this period, she lost 20 pounds (nearly 20% of her body weight), reducing her down to 83 pounds. Two years of medical treatment followed.

From 1982 to 1992, McDonald's received more than 700 reports of people burned by its coffee.

Another incident is related in the following news story: **(Exh. 4)**

A Miami-Dade woman says that the soup she bought from Subway scalded her thigh, hip, and buttocks so extensively that she had to rush to the hospital -- and undergo emergency treatment for second-degree burns, according to a recently filed lawsuit.

On July 30, Claudia Vargas purchased soup and a sub from the Hollywood sandwich store, located at 6582 Taft St. **When she returned to her car, she tried to take the soup out of the bag. But the container was too full and the lid was not attached correctly, so the soup spilled on her lap, Vargas says.**

Because the soup was extremely hot, 23-year old Vargas says that she suffered from second-degree burns that will leave her with permanent scarring.

Richard Lydecker, the lawyer representing Subway, says that his client did nothing wrong. "The investigation is still ongoing, but this soup was not any hotter than soup served normally," Lydecker tells the Pulp. "There was nothing special about this soup."

Lydecker insists that the soup was cooked and served at a reasonable temperature. "I mean, soup is hot. And people want their soup hot. You're not supposed to spill it on yourself. My client just wanted to serve a good tasting, hot soup. He looks forward to exonerating himself in court." Still, Vargas stands by her claim, and insists that Subway was negligent in how it prepped, marketed, and served her the soup.

Medical records furnished to the Pulp by Vargas' representative confirm that Vargas had to go to the emergency room after the

accident, where she was given antibiotics, a tetanus shot, and topical ointment for the wounds.

Vargas thinks that this could have been avoided if Subway hadn't served overly hot soup -- or if she'd had some kind of warning that the soup would be scalding and hazardous. Vargas is suing Subway, in hopes of getting money for her medical bills.

A plastic surgeon who examined Vargas shortly after the accident has said that chances for full recovery are grim: The burns will take at least 6 months to heal. And, "despite laser intervention, the patient will always have some residual scarring," medical documents note.

A restaurant owner has the legal right and duty to take all reasonable steps to prevent such injuries. It is for the restaurant owner, not a government entity, to decide whether plastic or paper is the safest for its food. Denying restaurant owners the discretion to determine the safest option for a particular type of food could have disastrous consequences. It just takes one tragic incident!



Claudia Vargas's burns caused when taking hot soup out of a carryout bag

CALIFORNIA STATE LAW PREEMPTION

The State of California regulates food safety in the California Retail Food Code. (Health and Safety Code Div. 104, Part 7.) Health and Safety Code § 113705 states as follows:

Legislative intent to preempt local standards

The Legislature finds and declares that the public health interest requires that there be uniform statewide health and sanitation standards for retail food facilities to assure the people of this state that the food will be pure, safe, and unadulterated. Except as provided in Section 113709, it is the intent of the Legislature to ***occupy the whole field*** of health and sanitation standards for retail food facilities, and the standards set forth in this part and regulations adopted pursuant to this part shall be ***exclusive*** of all local health and sanitation standards relating to retail food facilities.

Health and Safety Code § 113709 states as follows:

Authority to establish local requirements

This part does not prohibit a local governing body from adopting an evaluation or grading system for food facilities, from prohibiting any type of food facility, from adopting an employee health certification program, from regulating the provision of consumer toilet and handwashing facilities, or from adopting requirements for the public safety regulating the type of vending and the time, place, and manner of vending from vehicles upon a street pursuant to its authority under subdivision (b) of section 22455 of the Vehicle Code.

Health and Safety Code § 113789 defines a “food facility” as follows:

(a) “Food facility” means an operation that stores, prepares, packages, serves, vends, or otherwise provides food for human consumption at the retail level, including, but not limited to, the following:

(1) An operation where food is consumed on or off the premises, regardless of whether there is a charge for the food.

(2) Any place used in conjunction with the operations described in this subdivision, including, but not limited to, storage facilities for food-related utensils, equipment, and materials.(b) “Food facility” includes permanent and nonpermanent food facilities, including,

but not limited to, the following:

- (1) Public and private school cafeterias.
- (2) Restricted food service facilities.
- (3) Licensed health care facilities.
- (4) Commissaries.
- (5) Mobile food facilities.
- (6) Mobile support units.
- (7) Temporary food facilities.
- (8) Vending machines.
- (9) Certified farmers' markets, for purposes of permitting and enforcement pursuant to Section 114370.
- (10) Farm stands, for purposes of permitting and enforcement pursuant to Section 114375.

[§ 113789(c) contains exclusions from the above definition.]

Health and Safety Code § 113914 defines “single-use” articles as including single-use “carry-out utensils” and “bags” and “wrappers.” The statute uses the word “bags,” leaving no room for doubt that local bans of plastic bags are preempted.

“Carryout-out utensil” includes any “container used in the storage, preparation, transportation, dispensing, sale, or service of food.” (§ 113934)

Health and Safety Code § 113914 defines “single-use” articles as including single-use “carry-out utensils” and “**bags**” and “wrappers.” The words “carry-out” and “bags” leave no room for doubt that the Retail Food Code covers carryout bags.

Health and Safety Code § 113934 defines “carryout-out utensils” (the term used in § 113914) as including any carryout “**container** used in the storage, preparation, transportation, dispensing, sale, or service of food.” A bag is a container.

Health and Safety Code § 114081 states that “single-use articles [including carryout bags] shall not be “**reused**.”

Health and Safety Code § 114130(a) states that “utensils [including carryout bags] shall be designed and constructed to be “**durable**” and “**retain their characteristic qualities under normal use conditions**.”

Health and Safety Code §§ 114130.1 and 114130.2 state that “materials” that are used to make single-use articles and utensils [including carryout bags] shall not allow the migration of deleterious substances or impart colors, odors, or tastes to food and under normal use conditions shall be durable, nonabsorbent, safe and clean.

The above standards mean, among other things, that a bag must not become soggy or break apart when hot liquid is spilled inside. Paper does not always satisfy the standard.

The materials, durability, safety, are reuse bag of carryout bags are subject to the foregoing standards in the Retail Food Code. A plastic bag ban applicable to restaurants directly conflicts with the state standard that the determination of what kind of bag may be used depends on durability and safety. A city or county cannot make that determination by eliminating plastic as an option. In any event, there is field preemption.

The fact that cities and counties may wish to ban plastic bags at restaurants for environmental purposes is irrelevant. In *California Grocers Assn. v. City of Los Angeles* (2011) 52 Cal.4th 177, the Supreme Court decided a case concerning Retail Food Code preemption and stated as follows:

Express field preemption turns on a comparative statutory analysis: What field of exclusivity does the state preemption clause define, what subject matter does the local ordinance regulate, and do the two overlap?

(*Id.* at 188.)

Purpose alone is not a basis for concluding a local measure is preempted. While we and the Courts of Appeal have occasionally treated an ordinance’s purpose as relevant to state preemption analysis, we have done so in the context of a nuanced inquiry into the ultimate question in determining field preemption: whether the effect of the local ordinance is in fact to regulate in the very field the state has reserved to itself.

Fn4. To rest preemption analysis solely on considerations of purpose would generate the anomalous circumstance, rejected by the United States Supreme Court, that one jurisdiction’s measure might survive preemption, while another identical measure passed in a different jurisdiction might fall, “merely because its authors had different aspirations.”

(*Id.* at 190, emphasis added.)

While the purpose of banning plastic bags at restaurants may be to protect the environment, the effect is to intrude into an area that the State of California has reserved to itself.

The Supreme Court confirmed that **“the state alone”** may regulate “food transportation, storage, and preparation,” “how food should be handled or transported,” and “food display and service.” These are **fields** preempted by the Retail Food Code and are subject to **“exclusive state regulation.”** (*Id.* at 189.)

Based on the foregoing, the banning of plastic bags at restaurants by any city or county is preempted and invalid.

CONCLUSION

Cities and counties are requested and urged not to ban plastic bags at any establishment. However, if they choose to do so, restaurants and all other “food facilities” must be exempted. STPB will sue cities and counties to enforce state preemption. All rights are reserved.

Please contact Stephen Joseph, counsel for STPB, by phone or e-mail if you have any questions. Phone: (415) 577-6660. E-mail: savetheplasticbag@earthlink.net.

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Types of Burns

The following are common types of burns:

- [chemical burns](#)
- [electrical burns](#)
- [thermal burns](#)

Chemical burns

Chemical burns are tissue damage caused by exposure to a strong acid or alkali, such as phenol, creosol, mustard gas or phosphorus.

Chemical burns result from the conversion of chemical energy to thermal energy. Emergency treatment includes washing the surface of the wound with large amounts of water to remove the chemical. As long as the chemical is in contact with the skin, the burn usually continues to progress.

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Electrical burns

An electrical injury occurs when an electrical current from an external source runs through the body as heat. Electrical burns are the result of tissue damage from heat of up to 5,000 degrees Celsius generated by an electric current. The heat causes extensive damage and usually follows the current, but it can damage other structures such as muscle and bone. This electrical current usually flows along the blood vessels and nerves.

This type of electrical current can cause the following three burns:

- [contact burn injury](#)
- [flash burn](#)
- [flame burn](#)

The points of entrance and exit on the skin are burned, along with the muscle and subcutaneous tissues through which the current passes. It is possible that fatal cardiac arrhythmia may result. In this situation contact your local burn center or emergency room immediately.

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You may also email our [Consultation Center \(consult@shands.ufl.edu\)](mailto:consult@shands.ufl.edu) or use our secure online [form](#).

Thermal burns

Thermal burns are the most common types of burns. These often occur from residential fires, automobile accidents, playing with matches, improperly stored gasoline, space heaters, electrical malfunctions, or arson.

Flame burns are often deep burns, causing partial- to full-thickness burns.

Hot liquid burns are not as deep as flame burns, but they can still produce deep burns. Examples of hot liquids which can cause burns include hot water, coffee, grease and hot soup.

Burns from touching hot objects vary in depth, since people's reflexes cause them to react quickly. These burns can be caused by touching a stove, skillet or grill.

Flash injuries are burns that involve exposed parts of the skin and vary in depth depending on the proximity on the flash and the intensity. Automobile, gas tank and airplane explosions are causes of flash burns.

Sunburns can be extremely painful, but the pain is relieved as the wound is soothed and injury progression is stopped. Sunburns are usually superficial burns or first-degree burns.

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Bothin Burn Center

Safety Facts on Scalding Injuries

Hot Liquids Burn Like Fire

Hot liquids can cause life threatening burn injuries and are the leading cause of burn injuries in children under the age of 4 years. The experts in burn treatment at Saint Francis Memorial Hospital's Both Burn Center want you to know:

- Scalds and burn accidents frequently occur when parents or caregivers are in a hurry, angry, or under a lot of pressure or stress
- Coffee, tea, soup and hot tap water can be hot enough to cause serious burn injury
- Scald and steam burns are often associated with microwave oven use
- When tap water reaches 140 degrees Fahrenheit, it can cause a third degree (full thickness) burn in just five seconds
- Hot tap water accounts for 17% of all childhood scald hospitalizations
- 60-70% of all pediatric patients seen in the Bothin Burn Center have a scald injury.

The Bothin Burn Center staff recommends you take the following steps to prevent scald injuries:

- Provide continuous supervision of children in the kitchen and bathroom
- Keep all hot liquids at a safe distance from children - keep pot handles turned toward the back of the stove
- Test all heated liquid/food before giving it to a child or placing it within his/her reach
- Never hold a child while drinking a hot liquid
- Purchase appliances with short cords, and keep all cords from dangling over counter edges
- Before placing a child into the bath or getting into the tub yourself, test the temperature of the water by moving your hand rapidly through the water for several seconds. The temperature should not exceed 100 degrees Fahrenheit (a child's delicate skin burns more quickly than an adult's).
- Never leave a child unattended in the bathroom or tub
- Use extreme caution bathing a child in a kitchen sink with a single-lever faucet - these are easy for a child to turn on
- Adjust your thermostat setting on your water heater to produce a water temperature of 120-125 degrees or less

HOT WATER CAUSES THIRD DEGREE BURNS:

- in 1 second at 156 degrees
- in 2 seconds at 149 degrees
- in 5 seconds at 140 degrees
- in 15 seconds at 133 degrees

If you have questions regarding burn care or treatment, call the Bothin Burn Center staff at **(415) 353-6255**.

WARNING

**THE FOLLOWING PAGES
CONTAIN PHOTOGRAPHS
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Law Subway Soup Severely Burns Woman, Lawsuit Claims

By Victoria Bekiempis Sat., Sep. 10 2011 at 10:15 AM
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Claudia Vargas, 23, says she was burned by soup.

A Miami-Dade woman says that the soup she bought from Subway scalded her thigh, hip, and buttocks so extensively that she had to rush to the hospital -- and undergo emergency treatment for second-degree burns, according to a recently filed lawsuit.

On July 30, Claudia Vargas purchased soup and a sub from the Hollywood sandwich store, located at 6582 Taft St.

When she returned to her car, she tried to take the soup out of the bag. But the container was too full and the lid was not attached correctly, so the soup spilled on her lap, Vargas says.

Because the soup was extremely hot, 23-year old Vargas says that she suffered from second-degree burns that will leave her with permanent scarring.

The Pulp has acquired a photo of Vargas' injuries, but has posted it after the jump because of the disturbing nature of the image.

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TODAY'S DEAL IN BROWARD



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Vargas' burns.

Richard Lydecker, the lawyer representing Subway, says that his client did nothing wrong.

"The investigation is still ongoing, but this soup was not any hotter than soup served normally," Lydecker tells the Pulp. "There was nothing special about this soup."

Lydecker insists that the soup was cooked and served at a reasonable temperature.

"I mean, soup is hot. And people want their soup hot. You're not supposed to spill it on yourself. My client just wanted to serve a good tasting, hot soup. He looks forward to exonerating himself in court."

Still, Vargas stands by her claim, and insists that Subway was negligent in how it prepped, marketed, and served her the soup.

Medical records furnished to the Pulp by Vargas' representative confirm that Vargas had to go to the emergency room after the accident, where she was given antibiotics, a tetanus shot, and topical ointment for the wounds.

A plastic surgeon who examined Vargas shortly after the accident has said that chances for full recovery are grim: The burns will take at least 6 months to heal. And, "despite laser intervention, the patient will always have some residual scarring," medical documents note.

Vargas thinks that this could have been avoided if Subway hadn't served overly hot soup -- or if she'd had some kind of warning that the soup would be scalding and hazardous.

Vargas is suing Subway, in hopes of getting money for her medical bills.

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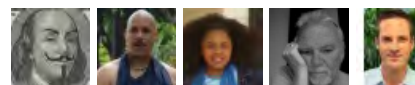
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CIVIL LAW & MOTION

Save the Plastic Bag Coalition vs City of Carpinteria	
Case No:	1385674
Hearing Date:	Tue May 15, 2012 9:30

Nature of Proceedings: Demurrer

Demurrer of City of Carpinteria to Complaint

Ruling:

For the reasons set forth herein, the demurrer of defendant City of Carpinteria to the complaint is overruled. Defendant shall file and serve its answer to the complaint on or before May 25, 2012.

Background:

On March 12, 2012, the City of Carpinteria adopted Ordinance No. 655 (the "Ordinance"), enacting chapter 8.51 in the Carpinteria Municipal Code entitled "Single-Use Bag Regulations."

"The purpose of these provisions is to promote:

"A. The protection of unique coastal resources found in Carpinteria and identified for protection in policies of the City's General Plan/Local Coastal Plan, including the Carpinteria 'El Estero' Salt Marsh, Beaches, Tidelands, and Offshore Reefs, Harbor Seal Hauling Grounds, and Creekways and Riparian Habitat;

"B. Compliance with federal and state mandates for Clean Water (including National Pollutant Discharge Elimination System Permit Program and waste stream reduction (AB 939 and AB 341));

"C. A reduction in the amount of plastic and paper material that is manufactured, transported, handled/processed, and discarded, and the impacts associated with such activities.

“D. A reduction in the amount of waste/debris in City parks, public open spaces, creeks, estuary, tidelands and the ocean, and the amount of material going to landfills;” (Carpinteria Mun. Code, § 8.51.020.)

The Single-Use Bag Regulations prohibit the dispensing of single-use bags as follows:

“A. Commencing on July 11, 2012 large commercial establishments are prohibited from dispensing to any customer at the point of sale a single-use bag.

“B. Commencing on April 11, 2013 small commercial establishments are prohibited from dispensing to any customer at the point of sale a single-use bag, except gift bags or paper bags, as defined in this chapter.” (Carpinteria Mun. Code, § 8.51.040.)

Under the Single-Use Bag Regulations, a “‘Large Commercial Establishment’ is a commercial establishment with over \$5,000,000 in annual gross retail sales volume” or is a grocery store of greater than 500 square feet in area. (Carpinteria Mun. Code, § 8.51.030, subs. (A), (B), (F).) A “‘Small Commercial Establishment’ is a food provider or a commercial establishment that does not qualify as a large commercial establishment.” (§ 8.51.030, subd. (C).) “Food providers” include restaurants. (§ 8.51.030, subd. (D).)

When the prohibitions become effective, both large and small commercial establishments are prohibited from dispensing “a single-use bag” “at the point of sale.”

“‘Single-Use Bag’ means any bag that is provided to customers for carryout purchases by a commercial establishment, excluding gift bags, product bags, and reusable bags”

“‘Point of Sale’ means the location in the commercial establishment where purchase is made.”

A “Reusable Bag” is a bag that is “specifically designed and manufactured for multiple reuse” and is made of cloth or other machine washable fabric or is made of other durable material “including plastic that is at least 2.25 mils thick.”

“‘Paper Bag’ means any paper bag that has a post-consumer recycled content of at least 40 percent and is 100 percent recyclable.”

On March 20, 2012, plaintiff Save the Plastic Bag Coalition, an unincorporated association, consisting of suppliers of plastic bags to restaurants and other food facilities in Carpinteria, filed its complaint for invalidation of the Ordinance based upon preemption by the California Retail Food Code. Plaintiff alleges: “[T]he Ordinance is invalid as it bans plastic bags at restaurants and other ‘food facilities’ as defined by H&S Code § 113789. The Ordinance intrudes into an area that the State of California has reserved to itself.”

Defendant City of Carpinteria (“City”) demurs to plaintiff’s complaint. City argues that plaintiff does not state a cause of action in its complaint because the Ordinance is not preempted by the Retail Food Code. Plaintiff opposes the demurrer, arguing that the California Supreme Court in *California Grocers Assn. v. City of Los Angeles* (2011) 52 Cal.4th 177 explained the scope of preemption by the Retail Food Code as including “how food should be handled or transported” and that the Ordinance is therefore preempted.

Analysis:

“The function of a demurrer is to test the sufficiency of the complaint alone and not the evidence or other extrinsic matters.” (Ingram v. Flippo (1999) 74 Cal.App.4th 1280, 1283.) “We treat the demurrer as admitting all material facts properly pleaded, but not contentions, deductions or conclusions of fact or law. [Citation.] We also consider matters which may be judicially noticed. [Citation.] Further, we give the complaint a reasonable interpretation, reading it as a whole and its parts in their context. [Citation.]” (Evans v. City of Berkeley (2006) 38 Cal.4th 1, 6, internal quotation marks omitted.) “If the complaint states a cause of action under any theory, regardless of the title under which the factual basis for relief is stated, that aspect of the complaint is good against a demurrer.” (Quelimane Co. v. Stewart Title Guaranty Co. (1998) 19 Cal.4th 26, 38.)

Request for Judicial Notice

City requests that the court take judicial notice of four documents: (Exhibit A) the Ordinance; (Exhibit B) a copy of the City’s Staff Report for City Council Meeting on December 12, 2011; (Exhibit C) a copy of the City’s Staff Report for City Council Meeting on February 27, 2012; and (Exhibit D) a copy of the City’s Staff Report for City Council Meeting on March 12, 2012. The court will grant City’s request as to Exhibit A, the Ordinance, which is also attached as exhibit A to plaintiff’s complaint. (Evid. Code, § 452, subs. (b), (c).)

Plaintiff objects to judicial notice being taken of exhibits B, C and D. City states that the purpose for its request for judicial notice of these exhibits is that the “Staff Reports will assist the Court in interpreting the intent of City Council in adopting the single-use bag regulations.” (RJN, at p. 2.) The court notes that city staff reports may, like other legislative history, be the subject of judicial notice to ascertain the purpose of the legislative enactment. (Bravo Vending v. City of Rancho Mirage (1993) 16 Cal.App.4th 383, 404-405.) However, the purpose of the Ordinance, to the extent it is relevant, is stated in the Ordinance directly. This stated purpose is not disputed by plaintiff in this demurrer. The staff reports elaborate on this stated purpose, but the staff reports do not provide any additional material that is relevant or useful to the court’s disposition of this demurrer. The City’s request for judicial notice of exhibits B, C and D will be denied. (See Mangini v. R. J. Reynolds Tobacco Co. (1994) 7 Cal.4th 1057, 1063.)

Plaintiff’s Cause of Action

Plaintiff styles its complaint as seeking “invalidation of plastic bag ban ordinance based on state retail food code for preemption; request for declaratory and injunctive relief.” (Complaint, at p. 1, capitalization altered.) In its prayer for relief, the first remedy plaintiff seeks is a “judgment declaring that the Ordinance is invalid as it is preempted and prohibited by the California Retail Food Code.” (Complaint, at p. 9.) Although plaintiff does not expressly cite the statute, it appears from these statements in the complaint that plaintiff seeks declaratory relief pursuant to Code of Civil Procedure section 1060.

“Any person ... who desires a declaration of his or her rights or duties with respect to another, ... may, in cases of actual controversy relating to the legal rights and duties of the respective parties, bring an original action or cross-complaint in the superior court for a declaration of his or her rights and duties in the premises” (Code Civ. Proc., § 1060.) “It is well established that parties may seek declaratory relief with respect to the interpretation

and application of local ordinances.” (Action Apartment Assn., Inc. v. City of Santa Monica (2007) 41 Cal.4th 1232, 1250.)

“A complaint for declaratory relief is legally sufficient if it sets forth facts showing the existence of an actual controversy relating to the legal rights and duties of the respective parties ... and requests that these rights and duties be adjudged by the court.” (Maguire v. Hibernia Sav. & Loan Soc. (1944) 23 Cal.2d 719, 728.) “If these requirements are met, the court must declare the rights of the parties whether or not the facts alleged establish that the plaintiff is entitled to a favorable declaration.” (Tiburon v. Northwestern P. R. Co. (1970) 4 Cal.App.3d 160, 170.)

The California Retail Food Code

Plaintiff’s complaint alleges that the Ordinance is invalid because it is preempted by the California Retail Food Code, Health and Safety Code section 113700 et seq. The Retail Food Code’s preemption provision is set forth in Health and Safety Code section 113705, which provides:

“The Legislature finds and declares that the public health interest requires that there be uniform statewide health and sanitation standards for retail food facilities to assure the people of this state that the food will be pure, safe, and unadulterated. Except as provided in Section 113709, it is the intent of the Legislature to occupy the whole field of health and sanitation standards for retail food facilities, and the standards set forth in this part and regulations adopted pursuant to this part shall be exclusive of all local health and sanitation standards relating to retail food facilities.”

Section 113709 provides narrow exceptions: “This part does not prohibit a local governing body from adopting an evaluation or grading system for food facilities, from prohibiting any type of food facility, from adopting an employee health certification program, from regulating the provision of consumer toilet and handwashing facilities, or from adopting requirements for the public safety regulating the type of vending and the time, place, and manner of vending from vehicles upon a street pursuant to its authority under subdivision (b) of Section 22455 of the Vehicle Code.” By their terms, these exceptions do not apply to the Ordinance as challenged by plaintiff in its complaint.

Plaintiff argues, and City does not appear to contest, that “retail food facilities” as defined by the Retail Food Code include “food providers” as defined in the Ordinance. (Health & Saf. Code, § 113789, subd. (a); Carpinteria Mun. Code, § 8.51.030, subd. (D).) Plaintiff cites to a number of provisions in the Retail Food Code to demonstrate that the Retail Food Code regulates the single-use bags prohibited by the Ordinance, including:

“‘Single-use articles’ mean utensils, tableware, carry-out utensils, bulk food containers, and other items such as bags, containers, placemats, stirrers, straws, toothpicks, and wrappers that are designed and constructed for one time, one person use, after which they are intended for discard.” (Health & Saf. Code, § 113914.)

“Single-use articles shall not be reused.” (Health & Saf. Code, § 114081, subd. (d).)

“Materials that are used to make single-use articles shall not allow the migration of deleterious substances or impart colors, odors, or tastes to food, and shall be safe and clean.” (Health & Saf. Code, § 114130.2.)

“‘Utensil’ means a food-contact implement or container used in the storage, preparation, transportation, dispensing, sale, or service of food, such as kitchenware or tableware that is multiuse, single-service, or single-use, gloves used in contact with food, temperature sensing probes of food temperature measuring devices, and probe-type price or identification tags used in contact with food.” (Health & Saf. Code, § 113934.)

Because plastic bags are used in the transportation of food, plaintiff argues, these above-quoted sections apply to preempt local standards, including an outright ban, on plastic bags.

The California Grocers Case

Both parties cite to the California Supreme Court’s decision in *California Grocers Assn. v. City of Los Angeles*, supra, 52 Cal.4th 177 as supporting their respective arguments. At issue in *California Grocers* was an ordinance adopted by the City of Los Angeles that required grocery stores of a specific size that undergo a change of ownership to retain current employees and take certain actions during a 90-day transition period. Plaintiff California Grocers Association filed an action seeking to invalidate the ordinance on various grounds, including preemption under the Retail Food Code. The trial court and the court of appeal agreed that the ordinance was preempted by the Retail Food Code. The Supreme Court, however, reversed, finding no preemption.

In reaching this conclusion, the Supreme Court began its discussion of preemption under the Retail Food Code by stating general principles:

“Local ordinances and regulations are subordinate to state law. [Citation.] Insofar as a local regulation conflicts with state law, it is preempted and invalid. [Citations.] ‘A conflict exists if the local legislation “duplicates, contradicts, or enters an area fully occupied by general law, either expressly or by legislative implication.”’ [Citations.]” (*California Grocers*, supra, 52 Cal.4th at p. 188, internal quotation marks omitted.) “Only the last of these bases for conflict, field preemption, is at issue here. ‘Local legislation enters an area “fully occupied” by general law when the Legislature has expressly manifested its intent to fully occupy the area or when it has impliedly done so in light of recognized indicia of intent.’ [Citation.] ... Express field preemption turns on a comparative statutory analysis: What field of exclusivity does the state preemption clause define, what subject matter does the local ordinance regulate, and do the two overlap?” (*Id.* at p. 188.)

The Court then summarized the sweep of preemption under the Retail Food Code: “Thus, the state alone may adopt ‘health and sanitation standards for retail food facilities.’ [Citation.] The remainder of the statutory scheme demonstrates by way of example the precise scope of exclusive state regulation, comprehensively detailing standards for, e.g., employee training on health matters ([Health & Saf. Code], §§ 113947–113947.3), employee health and hygiene (*id.*, §§ 113949–113978), food transportation, storage, and preparation (*id.*, §§ 113980–114057.1), food display and service (*id.*, §§ 114060–114083), food labeling (*id.*, §§ 114087–114094), the design and sanitizing of food preparation areas and utensils (*id.*, §§ 114095–114185.5), and the design and cleanliness of food facilities (*id.*, §§ 114250–114282).” (*California Grocers*, supra, 52 Cal.4th at p. 189, footnote omitted.)

The Court focused upon the scope of the field of exclusivity, rejecting the argument that the purpose in enacting the local ordinance determines preemption: “We may accept for the

sake of argument that the promotion of health and safety was one of the City's purposes in passing the Ordinance. That the Ordinance is preempted does not, however, follow. Purpose alone is not a basis for concluding a local measure is preempted. While we and the Courts of Appeal have occasionally treated an ordinance's purpose as relevant to state preemption analysis [citations], we have done so in the context of a nuanced inquiry into the ultimate question in determining field preemption: whether the effect of the local ordinance is in fact to regulate in the very field the state has reserved to itself." (California Grocers, supra, 52 Cal.4th at p. 190, footnote omitted.)

Applying these principles, the Court reasoned that the Los Angeles ordinance was not preempted: "The Retail Food Code does not preempt all laws that have as their purpose the promotion of food health and safety; it preempts only those that establish 'health and sanitation standards' for retail food establishments, so as to ensure uniformity for such facilities. [Citation.] The Retail Food Code itself dictates those uniform standards, but does not specify by whom they are to be carried out; as far as state law is concerned, a retail food store may employ whomever it likes, so long as those it employs comply with the state's standards for distributing food in a safe and healthful manner. For its part, the Ordinance ... regulates only who may be hired to engage in certain work, and though it may have been intended in part to reduce violations of state law by those workers, it does not itself add to or subtract from the state's uniform standards of conduct for whoever engages in that work." (California Grocers, supra, 52 Cal.4th at pp. 191-192.) "The Retail Food Code establishes standards for what certain employees, particularly one certified owner or supervising food service employee, must know or be taught, but does not regulate who must be hired; the Ordinance regulates the pool of nonsupervising, nonmanagerial employees from which a new owner temporarily must hire, but imposes no standards concerning what the hired employees must know or be taught about food safety." (Id. at p. 192.)

Both parties find support in the California Grocers opinion. Plaintiff relies upon the statements that the Retail Food Code exclusively governs food transportation, storage, and preparation. City relies upon the statements that no preemption existed because the Los Angeles ordinance imposed no standards concerning health and sanitation. City thus argues that the "Ordinance simply regulates the bags a cashier can provide at check-out, and does not set any health and sanitation standard for retail food facilities." (Demurrer, at p. 10.)

Purpose of the City's Ordinance

City goes to some length to discuss and argue the importance of the Ordinance in addressing environmental concerns of significant local concern. As discussed above in the context of the request for judicial notice, the Ordinance itself sets forth those concerns as being a basis for its enactment. The stated purpose of the Ordinance is not challenged by plaintiff. However, as California Grocers makes clear, the legal analysis to determine whether or not state law expressly preempts local law depends upon the scope of the state's exclusivity. "To rest preemption analysis solely on considerations of purpose would generate the anomalous circumstance, rejected by the United States Supreme Court, that one jurisdiction's measure might survive preemption, while another identical measure passed in a different jurisdiction might fall, 'merely because its authors had different aspirations.'" (California Grocers, supra, 52 Cal.4th at p. 190, fn. 4, quoting Shady Grove Orthopedic Associates, P. A. v. Allstate Ins. Co. (2010) 559 U.S. ___, ___ [130 S. Ct. 1431, 1441, 176 L. Ed. 2d 311].)

Preemption Analysis

Where, as here, the issue is express field preemption, the court must answer three questions: “What field of exclusivity does the state preemption clause define, what subject matter does the local ordinance regulate, and do the two overlap?” (California Grocers, *supra*, 52 Cal.4th at p. 188.)

The field of state preemption defined by the Retail Food Code is “health and sanitation standards for retail food facilities.” (Health & Saf. Code, § 113705.) “[T]he standards set forth in this part ... shall be exclusive of all local health and sanitation standards relating to retail food facilities.” (Ibid.)

The subject matter of the Ordinance is the prohibition of dispensing to consumers at the point of sale a single-use bag, as defined therein. (Carpinteria Mun. Code, § 8.51.040.)

The final question then is whether the state’s health and sanitation standards for retail food facilities overlap the City’s prohibition of dispensing plastic bags. Plaintiff argues that there is overlap between the Ordinance’s prohibitions and the Retail Food Code because the state alone may regulate “food transportation, storage, and preparation,” “how food should be handled or transported,” and “food display and service.” These statements, repeated from California Grocers, are accurate generalizations, but are not sufficient by themselves to determine overlap. (See *Big Creek Lumber Co. v. County of Santa Cruz* (2006) 38 Cal.4th 1139, 1152-1157 [extent of the field of express preemption determined by scope and interpretation of preempting statutes].) Instead, the question of overlap can be most simply addressed by determining in the first instance whether both the Retail Food Code and the Ordinance contain standards that regulate point of sale bags.

Point of sale bags fall within two definitions set forth in the Retail Food Code. The Retail Food Code defines a “utensil” as “a food-contact implement or container used in the storage, preparation, transportation, dispensing, sale, or service of food.” (Health & Saf. Code, § 113934.) A bag is a container. (Webster’s 3d New Internat. Dict. (1986) p. 162 [definition of “bag”].) A point of sale bag, as discussed herein, is used in the sale of food. Thus, at least to the extent there is “food-contact,” a point of sale bag is a “utensil.” For example, if a customer bought an apple and the seller put the apple in a plastic bag at the point of sale for transportation of the apple home, that bag would be a “utensil” under the Retail Food Code. At the same time, the bag, if made of single-use plastic, would be a “single-use bag” as defined and prohibited by the Ordinance.

A wrinkle in this example of buying an apple is the timing and purpose of the use of the bag. The Ordinance excludes “product bags” from the definition of “single-use bag.” (Carpinteria Mun. Code, § 8.51.030, subd. (K).) A “Product Bag” is “any bag provided to a customer within a commercial establishment for the purposes of transporting items to the point of sale.” (Id., subd. (H).) If the apple in the above example is first put into a bag and that bag is given to the customer to take to the cashier (i.e., the point of sale), that bag would be a “product bag” and not prohibited by the Ordinance even if the bag were made of plastic. However, if at the point of sale the product bag were placed inside another single-use bag, the outer bag would be subject to the prohibitions of the Ordinance, but the inner bag would not.

The second definition applicable to point of sale bags is “single-use articles.” The Retail Food Code defines “single-use articles” as “utensils, tableware, carry-out utensils, bulk food containers, and other items such as bags, containers, placemats, stirrers, straws, toothpicks, and wrappers that are designed and constructed for one time, one person use, after which they are intended for discard.” (Health & Saf. Code, § 113914.) The bag used to carry the apple in the first example would qualify as a “utensil” and therefore that single-use bag would fall within the definition of “single-use articles.”

The definition of “single-use articles” encompasses more items than “utensils” and specifically includes “bags.” (Health & Saf. Code, § 113914.) “Utensil,” as defined in Health and Safety Code section 113934, is by its terms limited to items in contact with food. However, “single-use articles” include items such as “placemats” which by their nature do not necessitate direct or immediate contact with food. Moreover, placemats, like plastic bags dispensed by restaurants, mitigate the impact of post-sale food spillage. (See Complaint, ¶¶ 21-24.) Consequently, the definition of “single-use articles” is sufficiently broad to include single-use bags dispensed by food providers at the point of sale.

The Retail Food Code provides standards for materials that are used to make single-use articles, namely, that the materials must be safe, clean and do not affect the food. (Health & Saf. Code, § 114130.2.) Thus, for example, it would be a violation of the Retail Food Code if the type of plastic used in a bag gave off a noxious odor permeating the food contained in the bag.

The Ordinance also provides standards for materials that used to make “single-use bags.” Where the Retail Food Code states its standards both affirmatively (safe and clean) and negatively (may not impart colors, odors or tastes to food), the Ordinance provides standards only negatively: No “single-use bags” may be dispensed by small establishments except for gift bags and paper bags. “‘Paper bag’ means any paper bag that has a post-consumer recycled content of at least 40 percent and is 100 percent recyclable.” (Carpinteria Mun. Code, § 8.51.030, subd. (I).) The effect of the Ordinance is to regulate the materials used to make “single-use bags” by permitting some materials and by prohibiting other materials.

Returning to the central question of whether there is overlap between the Retail Food Code and the Ordinance, the above discussion demonstrates that in some respects the Ordinance provides standards for materials used in statutorily defined “single-use articles” that are different from the standards provided in the Retail Food Code. Under the Ordinance, single-use plastic bags are never allowed; paper bags are allowed only if they contain sufficient post-consumer recycled content. The Retail Food Code allows single-use plastic bags and paper bags, but only if the materials used in those bags meet the qualitative requirements set forth in the statute. Consequently, the Retail Food Code and the Ordinance contain overlapping standards for acceptable materials used in making “single use articles.”

In order to state a cause of action for declaratory relief, plaintiff must allege a justiciable controversy. The court concludes that plaintiff has alleged a substantial controversy as to whether the Ordinance is in some part preempted by the Retail Food Code. Plaintiff has therefore adequately alleged a cause of action for declaratory relief and the City’s demurrer will be overruled.

The court must emphasize that City's demurrer raises the issue only of whether or not plaintiff has alleged a judicially recognizable cause of action. The court's determination that plaintiff has sufficiently alleged a cause of action does not determine whether plaintiff is ultimately entitled to a favorable declaration. The court notes, for example, that neither party has argued or provided legislative history that may shed further light on the intended scope of preemption set forth in the Retail Food Code.

The court recognizes that the parties argue important public policy questions regarding health, safety and the environment in support of their respective positions. Public policy choices, such as whether or not a plastic bag ban is a good idea, are inherently legislative decisions made in the political process and are not judicial decisions to be made in court. "[T]he judicial role in a democratic society is fundamentally to interpret laws, not to write them." (California Teachers Assn. v. Governing Bd. of Rialto Unified School Dist. (1997) 14 Cal.4th 627, 633, internal quotation marks and citation omitted.) As a consequence, "[c]ourts do not sit as super-legislatures to determine the wisdom, desirability or propriety of statutes enacted by the Legislature." (Estate of Horman (1971) 5 Cal.3d 62, 77.) The court's role here is strictly limited to applying the law to this controversy.



Appendix B

*Air Quality URBEMIS Results
Air Quality and Greenhouse Gas Estimates*

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Bag Ordinance.urb924

Project Name: Palo Alto Disposable Checkout Bag Ordinance

Project Location: Santa Clara County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.02	0.01	0.00	0.00	0.00	3.57

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.02	0.01	0.00	0.00	0.00	3.57

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Bag Ordinance.urb924

Project Name: Palo Alto Disposable Checkout Bag Ordinance

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.02	0.01	0.00	0.00	0.00	3.57
TOTALS (lbs/day, unmitigated)	0.00	0.02	0.01	0.00	0.00	0.00	3.57

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.12	1000 sq ft	1.00	0.12	0.89
					0.12	0.89

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

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)

Travel Conditions

Residential

Commercial

Home-Work

Home-Shop

Home-Other

Commute

Non-Work

Customer

Disposable Checkout Bag
Ordinance

2.0

1.0

97.0

Operational Changes to Defaults

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 2.urb924

Project Name: Palo Alto Alternative 2

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.00	0.00	0.00	0.00	0.00	0.30
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.30

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.01	1000 sq ft	1.00	0.01	0.07
					0.01	0.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	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)

Travel Conditions

Residential

Commercial

Home-Work

Home-Shop

Home-Other

Commute

Non-Work

Customer

Disposable Checkout Bag
Ordinance

2.0

1.0

97.0

Operational Changes to Defaults

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 3.urb924

Project Name: Palo Alto Alternative 3

Project Location: Santa Clara County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 3.urb924

Project Name: Palo Alto Alternative 3

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.01	0.00	0.00	0.00	0.00	2.08
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.07	1000 sq ft	1.00	0.07	0.52
					0.07	0.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

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)

Travel Conditions

Residential

Commercial

	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Disposable Checkout Bag Ordinance				2.0	1.0	97.0

Operational Changes to Defaults

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 4.urb924

Project Name: Palo Alto Alternative 4

Project Location: Santa Clara County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 4.urb924

Project Name: Palo Alto Alternative 4

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.01	0.00	0.00	0.00	0.00	2.08
TOTALS (lbs/day, unmitigated)	0.00	0.01	0.00	0.00	0.00	0.00	2.08

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.07	1000 sq ft	1.00	0.07	0.52
					0.07	0.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

Travel Conditions

	Residential			Commuter	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)

Travel Conditions

Residential

Commercial

Home-Work

Home-Shop

Home-Other

Commute

Non-Work

Customer

Disposable Checkout Bag
Ordinance

2.0

1.0

97.0

Operational Changes to Defaults

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 5.urb924

Project Name: Palo Alto Alternative 5

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.00	0.00	0.00	0.00	0.00	0.30
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.30

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.01	1000 sq ft	1.00	0.01	0.07
					0.01	0.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	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)

Travel Conditions

Residential

Commercial

	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Disposable Checkout Bag Ordinance				2.0	1.0	97.0

Operational Changes to Defaults

Urbemis 2007 Version 9.2.4

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

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Palo Alto Alt 6.urb924

Project Name: Palo Alto Alternative 6

Project Location: Santa Clara County

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
Disposable Checkout Bag Ordinance	0.00	0.00	0.00	0.00	0.00	0.00	0.30
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.30

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 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
Disposable Checkout Bag Ordinance		0.01	1000 sq ft	1.00	0.01	0.07
					0.01	0.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	1.7	95.8	2.5
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	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	25.0	75.0
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	0.0
Motorcycle	0.0	62.1	37.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	85.7	14.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	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)

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Disposable Checkout Bag Ordinance				2.0	1.0	97.0

Operational Changes to Defaults



Appendix C
Utilities Calculations

City of Palo Alto Disposable Checkout Bag Ordinance EIR	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (0% of existing)	0
Number of paper bags per day with 35% conversion	24,858
Number of reusable bags per day with 65% conversion	888

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	0	9786.073208	9.615974902
Gallons per day		1535.200159	0	2585.207021	2.540271803
Millions gallons per day (MGD) in Study Area		0.0015352	0	0.002585207	2.54027E-06
MGD per year		0.560348058	0	0.943600563	0.000927199
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	0.384179704				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	0	7393.293458	9.615974902
Gallons per day		1459.315741	0	1953.101489	2.540271803
Millions gallons per day (MGD) in Study Area		0.001459316	0	0.001953101	2.54027E-06
MGD per year		0.532650245	0	0.712882044	0.000927199
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	0.181158997				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	0	217.0041935	0.920185627
Tons per day (w/recycling)		0.51071546	0	0.239205893	0.00002
Tons per year		186.4111429	0	87.31015079	0.007119815
Increase in solid waste per year (MGD)				-99.10099208	-186.4040231
Increase as a result of Ordinance. Tons/year	-99.09387226				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		16687.23466	56.50262625
kWh in Study Area per day		8777.198739		4635.342998	15.69517408
million kWh in Study Area per day		0.008777199		0.004635343	1.56952E-05
Increase in million kWh per day				-0.004141856	-0.008761504
Increase as a result of Ordinance. Million kWh	-0.004126161				
Increase in kWh	-4126.160566				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	0	24957.93372
Millions gallons per day (MGD) in Study Area		0.002746272	0	0.024957934
MGD per year		1.002389408	0	9.10964581
Increase in water use per year (MGD)	8.107256402			
Increase in water per day	0.022211661			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	0	532.5883849	
Tons per day		0.323718803	0	0.587077503	
Tons per year		118.1573631	0	214.2832884	
Increase in solid waste per year (MGD)				96.12592538	
Increase as a result of Ordinance. Tons/day	0.2633587				
Increase as a result of Ordinance. Tons/year	96.12592538				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		65178.98628	0
kWh in Study Area per day		10035.46849		18105.27411	0
million kWh in Study Area per day		0.010035468		0.018105274	0
Increase in million kWh per day				0.008069806	
Increase as a result of Ordinance. Million kWh	0.008069806				
Increase in kWh	8069.805624				

City of Palo Alto Disposable Checkout Bag Ordinance EIR- Alternative 2	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (5% of existing)	3,551
Number of paper bags per day with 30% conversion	21,307
Number of reusable bags per day with 65% conversion	888

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	290.5682412	8388.062749	9.615974902
Gallons per day		1535.200159	76.76000795	2215.891732	2.540271803
Millions gallons per day (MGD) in Study Area		0.0015352	7.676E-05	0.002215892	2.54027E-06
MGD per year		0.560348058	0.028017403	0.808800482	0.000927199
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	0.277397026				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	276.2055525	6337.108678	9.615974902
Gallons per day		1459.315741	72.96578703	1674.086991	2.540271803
Millions gallons per day (MGD) in Study Area		0.001459316	7.29658E-05	0.001674087	2.54027E-06
MGD per year		0.532650245	0.026632512	0.611041752	0.000927199
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	0.105951218				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	23.16569114	186.0035945	0.920185627
Tons per day (w/recycling)		0.51071546	0.025535773	0.205033622	0.00002
Tons per year		186.4111429	9.320557144	74.83727211	0.007119815
Increase in solid waste per year (MGD)				-111.5738708	-186.4040231
Increase as a result of Ordinance. Tons/year	-102.2461938				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		14303.34399	56.50262625
kWh in Study Area per day		8777.198739		3973.151141	15.69517408
million kWh in Study Area per day		0.008777199		0.003973151	1.56952E-05
Increase in million kWh per day				-0.004804048	-0.008761504
Increase as a result of Ordinance. Million kWh	-0.004788352				
Increase in kWh	-4788.352423				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	137.3136175	21392.51462
Millions gallons per day (MGD) in Study Area		0.002746272	0.000137314	0.021392515
MGD per year		1.002389408	0.05011947	7.808267837
Increase in water use per year (MGD)	6.855997899			
Increase in water per day	0.018783556			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	14.68365537	456.5043299	
Tons per day		0.323718803	0.01618594	0.503209288	
Tons per year		118.1573631	5.907868153	183.6713901	
Increase in solid waste per year (MGD)				65.51402703	
Increase as a result of Ordinance. Tons/day	0.195676425				
Increase as a result of Ordinance. Tons/year	71.42189518				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		55867.70253	0
kWh in Study Area per day		10035.46849		15518.80638	0
million kWh in Study Area per day		0.010035468		0.015518806	0
Increase in million kWh per day				0.005483338	
Increase as a result of Ordinance. Million kWh	0.005483338				
Increase in kWh	5483.337893				

City of Palo Alto Disposable Checkout Bag Ordinance EIR-Alternative 3	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (0% of existing)	0
Number of paper bags per day with 11% conversion	7,813
Number of reusable bags per day with 89% conversion	1,216

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	0	3075.623008	13.16648871
Gallons per day		1535.200159	0	812.4936351	3.478218314
Millions gallons per day (MGD) in Study Area		0.0015352	0	0.000812494	3.47822E-06
MGD per year		0.560348058	0	0.296560177	0.00126955
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	-0.262518332				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	0	2323.606515	13.16648871
Gallons per day		1459.315741	0	613.8318966	3.478218314
Millions gallons per day (MGD) in Study Area		0.001459316	0	0.000613832	3.47822E-06
MGD per year		0.532650245	0	0.224048642	0.00126955
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	-0.307332053				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	0	68.20131797	1.259946475
Tons per day (w/recycling)		0.51071546	0	0.075178995	0.00003
Tons per year		186.4111429	0	27.44033311	0.00974867
Increase in solid waste per year (MGD)				-158.9708098	-186.4013942
Increase as a result of Ordinance. Tons/year	-158.9610611				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		5244.559465	77.3651344
kWh in Study Area per day		8777.198739		1456.822085	21.49031528
million kWh in Study Area per day		0.008777199		0.001456822	2.14903E-05
Increase in million kWh per day				-0.007320377	-0.008755708
Increase as a result of Ordinance. Million kWh	-0.007298886				
Increase in kWh	-7298.886338				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	0	7843.922028
Millions gallons per day (MGD) in Study Area		0.002746272	0	0.007843922
MGD per year		1.002389408	0	2.86303154
Increase in water use per year (MGD)	1.860642132			
Increase in water per day	0.00509765			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	0	167.384921	
Tons per day		0.323718803	0	0.184510072	
Tons per year		118.1573631	0	67.34617637	
Increase in solid waste per year (MGD)				-50.8111867	
Increase as a result of Ordinance. Tons/day	-0.139208731				
Increase as a result of Ordinance. Tons/year	-50.8111867				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		20484.82426	0
kWh in Study Area per day		10035.46849		5690.229007	0
million kWh in Study Area per day		0.010035468		0.005690229	0
Increase in million kWh per day				-0.004345239	
Increase as a result of Ordinance. Million kWh	-0.004345239				
Increase in kWh	-4345.239482				

City of Palo Alto Disposable Checkout Bag Ordinance EIR- Alternative 4	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (0% of existing)	0
Number of paper bags per day with 30% conversion	21,307
Number of reusable bags per day with 70% conversion	956

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	0	8388.062749	10.35566528
Gallons per day		1535.200159	0	2215.891732	2.735677326
Millions gallons per day (MGD) in Study Area		0.0015352	0	0.002215892	2.73568E-06
MGD per year		0.560348058	0	0.808800482	0.000998522
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	0.249450946				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	0	6337.108678	10.35566528
Gallons per day		1459.315741	0	1674.086991	2.735677326
Millions gallons per day (MGD) in Study Area		0.001459316	0	0.001674087	2.73568E-06
MGD per year		0.532650245	0	0.611041752	0.000998522
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	0.079390028				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	0	186.0035945	0.990969137
Tons per day (w/recycling)		0.51071546	0	0.205033622	0.00002
Tons per year		186.4111429	0	74.83727211	0.007667493
Increase in solid waste per year (MGD)				-111.5738708	-186.4034754
Increase as a result of Ordinance. Tons/year	-111.5662033				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		14303.34399	60.84898211
kWh in Study Area per day		8777.198739		3973.151141	16.90249517
million kWh in Study Area per day		0.008777199		0.003973151	1.69025E-05
Increase in million kWh per day				-0.004804048	-0.008760296
Increase as a result of Ordinance. Million kWh	-0.004787145				
Increase in kWh	-4787.145102				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	0	21392.51462
Millions gallons per day (MGD) in Study Area		0.002746272	0	0.021392515
MGD per year		1.002389408	0	7.808267837
Increase in water use per year (MGD)	6.805878429			
Increase in water per day	0.018646242			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	0	456.5043299	
Tons per day		0.323718803	0	0.503209288	
Tons per year		118.1573631	0	183.6713901	
Increase in solid waste per year (MGD)				65.51402703	
Increase as a result of Ordinance. Tons/day	0.179490485				
Increase as a result of Ordinance. Tons/year	65.51402703				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		55867.70253	0
kWh in Study Area per day		10035.46849		15518.80638	0
million kWh in Study Area per day		0.010035468		0.015518806	0
Increase in million kWh per day				0.005483338	
Increase as a result of Ordinance. Million kWh	0.005483338				
Increase in kWh	5483.337893				

City of Palo Alto Disposable Checkout Bag Ordinance EIR- Alternative 5	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (5% of existing)	0
Number of paper bags per day with 8.5% conversion	6,037
Number of reusable bags per day with 91.5% conversion	1,250

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	0	2376.617779	13.5363339
Gallons per day		1535.200159	0	627.8359907	3.575921076
Millions gallons per day (MGD) in Study Area		0.0015352	0	0.000627836	3.57592E-06
MGD per year		0.560348058	0	0.229160137	0.001305211
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	-0.32988271				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	0	1795.514126	13.5363339
Gallons per day		1459.315741	0	474.3246473	3.575921076
Millions gallons per day (MGD) in Study Area		0.001459316	0	0.000474325	3.57592E-06
MGD per year		0.532650245	0	0.173128496	0.001305211
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	-0.358216538				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	0	52.70101843	1.295338229
Tons per day (w/recycling)		0.51071546	0	0.05809286	0.00003
Tons per year		186.4111429	0	21.20389376	0.010022509
Increase in solid waste per year (MGD)				-165.2072491	-186.4011204
Increase as a result of Ordinance. Tons/year	-165.1972266				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		4052.614132	79.53831233
kWh in Study Area per day		8777.198739		1125.726157	22.09397582
million kWh in Study Area per day		0.008777199		0.001125726	2.2094E-05
Increase in million kWh per day				-0.007651473	-0.008755105
Increase as a result of Ordinance. Million kWh	-0.007629379				
Increase in kWh	-7629.378606				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	0	6061.212476
Millions gallons per day (MGD) in Study Area		0.002746272	0	0.006061212
MGD per year		1.002389408	0	2.212342554
Increase in water use per year (MGD)	1.209953146			
Increase in water per day	0.00331494			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	0	129.3428935	
Tons per day		0.323718803	0	0.142575965	
Tons per year		118.1573631	0	52.04022719	
Increase in solid waste per year (MGD)				-66.11713587	
Increase as a result of Ordinance. Tons/day	-0.181142838				
Increase as a result of Ordinance. Tons/year	-66.11713587				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		15829.18238	0
kWh in Study Area per day		10035.46849		4396.995141	0
million kWh in Study Area per day		0.010035468		0.004396995	0
Increase in million kWh per day				-0.005638473	
Increase as a result of Ordinance. Million kWh	-0.005638473				
Increase in kWh	-5638.473347				

City of Palo Alto Disposable Checkout Bag Ordinance EIR- Alternative 6	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (5% of existing)	67,473
Number of paper bags per day with 5% conversion	3,551
Number of reusable bags per day with 0% conversion	0

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (95%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	5520.796584	1398.010458	0
Gallons per day		1535.200159	1458.440151	369.3152887	0
Millions gallons per day (MGD) in Study Area		0.0015352	0.00145844	0.000369315	0
MGD per year		0.560348058	0.532330655	0.13480008	0
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	0.106782677				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	5247.905498	1056.18478	0
Gallons per day		1459.315741	1386.349954	279.0144984	0
Millions gallons per day (MGD) in Study Area		0.001459316	0.00138635	0.000279014	0
MGD per year		0.532650245	0.506017733	0.101840292	0
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	0.07520778				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (95%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	440.1481316	31.00059908	0
Tons per day (w/recycling)		0.51071546	0.485179687	0.03417227	0.00000
Tons per year		186.4111429	177.0905857	12.47287868	0
Increase in solid waste per year (MGD)				3.152321541	0
Increase as a result of Ordinance. Tons/year	3.152321541				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		2383.890666	0
kWh in Study Area per day		8777.198739		662.1918569	0
million kWh in Study Area per day		0.008777199		0.000662192	0
Increase in million kWh per day				-0.008115007	0
Increase as a result of Ordinance. Million kWh	-0.008115007				
Increase in kWh	-8115.006882				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (95%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	2608.958733	3565.419104
Millions gallons per day (MGD) in Study Area		0.002746272	0.002608959	0.003565419
MGD per year		1.002389408	0.952269938	1.301377973
Increase in water use per year (MGD)	1.251258502			
Increase in water per day	0.003428105			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (95%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	278.9894519	76.08405499	
Tons per day		0.323718803	0.307532863	0.083868215	
Tons per year		118.1573631	112.2494949	30.61189835	
Increase in solid waste per year (MGD)					
Increase as a result of Ordinance. Tons/day	0.067682275	0.323718803			
Increase as a result of Ordinance. Tons/year	24.7040302				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (95%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		9311.283755	0
kWh in Study Area per day		10035.46849		2586.46773	0
million kWh in Study Area per day		0.010035468		0.002586468	0
Increase in million kWh per day				-0.007449001	
Increase as a result of Ordinance. Million kWh	-0.007449001				
Increase in kWh	-7449.000758				

City of Palo Alto Disposable Checkout Bag Ordinance EIR- Alternative 7	
Plastic Bag Size (liters)	14
Paper Bag Size (liters)	20.48
Reusable bag size (liters)	37
Number of plastic bags used in Palo Alto per year	25,923,864
Number of plastic bags used in participating jurisdictions per day	71,024
Ordinance - Assume 100% switch to paper/reusable	
Number of Plastic bags still in (none allowed)	0
Number of paper bags per day (none allowed)	0
Number of reusable bags per day with 100% conversion	1,366

Conversions	
liters to gallons	0.26417205
Kg to short tons	0.00110231
MJ to kWh	0.27777778

Water Use - Ecobilan		Existing Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		52.6	52.6	173	2.634615385
Liters water per bag per day		0.081822222	0.081822222	0.393671111	0.010831197
Liters water in Study Area per day		5811.364825	0	0	14.79380754
Gallons per day		1535.200159	0	0	3.908110465
Millions gallons per day (MGD) in Study Area		0.0015352	0	0	3.90811E-06
MGD per year		0.560348058	0	0	0.00142646
Increase in water use per year (MGD)					
Increase as a result of Ordinance - Million gallons per year	-0.558921598				

Wastewater - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
Liters water per 9000 liters groceries		50	50	130.7	2.634615385
Liters water per bag per day		0.077777778	0.077777778	0.297415111	0.010831197
Liters water in Study Area per day		5524.11105	0	0	14.79380754
Gallons per day		1459.315741	0	0	3.908110465
Millions gallons per day (MGD) in Study Area		0.001459316	0	0	3.90811E-06
MGD per year		0.532650245	0	0	0.00142646
Increase in water use per year (MGD)					
Increase per day (MGD)					
Increase as a result of Ordinance - per year Million gallons	-0.531223785				

Solid Waste - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 9000 liters groceries (w/EPA recycling)		4.19356	4.19356	3.83624	0.252115385
kg waste per bag per day		0.006523316	0.006523316	0.008729577	0.001036474
kg waste in City per day		463.3138227	0	0	1.415670196
Tons per day (w/recycling)		0.51071546	0	0	0.00003
Tons per year		186.4111429	0	0	0.010953562
Increase in solid waste per year (MGD)				-186.4111429	-186.4001893
Increase as a result of Ordinance. Tons/year	-186.4001893				

2007 recycle rate

plastic bags	11.90%
paper bags	36.80%

Energy - Ecobilan		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 9000 liters groceries		286		295	15.48076923
MJ per bag per day		0.444888889		0.671288889	0.063643162
MJ in Study Area per day		31597.91521		0	86.9271173
kWh in Study Area per day		8777.198739		0	24.14642167
million kWh in Study Area per day		0.008777199		0	2.41464E-05
Increase in million kWh per day				-0.008777199	-0.008753052
Increase as a result of Ordinance. Million kWh	-0.008753052				
Increase in kWh	-8753.052317				

Water Use - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag
Gallons per 1000 paper bags (1500 plastic bags)		58	58	1004
Gallons per bag		0.038666667	0.038666667	1.004
Gallons water in Study Area per day		2746.272351	0	0
Millions gallons per day (MGD) in Study Area		0.002746272	0	0
MGD per year		1.002389408	0	0
Increase in water use per year (MGD)	-1.002389408			
Increase in water per day	-0.002746272			

Solid Waste -Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
kg waste per 1000 paper bags (1500 plastic bags)		6.20224	6.20224	21.4248	
kg waste per bag per day		0.004134827	0.004134827	0.0214248	
kg waste in Study Area per day		293.6731073	0	0	
Tons per day		0.323718803	0	0	
Tons per year		118.1573631	0	0	
Increase in solid waste per year (MGD)				-118.1573631	
Increase as a result of Ordinance. Tons/day	-0.323718803				
Increase as a result of Ordinance. Tons/year	-118.1573631				

2007 recycle rate	
plastic bags	11.90%
paper bags	36.80%

Energy - Boustead		Plastic bag	Proposed Plastic Bag Use (0%)	Paper bag	Reusable bag used 52 times
MJ per 1000 paper bags (1500 plastic)		763		2622	
MJ per bag per day		0.508666667		2.622	0
MJ in Study Area per day		36127.68627		0	0
kWh in Study Area per day		10035.46849		0	0
million kWh in Study Area per day		0.010035468		0	0
Increase in million kWh per day				-0.010035468	
Increase as a result of Ordinance. Million kWh	-0.010035468				
Increase in kWh	-10035.46849				



Appendix D
Proposed Draft Ordinance

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Ordinance No. _____

Ordinance of the Council of the City of Palo Alto Amending Chapter 5.35
("Retail Sales and Food Service Establishments - Requirement for Paper
Bags") ~~of the Palo Alto Municipal Code to Place a Limited~~ Prohibition of
Single-Use Plastic Checkout Bags

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Findings. The City Council finds as follows:

- (a) Single use plastic bags have environmental effects as many of these bags are conveyed across land or through storm drains into local creeks, the San Francisco Bay and into the Pacific Ocean. Studies have shown that 70% of the litter found in storm drains and at clean up events is plastic (bags, packaging, single-use disposable products).
- (b) Plastic bags that enter the marine environment have been found to adversely impact many wildlife species that ingest or become entangled in them. Paper bags tend to break down faster and do not pose the same risks for ingestion and entanglement.
- (c) Eighty percent of ocean debris originates from land. Plastic debris does not completely biodegrade in the marine environment; instead plastics break down into smaller and smaller pieces, absorbing toxins and forming high toxin concentrations, which in turn harm marine animals when they are mistaken for food. The Pacific Ocean contains a huge accumulation of plastic debris. Some scientists estimate that the density of plastic can be as great as one million pieces of plastic per square mile and plastic debris has increased over 100 fold in the past 40 years.
- (d) Plastic and paper checkout bags represent an unnecessary use of a nonrenewable resource. Reusable bags represent the sustainable alternative to single-use bags of all types because they consume less resources overall and produce less waste.
- (e) Even with the emphasis on recycling of plastics in the last several decades, the plastic bag recycling rate in California as of 2008 remains at approximately five percent or less, according to the California Integrated Waste Management Board. In addition, plastic bags pose collection, sorting and handling difficulties, limiting their recyclability.
- (f) The City discourages the use of all types of single-use checkout bags, because single-use bags consume more resources and produce more waste than reusable bags. However, plastic bags are the least desirable type of all single-use bags because they consume a nonrenewable resource, degrade very slowly and harm creek and marine life. It is the City's intent to address all types of single-use checkout plastic bags, including compostable and biodegradable ones, because all types consume non-renewable resources and can harm creek and marine life.

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- (g) Expanding the current ordinance supports the City's goal of Zero Waste by 2021 by reducing distribution of both plastic and paper bags. Plastic film has finite recyclability and is made from a nonrenewable natural resource. Ordinance expansion would reduce residuals contamination in municipal compost. A majority of compost contamination is comprised of plastic film and must be disposed as garbage.
- (h) Paper bags are more successfully recycled than plastic bags given current technologies. Therefore, diverting paper bags from landfill disposal is more attainable than it is for plastic bags. However, recyclable paper checkout bags do cause negative environmental impacts such as air, land and water pollution during resource extraction, manufacturing, transportation and ultimately in their disposal as even recycling paper bags consumes energy and causes pollution.
- (i) Reusable bags are considered worldwide to be the best option to reduce waste and litter, protect wildlife and conserve resources. Reusable bags have lower associated greenhouse gas emissions than single-use bags and are readily available and affordable for the customer.
- (j) Fifty-seven percent of combined grocery store and pharmacy checkout bags in Palo Alto are single-use paper or plastic based on a 2012 survey; therefore, further incentives are needed to decrease single-use checkout bags.
- (k) The City has given away more than 14,500 reusable checkout bags to Palo Alto residents to encourage their use.
- (l) Local cities are required by the Municipal Regional Permit (MRP) for storm water to reduce trash by 40% by 2014, 70% by 2017 and 100% by 2022, with cities implementing plastic bag bans as one of the actions to achieve these requirements. Palo Alto's short term trash reduction plan complying with the MRP is claiming a 6% reduction of trash with the current single use bag ban, however, cities with more comprehensive bans are claiming 12% reduction, assisting them in meeting this strict requirement in a cost-effective manner.
- (m) Due to the negative environmental effects and regulatory requirements to reduce trash, it is therefore in the best interest of the public health, safety, and welfare to restrict single-use bag distribution within the boundaries of the City of Palo Alto.
- (n) It is the intent of the Council to reduce negative impacts of single-use checkout bags through implementation of this Ordinance by continuing the requirement for grocery stores to not provide single-use plastic checkout bags and expanding that requirement to include all Retail Service and Food Service Establishments, while implementing a charge to allow customers to purchase a single-use paper bag or a reusable bag if the customer wants a bag and has not brought a reusable bag.

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SECTION 2. Chapter 5.35 (Retail Sales – Requirement for Paper Bags) of Title 5 (Health and Sanitation) of the Palo Alto Municipal Code is hereby repealed in its entirety and restated to read as follows:

Chapter 5.35

RETAIL SALES ~~AND FOOD SERVICE ESTABLISHMENTS- REQUIREMENT FOR PAPER CHECKOUT BAGS AND LIMITED~~ PROHIBITION ON SINGLE-USE PLASTIC CHECKOUT BAGS

Sections:

5.35.010	Definitions
5.35.020	Types of Checkout Bags Permitted at Retail Establishments
5.35.030	Types of Checkout Bags Permitted at Supermarkets
5.35.040	Operative Dates
5.35.050	Exemptions
5.35.060	Severability
5.35.070	Penalties

5.35.010 Definitions.

- (a) “Checkout Bag” means a bag that is provided by a Retail Establishment at the checkstand, cash register, point of sale or other point of departure for the purpose of transporting food or merchandise out of the establishment. Checkout Bags do not include ~~bags provided solely for produce, bulk food or meat at a produce, bulk food or meat department within a grocery store, Supermarket, produce or meat market or other similar retail establishment~~produce or product bags (see 5.35.010(c)).
- (b) “Food Service Establishment” means any establishment, located or providing food within the City of Palo Alto, which provides prepared and ready-to-consume food or beverages, for public consumption including but not limited to any Retail Service Establishment, supermarket, delicatessen, restaurant, food vendor, sales outlet, shop, cafeteria, catering truck or vehicle, cart or other sidewalk or outdoor vendor or caterer.
- (c) “Produce Bag” or “Product Bag” means 1) any bag typically without handles provided to a customer to carry produce meats, bulk food, or other food items to the point of sale inside a store 2) to hold prescription medication dispensed from a pharmacy, 3) to protect food or merchandise from being damaged or contaminated by other food or merchandise when items are placed together in a

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Reusable bag or Recyclable paper checkout bag; 4) a bag without handles that is designed to be placed over articles of clothing on a hanger

- (d) “Recyclable Paper Bag” or “Recyclable Paper Checkout Bag” means a paper bag that meets all of the following requirements: (1) contains no old growth fiber, (2) is 100% recyclable overall and contains a minimum of 40% post-consumer recycled content, ~~and~~ (3) displays the word “Recyclable” on the outside of the bag, and (4) is labeled with the name of the manufacturer, the location (country) where manufactured and the percentage of post-consumer recycled content in an easy-to-read size font.
- (e) “Retail Service Establishment” means any establishment commercial business facility providing retail sale, rental, service, processing, or repair of items primarily intended for consumer or household use, including but not limited to the following: groceries, meat, vegetables, dairy products, baked goods, candy, and other food products; liquor and bottled goods, household cleaning and maintenance products; drugs, cards, and stationery, notions, books, tobacco products, cosmetics, and specialty items; flowers, plants, hobby materials, toys, household pets and supplies, and handcrafted items; apparel, jewelry, fabrics, and like items; cameras, photography services, household electronic equipment, records, sporting equipment, kitchen utensils, home furnishing and appliances, art supplies and framing, arts and antiques, paint and wallpaper, carpeting and floor covering, interior decorating services, office supplies, musical instruments, hardware and homeware, and garden supplies; bicycles; mopeds and automotive parts and accessories (excluding service and installation); cookie shops, ice cream stores and delicatessens. engaged in the sale of goods to consumers for ultimate consumption.
- (f) “Reusable Checkout Bag” sold at a retail store means a bag with handles that is specifically designed and manufactured for multiple reuse and meets all of the following requirements:
- i. Is made of durable material so that it can be washed or disinfected at least 100 times
 - ii. Has a minimum lifetime capacity of 125 or more uses carrying 22 or more pounds over a distance of at least 175 feet
 - iii. Meets the standards of the California Toxics in Packaging Prevention Act (Cal. Health & Safety Code 25214.11-25214.26) as amended or any successor legislation
- (g) “Single-Use Plastic Checkout Bag” means any ~~Checkout Bag~~ made predominately from of plastic, deprived from either petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale which does not meet the definition of a reusable bag. excluding Reusable Bags is

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~~either (1) made of cloth or other machine washable fabric, and/or (2) made of durable plastic that is at least 2.25 mils thick and is suitable for reuse.~~

~~“Single Use Plastic Checkout Bag” means any Checkout Bag made from plastic, excluding Reusable Bags.~~

~~“Supermarket” means a full line, self service grocery store within the City of Palo Alto with gross annual sales of two million dollars (\$2,000,000.00) or more which sells several lines of dry grocery, canned goods, perishable food, produce and meat and some nonfood items. The City shall use the annual updates of the Progressive Grocer Marketing Guidebook and any computer printouts developed in conjunction with the guidebook to determine gross annual sales.~~

5.35.020 **Types of Checkout Bags Permitted at Retail Service and Food Service Establishments**

- (a) Beginning April 22, 2013, all Retail Service Establishments within the City of Palo Alto shall provide or make available to a customer only Reusable Bags or Recyclable Paper checkout Bags for the purpose of carrying away goods or other materials from the point of sale, subject to the terms of this Chapter.
- i. Single-Use Plastic bags exempt from the ordinance include those integral to the packaging of the product, newspaper bags, door-hanger bags, or bags sold in packages containing multiple bags intended for use as garbage, pet waste or yard waste bags.
 - ~~(b)ii. Farmers Markets may provide reusable, paper or plastic product bags without handles to hold produce or bulk items. Retail Establishment charges are not required at Farmers Markets unless Checkout Bags used to hold Product Bags are provided..the following as Checkout Bags to customers: Paper bags only, or a choice between paper or plastic bags. If the Retail Establishment offers customers a choice of paper or plastic bags at the checkstand, cash register or other point of departure, the customer shall be asked whether he or she requires or prefers that the goods purchased be placed in paper or plastic bags. The goods shall be placed in the type of bag requested by the customer.~~
- (b) Beginning October 1, 2013, all Food Service Establishments shall provide or make available to a customer only Reusable Bags or Recyclable Paper Checkout Bags for the purpose of carrying away goods or other materials from the point of sale, subject to the terms of this Chapter.
- i. Product Bags without handles may be used at Food Service Establishments to hold containers of food items that are free liquids such as soups or stews that might be susceptible to spilling. Nothing in this Section shall be read to

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~~preclude Retail Establishments from making Reusable Bags available for sale to customers~~

- (c) The City of Palo Alto encourages, but does not require in-store public education and encouragement to customers about the use of reusable bags. In-store education for Retail Service and Food Service Establishments is available at www.cityofpaloalto.org/plastics.
- (d) Nothing in this Chapter prohibits customers from using bags of any type that they bring to the establishment themselves or from carrying away goods that are not placed in a bag at point of sale, in lieu of using bags provided by the establishment.
- (e) A Retail Service or Food Service Establishment may provide a Reusable Bag at no charge if it is distributed as part of an infrequent and limited time promotion. Infrequent and limited time promotions shall not exceed a total of 14 days in any consecutive 12 month period. This Section shall not apply to Supermarkets as defined in Section 5.35.010(f).

5.35.030 Charge for Paper or Reusable Bags at Retail Service Establishments ~~Types of Checkout Bags Permitted at Supermarkets.~~

- (a) Beginning April 22, 2013 no Retail Service Establishment shall provide a Recyclable Paper Checkout Bag or Reusable Bag to a customer at the point of sale, unless the store charges the customer a checkout bag charge of at least ten cents (\$0.10) per bag. All Supermarkets within the City of Palo Alto shall provide only the following as Checkout Bags to customers: Reusable Bags and/or Recyclable Paper Bags.
- (b) Beginning April 22, 2014 no Retail Service Establishment shall provide a Recyclable Paper Checkout Bag or a Reusable Bag to a customer at the point of sale, unless the establishment charges the customer a checkout bag charge of at least twenty-five cents (\$.25) per bag. Nothing in this Chapter shall be read to preclude Supermarkets from making Reusable Bags available for sale to customers.
- (c) Clerks must ask customers who do not present their own reusable bag at point of checkout if they want to purchase a checkout bag. All Supermarkets are strongly encouraged to educate their staff to promote Reusable Bags as the best option for Checkout Bags and to post signs encouraging customers to use Reusable Bags.
- (d) The checkout bag charge shall be separately stated on the receipt and provided to the customer at the time of sale and shall be identified as the Checkout Bag Charge. Any other transaction fee charged by the Retail Service or Food Service Establishment in relation to providing a Checkout Bag shall be identified separately

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from the Checkout Bag Charge. The checkout bag charge will be completely retained by the Retail Service and is nontaxable.

- (e) Effective on the Ordinance start-date all Retail Services Establishments shall keep complete and accurate records of the number or the dollar amount collected from Recyclable Paper Checkout Bags sold each month. This information is required to be made available to City staff upon request up to twice annually and must be provided within seven days of request. Reporting false information, including information derived from incomplete or inaccurate records or documents, shall be a violation of the Ordinance. Records submitted to the City must be signed by a responsible agent or officer of the establishment attesting that the information provided on the form is accurate and complete.

5.35.040 Operative dates.

- (a) All Retail Service Establishments ~~and Supermarkets~~ shall comply with the requirements of this Ordinance by ~~September 18, 2009~~ April 22, 2013.
- (b) All Food Service Establishments shall comply with the requirements of the Ordinance by October 1, 2013.

5.35.050 Exemptions.

The City Manager, or his or her designee, may exempt a ~~Supermarket~~ Retail Service or Food Service Establishment from the requirements of this Chapter for a period of up to one additional year after the operative date of this Ordinance, upon sufficient showing evidence by the applicant that the provisions of this Chapter would cause undue hardship. This request must be submitted in writing to the City within 60 days of the effective date of this Chapter. The phrase "undue hardship" may include, but is not limited to, the following:

- (a) Situations where there are no acceptable alternatives to Single-Use Plastic Checkout Bags for reasons which are unique to the ~~Supermarket~~ Retail Service or Food Service Establishment.
- (b) Situations where compliance with the requirements of this Chapter would deprive a person of a legally protected right.
- (c) Retail Service Establishments shall not enforce the 10 cent or 25 cent store charge for customers who participate in the California Special Supplemental Food Program for Women, Infants, and Children pursuant to Article 2 (commencing with Section 123275) of Chapter 1 of Part 2 of Division 106 of the Health and Safety Code, or in the Supplemental Food Program pursuant to Chapter 10 (commencing with Section 15500) of Part 3 of Division 9 of the Welfare and Institutions Code."

i. This provision will expire two years after ordinance effect date.

5.35.060 Severability.

If any provision or clause of this Chapter is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other provisions of this Chapter, and clauses of this Chapter are declared to be severable.

5.35.070 Penalties.

- (a) Anyone violating or failing to comply with any of the requirements of this Chapter shall be guilty of an infraction as set forth in Chapter 1.08 of the Palo Alto Municipal Code.
- (b) The remedies and penalties provided in this Section are cumulative and not exclusive.

SECTION 3. The City Council finds that the adoption of this Ordinance is subject to environmental review under provisions of the California Environmental Quality Act (CEQA) under Section 15070 of the CEQA Guidelines, (“Decision to Prepare a Negative or Mitigated Negative Declaration”). The Department of Planning and Community Environment prepared an Initial Study for this Ordinance, which confirmed that the Ordinance does not have the potential to result in a significant impact on the environment, with appropriate mitigation. Consequently, a Mitigated Negative Declaration was prepared, made available for public review beginning February 4, 2009 through February 23, 2009, and is hereby adopted.

SECTION 4. This Ordinance shall be effective on the thirty-first day after the date of its adoption.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

Not Yet Approved

ATTEST:

City Clerk

Mayor

APPROVED AS TO FORM:

Deputy City Attorney

APPROVED:

City Manager

Director of Public Works

Director of Administrative
Services

Appendix E

List of Potential Retailers in Palo Alto



Businesses**Full Address****Food Service**

7-ELEVEN FOOD STORE	340 PORTAGE AV
A1 LIQUORS	3866 EL CAMINO REAL
ABUNDANT AIR CAFE	1901 EMBARCADERO RD, # 103
ACE OF SANDWICHES, THE	3866 EL CAMINO REAL
ADLAI E STEVENSON HOUSE	455 CHARLESTON RD
AMARIN THAI CUISINE	407 LYTTON AV
ANATOLIAN KITCHEN	2323 BIRCH ST
ANTONIO'S NUT HOUSE	321 CALIFORNIA AV
AQUARIUS THEATER	430 EMERSON ST
ASAP CALIFORNIA PIZZA KITCHEN	180 EL CAMINO REAL, # 136
AVENUE, THE	403 UNIVERSITY AV
BABBO'S	180 EL CAMINO REAL, # 717
BAJA FRESH MEXICAN GRILL	3990 EL CAMINO REAL
BARBEQUES GALORE	2080 EL CAMINO REAL
BARRON PARK SHELL	3601 EL CAMINO REAL
BASKIN ROBBINS ICE CREAM	2615 MIDDLEFIELD RD
BAUME FRENCH CUISINE MODERNE	201 CALIFORNIA AV
BAY CAFE & GOURMET DELI	1875 EMBARCADERO RD
BEE CAFE	2479 BAYSHORE RD, # 708
BISTRO ELAN	2363 BIRCH ST
BISTRO ELAN	448 CALIFORNIA AV
BISTRO MAXINE	548 RAMONA ST
BISTRO PASTIS	447 CALIFORNIA AV
BLOOMINGDALE'S #31	180 EL CAMINO REAL, # 1
BON APPETIT @ AFFYMAX	4001 MIRANDA AV
BON APPETIT @ WM WARE	3401 HILLVIEW AVE., BLDG. C
BON VIVANT CAFÉ	535 Bryant St
BOSTON MARKET #2418	3375 EL CAMINO REAL
BRAVO FONO	180 EL CAMINO REAL, # 99
BUCA DI BEPPO	643 EMERSON ST
CABANA-CROWN PLAZA	4290 EL CAMINO REAL
CAFE 220	220 UNIVERSITY AV, # B
CAFE A LA CARTE	730 WELCH RD
CAFE BRIOCHE	445 CALIFORNIA AV
CAFÉ DEL DOGE	419 UNIVERSITY AV
CAFÉ EPI	405 UNIVERSITY AV
CAFE PIAZZA	3000 EL CAMINO REAL, BLDG. 1
CAFE PRO BONO	2437 BIRCH ST
CAFE RENAISSANCE / MISUNO	321 HAMILTON AV
CAFE SOPHIA	2706 MIDDLEFIELD RD
CAFFE DEL DOGE	419 UNIVERSITY AV
CAFFE RIACE	200 SHERIDAN AVE., # 102
CALAFIA	855 EL CAMINO REAL
CALIFORNIA CAFE BAR & GRILL	700 WELCH RD
CALIFORNIA PIZZA KITCHEN	531 COWPER ST
CELIA'S MEXICAN RESTAURANT	3740 EL CAMINO REAL
CHEESECAKE FACTORY	375 UNIVERSITY AV

CHEESESTEAK SHOP	2305 EL CAMINO REAL
CHINA DELIGHT	461 EMERSON ST
CHINA MEI	3781 EL CAMINO REAL
CHIPOTLE	2675 EL CAMINO REAL
Chipotle @ SSC	180 EL CAMINO REAL, # 15A
CHO'S RESTAURANT	213 CALIFORNIA AV
CIBO RESTAURANT & BAR	3398 EL CAMINO REAL
CINE ARTS AT PALO ALTO SQUARE	3000 EL CAMINO REAL, # 2
CLASSIC RESIDENCE BY HYATT	620 SAND HILL RD
CLUB ILLUSIONS	260 CALIFORNIA AV
CLUB ILLUSIONS	401 WAVERLEY ST
COCONUTS	642 RAMONA ST
COLD STONE CREAMERY	855 EL CAMINO REAL, # 9
COMO ESTA TAQUERIA	2605 MIDDLEFIELD RD, # A
COUNTER, THE	369 CALIFORNIA AV
COUPA CAFE	538 RAMONA ST
COWPER INN	705 COWPER ST
CREPEVINE	367 UNIVERSITY AVE.
CROSSROADS WORLD MARKET	720 SAN ANTONIO AV
DA SICHUAN BISTRO	3781 EL CAMINO REAL
DARBAR INDIAN CUISINE	129 LYTTON AV
DIAZ MARKET STOP	3487 EL CAMINO REAL
DINAH'S POOLSIDE COFFEE SHOP	4261 EL CAMINO REAL
DOMINO'S PIZZA	240 CAMBRIDGE AVE., B
DOUCE D'FRANCE	855 EL CAMINO REAL, # 104
DRIFTWOOD MARKET	3450 EL CAMINO REAL
ELBE RESTAURANT & RUDY'S PUB	117 UNIVERSITY AV
EMPIRE TAP ROOM	651 EMERSON ST
EQUINOX FITNESS CLUB	435 ACACIA AV
ESPRESSO BAR #5802	795 EL CAMINO REAL, # 2
EUROMART	3707 EL CAMINO REAL
EVVIA	420 EMERSON ST
FAMBRINI'S TERRACE BISTRO	2600 EL CAMINO REAL
FISH MARKET THE	3150 EL CAMINO REAL
FLEMING'S STEAKHOUSE	180 EL CAMINO REAL
FRAN'S MARKET	499 LYTTON AV
FRESH TASTE CHINESE GARDEN	2111 EL CAMINO REAL
FUKI SUSHI	4119 EL CAMINO REAL
GARDEN FRESH	460 RAMONA ST
GATEAU ET GANACHE	3261 ASH ST, B2
GODIVA CHOCOLATIER	180 EL CAMINO REAL, # 301
GOOD EARTH CAFE & BAKERY	1520 PAGE MILL RD
GOOD EARTH PATIO CAFE	1899 PAGE MILL RD
GORDON BIERSCHE BREWERY RESTAURANT	640 EMERSON ST
GOURMET FRANKS	180 EL CAMINO REAL, # 199
GREEN ELEPHANT GOURMET	3950 MIDDLEFIELD RD
GYROS GYROS	498 UNIVERSITY AV
HAAGEN-DAZS	180 EL CAMINO REAL
HAAGEN-DAZS	203 UNIVERSITY AVE., # 230
HAMILTON, THE	555 BYRON ST
HAN	452 UNIVERSITY AV
HAPPY DONUTS	3916 EL CAMINO REAL

HOBEE'S	855 EL CAMINO REAL, # 67
HOBEE'S RESTAURANT	4224 EL CAMINO REAL
HOLLYWOOD VIDEO #005-592	3903 EL CAMINO REAL
HOMMA'S BROWN RICE SUSHI	2363 BIRCH ST, #B
HONEY BAKED HAM	4113 EL CAMINO REAL
HOUSE OF BAGELS	526 UNIVERSITY AV
HOWIE'S ARTISAN PIZZA	855 EL CAMINO REAL, # 60
HUNAN GARDEN RESTAURANT	3345 EL CAMINO REAL
HYDERABAD HOUSE	448 UNIVERSITY AV
IL FORNAIO	520 COWPER ST
INDOCHINE	2710 MIDDLEFIELD RD
IZZY'S BROOKLYN BAGELS	477 CALIFORNIA AV
J J & F FOOD STORE	520 COLLEGE AV
JACK IN THE BOX	2280 EL CAMINO REAL
JADE PALACE	151 CALIFORNIA AVE., E101
JAMBA JUICE Store #3	855 EL CAMINO REAL, # 69
JAMBA JUICE Store #325	3990 EL CAMINO REAL , # 2
JANTA INDIAN CUISINE	369 LYTTON AV
JAPANESE TAPAS & RAMEN	799 SAN ANTONIO AV
JIN SHO	454 CALIFORNIA AV
JING JING RESTAURANT	443 EMERSON ST
JOANIE'S CAFÉ	405 CALIFORNIA AV
JOYA	339 UNIVERSITY AV
KARA'S CUPCAKES	
KIRK'S STEAKBURGERS	855 EL CAMINO REAL, # 75
KOREAN BBQ	855 EL CAMINO REAL
L&L HAWAIIAN BBQ	3890 EL CAMINO REAL
LA BAGUETTE	180 EL CAMINO REAL, # 170
La BODEGUITA	463 CALIFORNIA AV
LA COMIDA	450 BRYANT ST
LA MORENITA RESTAURANT	800 EMERSON ST
LA STRADA	355 UNIVERSITY AV
LAVANDA	185 UNIVERSITY AV
LOTUS THAI BISTRO	425 CALIFORNIA AV
LOVING HUT	165 UNIVERSITY AV
LUNCHSTOP @ LOCKHEED MARTIN #206	3251 HANOVER ST, # 206
LYFE	167 HAMILTON AV
LYTTON AVE COFFEE ROASTING CO	401 LYTTON AV
MACARTHUR PARK	27 UNIVERSITY AV
MADAM TAM	180 EL CAMINO REAL,# 399
MANDARIN GOURMET	420 RAMONA ST
MANGO CARIBBEAN RESTAURANT	435 HAMILTON AV
MANTRA RESTAURANT	636 EMERSON ST
MAX'S OPERA CAFE	180 EL CAMINO REAL, # 711
MAYFIELD BAKERY & CAFÉ	855 EL CAMINO REAL
MCDONALD'S	180 EL CAMINO REAL, # 190
MCDONALD'S RESTAURANT #3094	3128 EL CAMINO REAL
MEDITERRANEAN WRAPS	433 CALIFORNIA AV
MELT, THE	180 EL CAMINO REAL
MICHAEL'S GELATO CAFE	440 UNIVERSITY AV
MIKE'S CAFE ETC	2680 MIDDLEFIELD RD
MING'S VILLA	1700 EMBARCADERO RD

MIYAKE	140 UNIVERSITY AV
MONIQUE'S CHOCOLATES	539 BRYANT ST.
MOUNTAIN MIKE'S PIZZA	3918 MIDDLEFIELD RD
NEIMAN-MARCUS RESTAURANT	180 EL CAMINO REAL, # 400
NEW YORK PIZZA	325 HAMILTON AV
NOLA'S RESTAURANT	535 RAMONA ST
NORDSTROM #422	180 EL CAMINO REAL, # 550
O SUSHI HOUSE	403 UNIVERSITY AV
OLD PRO	545 RAMONA ST
OLIVE GARDEN RESTAURANT	2515 EL CAMINO REAL
OSTERIA	247 HAMILTON AV
PALANTIR TECHNOLOGIES	100 Hamilton Ave., Ste. 300
PALO ALTO BAKING COMPANY	381 CALIFORNIA AV
PALO ALTO CAFE	2675 MIDDLEFIELD RD, # A
PALO ALTO CHEVRON	3897 EL CAMINO REAL
PALO ALTO CITY HALL CAFE	250 HAMILTON AV
PALO ALTO CREAMERY AT STANFORD	180 EL CAMINO REAL, # 2A
PALO ALTO ELKS LODGE	4249 EL CAMINO REAL
PALO ALTO GOLF COURSE BAY CAFÉ	1875 Embarcadero Rd
PALO ALTO HILLS GOLF & COUNTRY CLUB	3000 ALEXIS DR
PALO ALTO PIZZA CO.	2434 PARK BL
PALO ALTO SHELL	2200 EL CAMINO REAL
PALO ALTO SOL	408 CALIFORNIA AV
PALO ALTO UNOCAL	835 SAN ANTONIO AV
PAMPAS	529 ALMA ST
PANACHE CATERING	3261 ASH ST, #B
PANDA EXPRESS	2310 EL CAMINO REAL
PAPA JOHN'S PIZZA	3898 EL CAMINO REAL
PAPA MURPHYS	2730 MIDDLEFIELD RD
PASTA D'ANGELO	326 UNIVERSITY AV
PATIO @ RUDY'S, The	412 EMERSON ST
PATXI'S CHICAGO PIZZA	441 EMERSON ST
PEET'S COFFEE & TEA	153 HOMER AV
PEET'S COFFEE & TEA	855 EL CAMINO REAL, # 77
PEET'S COFFEE & TEA #111	3904 MIDDLEFIELD RD
PENINSULA CREAMERY DAIRY FOUNTAIN	900 HIGH ST
PENINSULA FOUNTAIN & GRILL	566 EMERSON ST
PF CHANG'S CHINA BISTRO	180 EL CAMINO REAL, #900
PIZZA CHICAGO	4115 EL CAMINO REAL
PIZZA MY HEART	220 UNIVERSITY AV
PLUTO'S	482 UNIVERSITY AV
POMMAND CAFE	3163 MIDDLEFIELD RD
PRINTERS CAFE	320 CALIFORNIA AV
PROLIFIC OVEN THE	550 WAVERLEY ST
R&B SEAFOOD RESTAURANT	2209 EL CAMINO REAL
RAMONA'S PIZZA	2313 BIRCH ST
RANGOON RESTAURANT	565 BRYANT ST
RANGOON RUBY'S	445 EMERSON ST
REPOSADO	236 HAMILTON AVE
RICK'S ICE CREAM	3950 MIDDLEFIELD RD
ROJOZ WRAPS	3906 MIDDLEFIELD RD
ROSE & CROWN PUB	547 EMERSON ST

ROUND TABLE PIZZA	702 COLORADO AV
ROUND TABLE PIZZA #15	263 UNIVERSITY AV
S O S FINE FOODS	949 EMERSON ST
SAFEWAY #1682	2811 Middlefield Rd
SANCHO'S TAQUERIA	491 LYTTON AV
SAP CAFÉ D-BON APPETIT	3410 HILLVIEW AV
SAP CAFETERIA	3450 HILLVIEW AV
SAP CAFETERIA-BON APPETIT	3475 DEER CREEK RD
SAP-BON APPETIT	3412 HILLVIEW AV
SCOTT'S SEAFOOD GRILL & BAR	855 EL CAMINO REAL,# 1
SCOTTY'S BAR	548 EMERSON ST
SEE'S CANDIES #45	180 EL CAMINO REAL, #680
SHERATON PALO ALTO	625 EL CAMINO REAL
SHOKOOLAT	516 UNIVERSITY AV
SIAM ORCHID	496 HAMILTON AV
SIAM ROYAL AUTHENTIC THAI CUISINE	338 UNIVERSITY AV
SIMPLY SANDWICHES	2431 ASH ST
SLIDEBAR	324 UNIVERSITY AV
SMOG PROS ARCO #1326	840 SAN ANTONIO AV
SO GONG DONG TOFU HOUSE	4127 EL CAMINO REAL, #A
SOME KIND OF PLACE- A KOREAN BBQ	855 EL CAMINO REAL, # 85
SPALTI RISTORANTE	417 CALIFORNIA AV
SPOT-A-PIZZA PLACE	115 HAMILTON AV
SPROUTS	168 UNIVERSITY AV
ST MICHAEL'S ALLEY	806 EMERSON ST
STANFORD GRILL	198 Junipero Serra Blvd
STANFORD TERRACE INN	531 STANFORD AV
STARBUCKS #5555	2775 MIDDLEFIELD RD
STARBUCKS #9870	361 CALIFORNIA AV
STARBUCKS COFFEE #2822	180 EL CAMINO REAL, # 79
STARBUCKS COFFEE #2886	4131 EL CAMINO REAL, # 101
STARBUCKS COFFEE #5541	2000 EL CAMINO REAL
STRAITS CAFE PALO ALTO	3295 EL CAMINO REAL
SU HONG	4256 EL CAMINO REAL
SUBWAY #27048	421 CALIFORNIA AV
SUBWAY #30816	4131 EL CAMINO REAL
SUBWAY #32950	2717 MIDDLEFIELD RD
SUNDANCE MINE COMPANY	1921 EL CAMINO REAL
SUSHI HOUSE	855 EL CAMINO REAL, # 158
SUSHI TOMO	201 UNIVERSITY AV
SUSHI TOMO	4131 EL CAMINO WY
SZECHWAN CAFE	406 CALIFORNIA AV
TACO BELL #2297	910 CHARLESTON RD
TAIPAN PALO ALTO	560 WAVERLEY ST
TAMARINE RESTAURANT	546 UNIVERSITY AV
TANDOORI OVEN	365 CALIFORNIA AV
TAQUERIA AZTECA	321 CALIFORNIA AVE., # 2
TAQUERIA EL GRULLENSE	3636 EL CAMINO REAL
TAVA INDIAN	855 El Camino Real
TEA TIME-TEA LOVERS SHOP	
TEAVANA # 26	260 CALIFORNIA AV

TEUSCHER CHOCOLATE OF SWITZERLAND	180 EL CAMINO REAL, # 151
THAI CITY RESTAURANT	3691 EL CAMINO REAL
THAIPHOON RESTAURANT	543 EMERSON ST
THREE SEASONS RESTAURANT	518 BRYANT ST
TIBCO-BON APPETIT	3307 HILLVIEW AV
TRADER VIC'S	4269 EL CAMINO REAL
UNIVERSITY CAFÉ	271 UNIVERSITY AV
UNIVERSITY CLUB OF PALO ALTO	3277 MIRANDA AV
UZUMAKI SUSHI	451 CALIFORNIA AV
VALERO OF PALO ALTO	1963 EL CAMINO REAL
VERO	530 BRYANT ST
VILLAGE CHEESE HOUSE INC	855 EL CAMINO REAL, # 157
VIN VINO WINE	437 CALIFORNIA AV
VINO LOCALE	431 KIPLING ST
WEBSTER HOUSE	401 WEBSTER ST
WEST FRESH	2237 EL CAMINO REAL
WESTERN DINING @ CPI	811 HANSEN WY
WESTIN PALO ALTO	675 EL CAMINO REAL
WINE ROOM, THE	520 RAMONA ST
YUCCA DE LAC	180 EL CAMINO REAL
ZIBIBBO'S	430 KIPLING ST
ZYME & DINE CAFE	925 PAGE MILL RD

Retail

2B MOM	855 EL CAMINO REAL
3 G'S CAFE	456 CAMBRIDGE AVE
3ID	3427 THOMAS DR
45WALL DESIGN	3729 HERON WAY
57TH & LUXE	855 EL CAMINO REAL #13A388
7-ELEVEN FOOD STORE	520 COWPER ST, # 2
A & A AUTO REPAIR	1963 EL CAMINO REAL
A & P INTERIOR DESIGNS	2450 WATSON CT
A BALLOON ABOUT TOWN	3079 WAVERLEY ST
A LITTLE SECRET	505 BARRON AVE
A100 US	529 BRYANT ST
AA AUTO GLASS	744 SAN ANTONIO RD #C27
AANANTA KASHMIR VALLEY ART BTQ	180 EL CAMINO REAL #1
ABBAY'S DINER	209 UNIVERSITY AVE
ABC VACUUM & SEWING	408 FLORENCE ST
ABERCROMBIE & FITCH	180 EL CAMINO REAL #V840
ABLER ENTERPRISES	3718 GROVE AVE
ABRAMS FINE ARTS	542 HIGH ST
ACCENT ARTS	392 S CALIFORNIA AVE
ACME BIOSCIENCE	3941 E BAYSHORE RD
ACME PARTY BOX COMPANY	1528 BYRON ST
ACROSS THE LINE CARDS	916 MORENO AVE
ADDISON ANTIQUE	100 ADDISON AVE
ADINA MAGILL	888 AMES AVE
ADMCADIAM	3375 ALMA ST #374
ADORNMENTS BY SUSAN SCHAPS	944 BOYCE AVE
ADVANCE HAIR THERAPY	200 S CALIFORNIA AVE #190

ADVANCE PROSTHETICS	2237 ALMA ST
AFFYMAX RESEARCH INSTITUTE	4001 MIRANDA AVE
AIM	626 GLENBROOK DR
AKINS BODY SHOP	3045 PARK BLVD
AKSESARE	610 MIDDLEFIELD RD
ALAN HUTCHINGS INSTALLATION	285 RINCONADA AVE
ALAN JAMES CLARK	126 WALTER HAYS DR
ALDO SHOES	180 EL CAMINO REAL #L200
ALEXANDERS DOG GROOMING	2415 ASH ST
ALISON BAKERY	4131 EL CAMINO REAL #104
ALTA MESA MEMORIAL PARK	695 ARASTRADERO RD
ALYSSA LEVITAN DESIGNS	2326 WEBSTER ST
AMBASSADOR TOYS	855 EL CAMINO REAL #33
AMBER DHARA	150 UNIVERSITY AVE
AMBIANCE INTERIORS	1027 ALMA ST
A-MED HEALTH CARE	777 WELCH RD #J
AMER CANCER SOCIETY	50 EMBARCADERO RD
AMER.EXPRESS TRAVEL RELATD SVC	250 UNIVERSITY AVE
AMERICAN APPAREL	170 UNIVERSITY AVE
ANA PAULA QUIRINO SIMOES	3275 KIPLING ST
ANATOLIAN ART	532 RAMONA ST
ANDERSON HONDA	1766 EMBARCADERO RD
ANDREA EDELMAN	2195 COLUMBIA ST
ANDREA SPIRA INTERIORS	2025 TASSO ST
ANN TAYLOR	180 EL CAMINO REAL #C18
ANNA BRIDGET KALAR	418 COLERIDGE AVE
ANNA TEEPLES DESIGNS	129 CHURCHILL AVE
ANNE GRAFF	210 EL CARMELO AVE
ANNE LOUISE KLOCKO	777 EMBARCADERO RD
ANNFER	226 ELY PL
ANTHONY A. MONTANINO	400 PEPPER AVE
A-PLUS AUTO GLASS	744 SAN ANTONIO RD #27
APPLE STORES	180 EL CAMINO REAL #183
APPLE STORES	451 UNIVERSITY AVE
APPLEBITE WORKS	455 E CHARLESTON RD #A309
APRIL JOY HOCKING	350 LOMA VERDE AVE
ARCO AM/PM MINI MARTS	840 SAN ANTONIO RD
ARLENE G KLAINER	100 ADDISON AVE
ARLENE G KLAINER	4195 OAK HILL AVE
ARNOLDI JEWELERS	255 UNIVERSITY AVE
ART CRAFT LINOLEUM CARPET SHOP	858 SAN ANTONIO RD
ART DIRECTIONS	419 SEALE AVE
ARTHUR ANTHONY KIRSCH JR.	4160 BYRON ST #B
ARTLINE	3441 THOMAS DR
ART'S BODYCRAFT	280 LAMBERT AVE
ASTOR GIFT & HOME	855 EL CAMINO REAL #109
AT OPHTHALMIC	779 MAPLEWOOD AVE
ATHERTON ANTQUE GALLERY	100 ADDISON AVE
ATREVO	2160 YALE ST
ATRIUM HAIR SALON	250 UNIVERSITY AVE #103
AUDREY PETERS INTERIOR DESIGN	912 WAVERLEY ST
AVALON ART & YOGA CENTER	370 S CALIFORNIA AVE

AVENUE FLORIST	347 S CALIFORNIA AVE
AV-EXPRESSIONS	947 ILIMA WAY
AVIATION SUPPLIES	1903 EMBARCADERO RD #B
AVY ANIMAL CLINIC	461 PAGE MILL RD
A-X ARMANI EXCHANGE	180 EL CAMINO REAL #D122
AZEEM LAKHA DMD	720 COWPER ST
AZNFLIX	4380 MILLER CT
B & P FLORIST & PLANTS	3880 EL CAMINO REAL
B.D. STRATTON BUSINESS SERVICE	3022 WAVERLEY ST
BAHRAM BEHROOZI	100 ADDISON AVE
BALANCE CENTER	560 OXFORD AVE
BANANA REPUBLIC	180 EL CAMINO REAL #172
BARBARA J.SEBASTIAN	777 EMBARCADERO RD
BARBARA S.KOLLIN	2327 RAMONA ST
BARBARA WOLFE INTERIORS	539 MADISON WAY
BARBEQUES GALORE	2080 EL CAMINO REAL
BARE ESCENTUALS BEAUTY	180 EL CAMINO REAL #830
BARGAIN BOX	341 S CALIFORNIA AVE
BARRAGAN GLASS WORKS	857 ROBB RD
BARRY JOHNSON DESIGN	853 ALMA ST
BAS DESIGNS	901 ALMA ST
BATH & BODY WORKS	180 EL CAMINO REAL
BAUME	201 S CALIFORNIA AVE
BAY NUTRITION CENTER	2248 PARK BLVD
BAYWATER PUBLISHING	2200 GENG RD
BCBG MAX AZRIA	180 EL CAMINO REAL #D120
BEADSHOP.COM	3716 STARR KING CIR
BEADY DIVA	479 DYMOND CT
BEARY NICE GIFTS	920 BOYCE AVE
BEAU JOUR DESIGNS	165 FOREST AVE #24
BEAUTY SPA BY EREEDA	200 S CALIFORNIA AVE #190
BEAUTYLAND BEAUTY SUPPLY	180 EL CAMINO REAL #242
BEAVERTOOTH TOOLS	490 GARY CT
BELLA BEAUTY SALON	585 BRYANT ST
BELL'S COLLEGE BOOK SHOP	536 EMERSON ST
BESPOKE	855 EL CAMINO REAL #135
BETTER CHINESE	640 WAVERLEY ST
BETTER HEARING CENTER OF PALOA	480 LYTTON AVE
BETTER WORLD PRESS	543 JACKSON DR
BETTY ANN BRYANT	4270 TERMAN DR #205
BETTY P J LEE	1106 HAMILTON AVE
BEYOND INTERIORS	500 E MEADOW DR
BICKER & COMPANY CPAS	2221 EL CAMINO REAL
BILLE ET PLUME	65 KIRBY PL
BILLIE MOFFITT DESIGN	1437 HAMILTON AVE
BIOENERGY BALANCING CENTER	1239 CEDAR ST
BIRDCAGE PRESS	853 ALMA ST
BIRKETT HOUSE DESIGN	2130 YALE ST
BLACK DIAMOND SPORTS	162 UNIVERSITY AVE
BLANKA ABELIN	200 S CALIFORNIA AVE #190
BLOOM	2820 ROSS RD
BLOOMINGDALE'S	180 EL CAMINO REAL #A1

BLOOMS BY NICOLE	3733 CARLSON CIR
BLOSSOM BIRTH SERVICES	299 S CALIFORNIA AVE #120
BLOSSOM DECOR	3062 WAVERLEY ST
BLUE KITE BRAND SOULTIONS	318 EMERSON ST #2
BLUE SKY - OUTDOOR	230 PORTAGE AVE
BLUMOON BAMBOO	4250 EL CAMINO REAL #C325
BODY KNEADS	810 SAN ANTONIO RD
BODY KNEADS SPA AND SALON	810 SAN ANTONIO RD
BOGNER PRODUCTIONS	544 GREER RD
BON APPETIT MANAGEMENT CO.	100 Hamilton Ave., Ste. 400
BONNIE BROCK LANDSCAPE DESIGN	948 CLARA DR
BONSALL'S SHOES	3783 EL CAMINO REAL
BOOK DEVELOPERS	930 FOREST AVE
BOOKS & THINGS	1853 EDGEWOOD DR
BOOKS INCORPORATED	855 EL CAMINO REAL
BOSE FACTORY STORE	180 EL CAMINO REAL #H-145
BOTTLENOTES	555 HAMILTON AVE #125
BOUM! JEWELRY	2376 BRYANT ST
BPI	900 WELCH RD #205
BPVENTURES	342 HIGH ST
BRAD LOZARES GOLF SHOP	1875 EMBARCADERO RD
BRAFF DESIGNS	805 GARLAND DR
BRAUER MEDICAL CLINIC	630 UNIVERSITY AVE
BRENDA LEBANC SKIN CARE	345 SHERIDAN AVE #223
BRIGHT SPOTS	3351 ALMA ST #201
BRIGHTON COLLECTIBLES	180 EL CAMINO REAL #F180
BROOKS BROTHERS	180 EL CAMINO REAL #M383
BROOKSTONE GIFTS	180 EL CAMINO REAL #D91
BRUCE CAMENZIND ENTERPRISES	792 MONTROSE AVE
BRYANT STREET GALLERY	532 BRYANT ST
BUCKLES SMITH ELECTRIC	796 SAN ANTONIO RD
BURBERRYS LIMITED	180 EL CAMINO REAL #130
BYTE CLOTHING	765 SAN ANTONIO RD #58
C M WASSON COMPANY	423 CHAUCER ST
C V THERAPEUTICS	3172 PORTER DR
CA PINBALL COMPANY	759 KENDALL AVE
CABINETS BY DESIGN	864 SAN ANTONIO RD
CACHE	180 EL CAMINO REAL #D124
CAFE' TAXIM	423 UNIVERSITY AVE
CALIFORNIA BACH SOCIETY	555 WAVERLEY ST
CALIFORNIA PAINT COMPANY	360 S CALIFORNIA AVE
CALIFORNIA SHOE/LUGGAGE REPAIR	556 EMERSON ST
CALIFORNIA STATE AUTO ASSOC.	430 FOREST AVE
CALIFORNIA YOGA CENTER	541 COWPER ST #C
CALVIN TRAN	540 UNIVERSITY AVE #150
CAMENZIND DREDGING	792 MONTROSE AVE
CAMENZIND DREDGING INC	792 MONTROSE AVE
CAMILLA OLSON	805 MELVILLE AVE
CAMILLE'S FLOWERS	3716 ORTEGA CT
CANARY FOUNDATION	1501 S CALIFORNIA AVE #2500
CANTERBURY LANE	1470 SAND HILL RD #408
CAPAY VALLEY FARM SHOP	100 FOREST AVE

CARINA'S CREATIONS JEWELRY	1022 WEBSTER ST
CARLOS RUIZ	933 EMERSON ST
CARLSEN MOTOR CARS	1730 EMBARCADERO RD
CARLSEN SUBARU	4180 EL CAMINO REAL
CARNESCO	378 CAMBRIDGE AVE #M
CAROL ANN PULLIAM	3176 MADDUX DR
CAROL BLUMBERG	620 SAND HILL RD #405A
CAROL J. JENSEN	4009 ORME ST
CAROL SIMONE	1011 FULTON ST
CAROLINE ADLER	2484 BRYANT ST
CAROLYN HOFSTETTER	850 WEBSTER ST #920
CAROLYN IRENE BOOTH SANTO	933 EMERSON ST
CARPETWORKS	4017 FABIAN WAY
CARROLL HOWELL HARRINGTON	830 MELVILLE AVE
CARYN WHITE PHOTOGRAPHY	2875 EMERSON ST
CASSIS	206 HOMER AVE
CATHOLIC CHARITIES CYO	3000 ALEXIS DR
CATHY GANNES PHOTOGRPHY FRMNG.	2195 AMHERST ST
CECILIA ANN HOOTON	1661 MARIPOSA AVE
CEDIDE OLCAY	315 HAMILTON AVE
CEIBA DESIGNS	2390 HANOVER ST
CELMA QUEIROZ KIRKWOOD	428 GUINDA ST
CENTER FOR CONTINUING STUDY	132 HAMILTON AVE
CENTURY THEATRES	3000 EL CAMINO REAL
CENTURY WINE & LIQUOR	3163 MIDDLEFIELD RD
CENTURY WINE & SPIRITS	3163 MIDDLEFIELD RD
CHABAD OF GREATER SOUTH BAY	3070 LOUIS RD

CHARLSETON SHOPPING CENTER	121 Spear Street, Ste. 250
CHEVRON SERVICE STATIONS	3897 EL CAMINO REAL
CHEVRON SERVICE STATIONS	3972 EL CAMINO REAL
CHICO'S	388 UNIVERSITY AVE
CHINESE CULTURE & ART HER. FDT	1010 CORPORATION WAY
CHRISTIAN SCIENCE READING ROOM	459 S CALIFORNIA AVE
CHRISTINA PAHL	909 RAMONA ST
CHRISTOPHER H. JOY, D.M.D.	668 HOMER AVE
CHRISTOPHER JOHN MACIE	4161 EL CAMINO WAY #A
CHRISTOPHER S.& ADRIENNE F.AMM	1621 CHANNING AVE
CHRISTOPHER'S CRYSTAL GEMS	100 ADDISON AVE
CHURCH OF SCIENTOLOGY	150 GRANT AVE #C
CIELO	475 UNIVERSITY AVE
CIELO	477 UNIVERSITY AVE
CIGAR HOUSE	393 S CALIFORNIA AVE
CINDY S MATTESON DR	540 UNIVERSITY AVE
CIRRUS PRESS	171 BRYANT ST #J
CITRUS LANE	3170 WAVERLEY ST
CITY OF PALO ALTO	250 HAMILTON AVE
CLARE MALONE PRICHARD	1000 ELWELL CT #150A
CLASSIC KITCHENS	4335 EL CAMINO REAL
CLASSIC PLUMBING FIXTURES	475 JAMES RD
CLASSIC RESIDENCE BY HYATT	600 SAND HILL RD
CLAUDIA HUBER TOMPERT	514 HIGH ST #6

CLEAR SKIN CLINIC	4020 FABIAN WAY #305
CLOTHING BY R.W. SCHWOCK	3875 PARK BLVD #2
CLUB ONE	3921 FABIAN WAY
CMK AUTOMOTIVE	906 INDUSTRIAL AVE
COACH STORES	180 EL CAMINO REAL #361
COHO CATERING	459 LAGUNITA DR #1
COLBURN DESIGN	1944 WAVERLEY ST
COLBY SYSTEMS	2991 ALEXIS DR
COLDWATER CREEK	180 EL CAMINO REAL #850
COLLECTIVE CREATIONS	4335 EL CAMINO REAL #201
COLLECTIVE CREATIONS	844 E CHARLESTON RD
COLLINS AND KRIEG	1212 FULTON ST
COLOR BURST FLOWER MARKET	477 FOREST AVE
COMMITTEE OF 100 FOR TIBET	527 HALE ST
COMMON GROUND GARDEN SUPPLY	559 COLLEGE AVE
COMMUNITY SKATING	3009 MIDDLEFIELD RD
COMPANY FOOD	3343 SAINT MICHAEL CT
COMPASS GROUP	901 S CALIFORNIA AVE
COMPASS GROUP	925 PAGE MILL RD
CONNIE HO, MD, PC	882 EMERSON ST #B
CONTINENTAL CATERERS	918 INDUSTRIAL AVE
CONTROLLED THERMAL PROCESSING	2415 EMBARCADERO WAY
CONVIVIALITY BY JESSA	1618 SAND HILL RD #312
COOPER & COOPER PUBLISHING	1101 MIDDLEFIELD RD
CORE STUDIO	2695 MIDDLEFIELD RD
COREY B KATZ	529 MATADERO AVE #2
CORINNA MORI DESIGN	841 SYCAMORE DR
CORKSCREW.COM	3717 ORTEGA CT

COUNTRY SUN NATURAL FOODS	440 CALIFORNIA AVE.
COUPA COSAS CORPORATION	536 RAMONA ST
CRAIG DESIGN ASSOCIATES	101 WAVERLEY ST
CRATE & BARREL	180 EL CAMINO REAL #530
CREATE IT CERAMICS & MOSAIC ST	855 EL CAMINO REAL #108
CREATIVE DESIGNS	900 WELCH RD #402
CREATIVE WORKS	3747 REDWOOD CIR
CROSSFIT PALO ALTO	327 KINGSLEY AVE
CROSSROAD WORLD MARKET	720 SAN ANTONIO RD
CROWNE PLAZA CABANA HOTEL	4290 EL CAMINO REAL
CSG/BETTER HEARING CENTER	480 LYTTON AVE
CULTURE ORGANIC FROZEN YOGURT CVS #3935	340 S CALIFORNIA AVE

CVS #9984	855 EL CAMINO REAL
CVS/PHARMACY	2701 MIDDLEFIELD ROAD
CVS/PHARMACY	352 UNIVERSITY AVE
CYNTHIA DENISE CHIN-LEE	855 EL CAMINO REAL
CYPRESS NATUROPATHIC MEDICINE	666 WILDWOOD LN
D & M MOTORS	359 MIDDLEFIELD RD
D MCCLUNG ESTATE & JEWELRY	190 CHANNING AVE
DADOO KIDS	700 WELCH RD #102
DALIS	619 TENNYSON AVE
	970 PALO ALTO AVE

DANCE CONNECTION	4000 MIDDLEFIELD RD #L5
DANIEL ALEXANDRU WAGNER	1613 MARIPOSA AVE
DAR AMPLIFICATION	940 HIGH ST
DARRELL ALOYSIUS DANG	500 MIDDLEFIELD RD
DAVE'S AUTO REPAIR	830 E CHARLESTON RD
DAVID BACHELDER SISSON	469 FERNANDO AVE
DAVID L.& BONNIE POLLARD	2450 SOUTH CT
DAWNING DAY MUSIC	3858 TIMLOTT CT
DAY ONE CENTERS	855 EL CAMINO REAL
DE NOVO FINE JEWELRY	250 UNIVERSITY AVE
DEA BURMEISTER	541 COWPER ST #C
DEAN W.CLARK,DDS	2875 MIDDLEFIELD RD
DEBORAH ELIZABETH WERTER	777 WELCH RD #B
DEBORAH'S COLLECTION	100 ADDISON AVE
DEE DEE RANCH	934 RAMONA ST
DELIGHT	2323 BIRCH ST
DENNIS IRWIN ILLUSTRATION/DSNG	1251 COLLEGE AVE
DESIGN STAGES	2190 BARBARA DR
DESIGN WITHIN REACH	447 UNIVERSITY AVE
DESIGNER IDEAS	644 MAYBELL AVE
DESIGNER PURSES BY JODEE	2599 EMERSON ST
DESIGNS BY DAVINA	3525 GREER RD
DESIGNS BY MYRNA	833 HAMILTON AVE
DESIGNS BY NANCY	1011 HUTCHINSON AVE
DESTINO DAY SPA	4335 EL CAMINO REAL #A
DI MODA	125 UNIVERSITY AVE #90
DINAH'S MOTOR HOTEL	4261 EL CAMINO REAL
DINEH'LADY DESIGN	295 GALVEZ ST
DIVERSIFIED DRAPERY PRODUCTS	3801 MIRANDA AVE
DIVERSIFIED DRAPERY PRODUCTS	50 EMBARCADERO RD
DOG-GONE GOOD!	466 RUTHVEN AVE
DOHATSUTEN	799 SAN ANTONIO RD
DON ENGLISH	650 GILMAN ST
DONALD DOUGLAS HENRIETAS SKIN	611 COWPER ST
DONNA M KILIAN	229 HAMILTON AVE
DORIS HELGA FISCHER-COLBRIE	812 SEALE AVE
DOROTHY JANNINK	661 COWPER ST
DOUGLAS L PECK PHOTOGRAPHY	854 RORKE WAY
DOWNING DESIGNS	1400 HAMILTON AVE
DOWNTOWN PALO ALTO FARMRS MRKT	229 BRYANT ST
DR. KENNETH OWYANG	442 RAMONA ST
DREAKIYA	261 EL DORADO AVE
DREAMTIME DESIGNS	100 ADDISON AVE
DRIFTWOOD DELI & MARKET	3450 EL CAMINO REAL
DS NEWMAN SALON	2699 MIDDLEFIELD RD
DUET PLASTIC SURGERY A MED COR	1515 EL CAMINO REAL #D
DUTTON DESIGNS	507 HOMER AVE
DUXIANA PALO ALTO	534 BRYANT ST
EARLY LEARNING INSTITUTE	2800 W BAYSHORE RD
EDGE HAIR SALON	250 UNIVERSITY AVE #103
EDITH SOMMER	3492 JANICE WAY
EDITH V.ZITELLI	770 NORTHAMPTON DR

EDWARD M.HOLLIS	876 WARREN WAY
EDWARDS LUGGAGE	180 EL CAMINO REAL #C9
EFFECTS	418 WAVERLEY ST
EILEEN FISHER	180 EL CAMINO REAL #D114
EL CAMINO ANIMAL HOSPITAL	2951 EL CAMINO REAL
ELAINE GOLDMAN	3332 MIDDLEFIELD RD
ELBE RESTAURANT/RUDY'S PUB	117 UNIVERSITY AVE
ELECTRIC POWER RESEARCH INST.	3420 HILLVIEW AVE
ELEMENTAL STYLE	3790 EL CAMINO REAL #105
ELENA LAINE ADAMS	562 KENDALL AVE #16
ELI'S MARKET	3487 EL CAMINO REAL
ELITE AUTO PERFORMANCE	1963 EL CAMINO REAL
ELIZABETH ANN CODY	4030 TRANSPORT ST
ELIZABETH FERGASON	100 ADDISON AVE
ELIZABETH GAMBLE GARDEN CENTER	1431 WAVERLEY ST
ELIZABETH WEAL	3481 JANICE WAY
ELIZABETH WONG COMPANY	1849 WEBSTER ST
ELKS LODGE 1471	4249 EL CAMINO REAL
ELLEN JOANNE GUST	755 MAYVIEW AVE
EMPIRE VINTAGE CLOTHING	443 WAVERLEY ST
ENDOCRINE THERAPEUTICS	350 CAMBRIDGE AVE #250
ENERGY WEAR	435 ACACIA AVE
ENERON	550 IRVEN CT
ENVIRONMENTAL DESIGN	2385 WAVERLEY ST
EOC INSTITUTE	1520 SAND HILL RD #308
EPIFANIO JUAREZ DESIGN	437 KIPLING ST #200
EQUINOX FITNESS	435 ACACIA AVE
ERGO WORKS	420 OLIVE AVE
ERIN MCGARRY GALLERY	331 CURTNER AVE #K
ERMENEGILDO ZENGA	180 EL CAMINO REAL #157A
ERNA WENUS	2251 HIGH ST
ERNEST N. KAPLAN M.D.	1515 EL CAMINO REAL #D
ERNIE'S WINE & LIQUORS	3866 EL CAMINO REAL
ERNIE'S WINE LIQUOR	3870 EL CAMINO REAL
ESTER WINDOW SYSTEMS	425 PORTAGE AVE
ESTHER FEDER	455 GRANT AVE #7
ESTHER M GOKHALE	2439 BIRCH ST #1
EUROPEAN & ASIAN AUTO CENTER	111 HOMER AVE
EUROPEAN COBBLERY	410 S CALIFORNIA AVE
EVA PAAL ANTIQUES	100 ADDISON AVE
EVC DESIGN ASSOCIATES	3130 ALEXIS DR
EVEREST	940 INDUSTRIAL AVE
EVOLVE ART STUDIO	2390 CARMEL DR
EVOLVE DISCOVERY	3335 BIRCH ST
EXIT STAGE RIGHT	1074 ARROWHEAD WAY
EXPONENTIAL EDGE INC	228 HAMILTON AVE #300
EXPRESS STORES	180 EL CAMINO REAL #196
EYES OF THE AVENUE	479 UNIVERSITY AVE
FAMILY FASHION CUTS	3709 EL CAMINO REAL
FAMOUS BEAUTY SALON	3777 EL CAMINO REAL
FASHION CLASSICS	3340 COWPER ST
FASHION PASSION	180 EL CAMINO REAL #345

FASHION PASSION	425 UNIVERSITY AVE
FAST REPAIR	2127 EL CAMINO REAL
FEDEX OFFICE	249 S CALIFORNIA AVE
FEDEX OFFICE	3000 EL CAMINO REAL
FELICIA SNOW INTERIORS	1460 MIDDLEFIELD RD
FIBRE ARTS DESIGN STUDIO	935 INDUSTRIAL AVE
FIDDLESTICKS & IVORY MUSIC	3890 MAGNOLIA DR
FIMBRES BROTHERS	906 INDUSTRIAL AVE
FINANCIAL ENGINES	1804 EMBARCADERO RD
FISKER	4190 EL CAMINO REAL
FIVE STAR FORMULATORS	929 HIGH ST
FIVE TEN	510 WAVERLEY ST
FLORENCE A DE BRETAGNE	756 GARLAND DR
FLORENCE CATANIA PHOTOGRAPHY	85 ROOSEVELT CIR
FLOWERS BY EDIE	230 PARKSIDE DR
FOLLETT BOOKSTORES	180 EL CAMINO REAL #150
FONO ART	180 EL CAMINO REAL #717
FOOT LOCKER	3225 EL CAMINO REAL
FOOTHILL COMMUNITY COLLEGE	4000 MIDDLEFIELD RD
FOOTHILLS TENNIS & SWIMMING	3351 MIRANDA AVE
FOOTWEAR	463 UNIVERSITY AVE
FOR EYES OPTICAL	855 EL CAMINO REAL #83
FOREST SPA BOUTIQUE	325 FOREST AVE
FORM FITNESS	445 BRYANT ST
FORMA JEWELRY	360 W CHARLESTON RD
FORMS OF AMBER	755 MAYVIEW AVE
FRANCESCA 48	1635 BRYANT ST
FRETTE NORTH AMERICA	180 EL CAMINO REAL
FRIENDLY TAKEOVERS	2721 MIDTOWN CT #110
FRIENDS PALO ALTO CHILDRENS	1305 MIDDLEFIELD RD
FROM TEE TO GREEN	180 EL CAMINO REAL #78
FRY'S ELECTRONICS #1	855 EL CAMINO REAL, # 49
FULTUS CORP	1036 COLORADO AVE #2J
FUTURE SOUND	3337 EL CAMINO REAL
FX HOUSE ASSOCIATES	785 LOMA VERDE AVE
G L DI CAPELLO	4155 EL CAMINO WAY #B
GABRIEL DESIGN & INTERIORS	701 LA PARA AVE
GALERIE D'ART SYLVIE PLATINI	1625 HAMILTON AVE
GALLERY HOUSE	320 S CALIFORNIA AVE
GAME PLAN	1532 EDGEWOOD DR
GAMESTOP	370 UNIVERSITY AVE
GAP KIDS	180 EL CAMINO REAL #L228
GARDEN CLUB	1431 WAVERLEY ST
GARDEN COURT HOTEL	534 EMERSON ST
GARRY BAILEY	101 S CALIFORNIA AVE #D100B
GARY ZWEIG PHOTOGRAPHY	770 WELCH RD #380
GAYLE C.BRUGLER	100 ADDISON AVE
GAYLE C.BRUGLER	2041 WEBSTER ST
GELATO CLASSICO ITALIAN ICE	435 EMERSON ST
GENERAL NUTRITION CENTERS	855 EL CAMINO REAL
GEORGE W.COMMONS MEDICAL CORP	1515 EL CAMINO REAL
GERALD MASTELLER	859 LA PARA AVE

GERARDUS B.STAAL	635 MARION AVE
GERI MCGILVRAY ART STUDIO	2533 MIDDLEFIELD RD
GERTIE MELLON	4030 TRANSPORT ST
GERTRUDE REAGAN	967 MORENO AVE
GHILARDUCCI DESIGNS	2721 MIDTOWN CT #212
GIFTS & COLLECTIBLES	1421 DANA AVE
GITANE	855 EL CAMINO REAL #88
GITANE-FREEDOM OF STYLE	855 EL CAMINO REAL #88
GITTI'S FINE LINGERIE	547 BRYANT ST
GLEIM THE JEWELER	180 EL CAMINO REAL #111
GLEIM THE JEWELER	540 UNIVERSITY AVE #100
GLENDAS GARDENS	1074 MORENO AVE
GOING IN STYLE	180 EL CAMINO REAL BLVD #606
GOLDFINE'S	659 TENNYSON AVE
GOLDSMITH	541 EMERSON ST
GONE TO PIECES	229 HAMILTON AVE
GOOD LIFE	544 OXFORD AVE
GOOD SOUND PUBLISHING	295 OLIVE AVE
GORDON E & BETTY I MOORE FOUND	1661 PAGE MILL RD
GOULD DERMATOLOGY GROUP	750 WELCH RD #218
GRAVITY	544 EMERSON ST
GREAT AMERICAN FRAMING COMPANY	229 HAMILTON AVE
GREAT CLIPS FOR HAIR	3902 MIDDLEFIELD RD
GREENCITIZEN	161 HOMER AVE
GREENE	158 UNIVERSITY AVE
GREENHOUSE INTERIORS	2160 BYRON ST
GREGORY DEANE STUDIO	4075 TRANSPORT ST
GRETCHEN SCHROEDER HAIRSTYLIST	611 COWPER ST
GRYPHON STRINGED INSTRUMENTS	211 LAMBERT AVE
GUNDERSON TAYLOR DESIGN	1415 HAMILTON AVE
GYMBOREE STORE	180 EL CAMINO REAL #204
H & R BLOCK TAX SERVICES	2470 EL CAMINO REAL #1
HABITATCARE	871 BRUCE DR
HAIR BY MONIQUE SIGLINGER	493 LYTTON AVE
HAIR INTERNATIONAL	232 STANFORD AVE
HAIR SHAPER'S CLUB	453 S CALIFORNIA AVE
HAIR STYLING BY STEVE	2426 PARK BLVD
HALO-A BLOW DRY BAR	855 EL CAMINO REAL #73
HAN	452 UNIVERSITY AVE
HANDA DESIGNS	2899 SOUTH CT
HANDWERKS	913 CLARA DR
HANS IMPORTED CAR SERVICE	904 HIGH ST
HAROLDS AUTO UPHOLSTERY	4074 FABIAN WAY #3
HASBAGS	4282 SUZANNE DR
HEALTHSOUTH SPORTS REHAB CTRS.	730 WELCH RD #A
HEARTWOOD WINDOW & DOOR	750 SAN ANTONIO RD
HEATHER KRISTINE HARDING	619 CHANNING AVE
HEDY'S SKIN NAIL & BODY CARE	421 ALMA ST
HEINICHEN'S GARAGE	960 HIGH ST
HEMINGWAY	480 UNIVERSITY AVE
HENGHELD MOTOR COMPANY	762 SAN ANTONIO RD
HENRY LEE WILLIAMS	180 EL CAMINO REAL

HEPADNAVIRUS TESTING	706 BARRON AVE
HEWETT BURKARD ASSOCIATES	100 ADDISON AVE
HICKINGBOTHAM ENTERPRISES	868 LINCOLN AVE
HIGH STREET AUTOMOTIVE	904 HIGH ST
HIURA & HIURA DDS	689 COLORADO AVE
HOLISTIC PHYSICAL THERAPY	2170 STAUNTON CT
HOLLYPEARL	2246 HARVARD ST
HOMES BY RENATE	606 SANTA RITA AVE
HOMES REDEFINED	3179 GREER RD
HONEYS AND HEROES	855 EL CAMINO REAL #120
HOTEL KEEN	425 HIGH ST
HOTFLAG.COM, CAFEDVD.COM	2123 EL CAMINO REAL
HOWARD'S SHOES FOR CHILDREN	180 EL CAMINO REAL #198
HUI DOU	734 DE SOTO DR
HVS COLLECTIONS	100 ADDISON AVE
IDEAL HEALTHSPAN	145 N CALIFORNIA AVE #2
I'M NOT JUST A GIRL	462 FERNE AVE
IMPORTS WITHOUT BORDERS	524 PATRICIA LN
IN FULL BLOOM	555 LYTTON AVE #3
IN HER SHOES	855 EL CAMINO REAL
IN LADY'S BOUTIQUE	444 UNIVERSITY AVE
IN2CHANGE	870 E CHARLESTON RD #210
INGEBORG INFANTE	1110 MIDDLEFIELD RD
INGRID'S SUNTANNING	2417 PARK BLVD
INSTAFOTOS	300 PASTEUR DR
INTEGRITY OFFICE SOLUTIONS	2226 LOUIS RD
INTERIORS BY CLARA SHARPLESS	777 LA PARA AVE
INTERIORS BY KRISTINE	541 COWPER ST #B
INTERIORS FOR MODERN LIVING	212 HIGH ST
INTERNATIONAL SCHOOL OF THE PE	151 LAURA LN
INTERNATIONAL SPORTS IMAGES	143 CHURCHILL AVE
INTUITIVE CLIMATE CONTROL	2530 MARSHALL DR
INVITING SPACES BY KIM	467 HAMILTON AVE #21
IPANTIES.COM	1115 COLORADO AVE
IRENE ADELAIDE BEARDSLEY	1013 PARADISE WAY
ISABELLE MARIE TRAINER	3491 THOMAS DR
J & R ENTERPRISES	931 CELIA DR
J CREW STORE	180 EL CAMINO REAL #317
J D L A	750 WELCH RD #104
J FOSS	250 UNIVERSITY AVE
J JILL THE STORE	180 EL CAMINO REAL #607
J SALON	744 SAN ANTONIO RD #8
J.G. COLLECTIONS	804 FOREST AVE
J.P. PETERS ART	1021 RAMONA ST
JACK NADEL	2370 WATSON CT #100
JACKMANIA	3589 ARBUTUS AVE
JACQUIES SEW & SEW	3427 ALMA ST
JAMES COX, DDS	777 WELCH RD #H
JAMIL ORIENTAL CARPETS	431 S CALIFORNIA AVE
JANET B.WASSON	423 CHAUCER ST
JAY ALAN COMPANY	855 EL CAMINO REAL #14
JB CONCEPTS	505 CHANNING AVE

JEANESE ROWELL INTERIORS	308 BRYANT ST
JENNIFER CONVERTIBLES/LEATHER	383 UNIVERSITY AVE
JEROLD H LIPSON DDS MS	680 UNIVERSITY AVE
JEWISH STUDY NETWORK	3626 EL CAMINO REAL
JIFFY LUBE	4195 EL CAMINO REAL
JIFFY LUBE	4201 MIDDLEFIELD RD
J-INTERIORS	546 HILBAR LN
JJ&F Food Store & Deli	520 College Ave
JOANNA R WESTERFELD	1810 MIDDLEFIELD RD
JOANNE KOLTNOW	317 LELAND AVE
JOCELYN P.BAUM	909 HAMILTON AVE
JOEL R.BERGQUIST & MARGARET	2085 EMERSON ST
JOHN CHUNG'S HOBBIES	2468 INDIAN DR
JOHN KAZUO NAKATA	965 COLORADO AVE
JOHN THOMAS HAINES	332 TIOGA CT
JOS. A BANK CLOTHIERS	270 UNIVERSITY AVE
JOSEPHINE TERSINI SHUSTER	4250 EL CAMINO REAL #B414
JOST HVAC & SHEET METAL	412 OLIVE AVE
JOY HANA IMAI	619 FULTON ST
JOYE ENTERPRISE	470 ANTON CT
JSDF HOBBIES	1494 PITMAN AVE
JUDITH A.FROST & COMPANY	67 ENCINA AVE
JUDITH G.KLEINBERG	722 ASHBY DR
JUDITH MINNICK CONTENT	827 MATADERO AVE
JUICY COUTURE STORE	180 EL CAMINO REAL
JULIA NELSON-GAL FINE ARTS	400 MIDDLEFIELD RD
JULIAN CHASE HAIR DESIGNS	2343 BIRCH ST
JULIE JOMO	1409 DANA AVE
JULIET C. ANDERSON	50 EMBARCADERO RD
JUNNOON	150 UNIVERSITY AVE
JUST A PARTY GIRL	3066 PRICE CT
JUST TERRI	525 HAMILTON AVE #B
JUST THE TOUCH	540 JACKSON DR
JUST US CATERING	1310 BRYANT ST
JVC ENTERPRISES	4290 EL CAMINO REAL
K L COLLECTIONS	390 EVERETT AVE
KALEIDOSCOPE INTERIORS	852 AMES AVE
KANPAI	330 LYTTON AVE
KARA	457 KINGSLEY AVE
KAREN VANORS DOL WHITE	146 WALTER HAYS DR
KATE SPADE	180 EL CAMINO REAL #153
KATHARINE G.& EDWARD T.SICKEL	418 PALM ST
KATHERINE JANTZEN GLAZIER	1955 TASSO ST
KATHERINE KLEIN	525 HAWTHORNE AVE
KATHLEEN BOBICK	2603 ROSS RD
KATHRYN DUNLEVIE	1303 WAVERLEY ST
KATHRYN MARIE KERNS	1091 TANLAND DR #107
KATHRYN MARIE PERRY	513 ASHTON AVE
KEEBLE & SHUCAT PHOTOGRAPHY	261 S CALIFORNIA AVE
KEEBLE & SHUCAT PHOTOGRAPHY	290 S CALIFORNIA AVE
KEELAN DESIGNS	339 MANZANITA AVE
KELLY BARTHELEMY DESIGN	1929 CHANNING AVE

KELLY MOORE PAINTS	411 PAGE MILL RD
KEN'S GOOD BOOKS	4064 SUTHERLAND DR
KIEHL'S SINCE 1851	180 EL CAMINO REAL #152
KIM GRANT TENNIS	3005 MIDDLEFIELD RD
KIM'S NAIL CARE	540 EMERSON ST
KIMURA GALLERY	482 HAMILTON AVE
KINDRED SPIRITS	1868 BRET HARTE ST
KITSCH COUTURE	435 UNIVERSITY AVE
KMAS	1001 E CHARLESTON RD
KMR DESIGN	2389 RAMONA ST
KRAFT FURNITURE & SLEEP SHOP	3567 EL CAMINO REAL
KROYMANN ASSOCIATES	1 SOMERSET PL
KURTS & DORNS AUTO SERVICE	930 EMERSON ST
KUSAMURA BONSAI CLUB	3800 MIDDLEFIELD RD
KUSAMURA BONSAI CLUB	600 COLORADO AVE
LA BELLE SKIN CARE SALON	855 EL CAMINO REAL #95
LA BODEQUITA DEL MEDIO	463 S CALIFORNIA AVE
LA CREMA SPA BOUTIQUE	325 FOREST AVE
LA JOLIE NAIL SPA	364 S CALIFORNIA AVE
LA-BELLE EUROPEAN FACIAL SALON	180 EL CAMINO REAL #36
LACOSTE	180 EL CAMINO REAL #119
LAMBERT AVENUE RESTORATION	300 LAMBERT AVE
LARRY S BABY SAFETY SERVICES	3888 GROVE AVE
LAURA JACOBSON ART	4030 TRANSPORT ST #C32
LAUREN ARMSTRONG WILLIAMS	100 ADDISON AVE
LAURIE CHESTNUTT FLORALS	463 LYTTON AVE #C
LAURIKS & ASSOC.	3790 EL CAMINO REAL #103
LAVANYA	744 SAN ANTONIO RD #26
LAWRENCE YUEN CHIN	163 HAMILTON AVE
LE GARAGE	4285 MIRANDA AVE
LEAF & PETAL	439 S CALIFORNIA AVE
LEAGUE OF WOMEN VOTERS	953 INDUSTRIAL AVE #113
LEE JOHNSON COMPANY	3580 LA MATA WAY
LEEDER OF THE PACK	940 OLD TRACE RD
LEGAR SALON	334 S CALIFORNIA AVE
LEIKAM ENTERPRISES	530 KENDALL AVE #1
LES PETITS CADEAUX	415 UNIVERSITY AVE
LESLIE LAMBERT	4030 TRANSPORT ST #G
LETA MARIE HERMES	100 ADDISON AVE
L'ETOILE SKIN CARE	845 LA PARA AVE
LETTER PERFECT FINE STATIONERY	384 UNIVERSITY AVE
LIDIA SKIN CARE STUDIO	437 KIPLING ST #150
LIFE OUTSIDE THE BOX	4161 EL CAMINO WAY #A
LIFETIME POOLS INC.	910 SAN ANTONIO RD
LILLIAN CHUN INTERIOR DESIGN	1357 PITMAN AVE
LILLIAN LESNICK	731 CHRISTINE DR
LINDA JAY DESIGNS	3184 WAVERLEY ST
LINDA L.HOSFORD	100 ADDISON AVE
LINDA LOUISE NANSEN	100 ADDISON AVE
LIPPERT & LIPPERT DESIGN	580 HAWTHORNE AVE
LISA'S COUNTER CULTURE	645 BARRON AVE
LISHA LEE	2620 MARSHALL DR

LITAI WENG NUTRITION CONSULTNT	995 N CALIFORNIA AVE
LITTLE FUN & GAMES	2320 BRYANT ST
LITTLEGREENCYCLO	1161 EMBARCADERO RD
LITTLEGREENCYCLO	3500 DEER CREEK RD
LJH ENTERPRISES	375 OLIVE AVE
LND GLASS BEAD AND JEWELRY	3124 GENEVIEVE CT
L'OCCITANE	180 EL CAMINO REAL #660
LORAL SPACE SYSTEMS	3825 FABIAN WAY
LORINDA BADER REICHERT	81 KIRBY PL
LOUIS SPIEGEL	3979 BIBBITS DR
LOUIS VUITTON	180 EL CAMINO REAL #351
LOVEBIAN DESIGNS	619 CHANNING AVE
LOY D.MARTIN FINE CUSTOM FURN.	150 GRANT AVE #F
LSB PALO	180 EL CAMINO REAL #208
LUCKY BRAND DUNGAREES	180 EL CAMINO REAL #D83
LUCY	180 EL CAMINO REAL #D87
LUCY TRAEGER LTD	2300 WAVERLEY ST
LULULEMON USA	432 UNIVERSITY AVE
LULU'S	180 EL CAMINO REAL, # 300
LUMPIAHHH	824 SAN ANTONIO RD
LUX EYEWEAR	1805 EL CAMINO REAL #100
LUXE	100 ADDISON AVE
LYDIA B ZAVERUKHA	3921 FABIAN WAY
LYNDA LUMISH DESIGN	3872 GROVE AVE
LYONS LIMITED ANTIQUE PRINTS	855 EL CAMINO REAL #10
M B SERVICES	880 SAN JUDE AVE
MAACO AUTO PAINTING & BODYWORK	816 SAN ANTONIO RD
MAC'S SMOKE SHOP	322 UNIVERSITY AV
MACY'S DEPT STORES INC	180 EL CAMINO REAL, # 395
MACY'S MEN'S STORE	180 EL CAMINO REAL #J50
MAEVE ELLEN GROGAN	1319 HOPKINS AVE
MAEVE ELLEN GROGAN	609 COWPER ST #B
MAHIN AND COMPANY	350 S CALIFORNIA AVE
MAJESTIC GEMS INTERNATIONAL	180 EL CAMINO REAL #4
MANSOOR GORE JEWELERS	530 RAMONA ST
MARCIA ELIZABETH REHMUS	620 SAND HILL RD #428D
MARGERY SHARON MARGULIES	777 EMBARCADERO RD
MARGO MONTGOMERY & DEANE	540 SEALE AVE
MARGUERITE OLSON FLETCHER	197 BRYANT ST #3
MARIPAT K.WILKINS	2105 EMERSON ST
MARJ PITCHON MISFELDT DESIGN	2216 AMHERST ST
MARTHA BARRY INTERIORS	87 CRESCENT DR
MARTHA CASTILLO	772 CLARA DR
MARTHA S.WHITNEY	3170 MACKALL WAY
MARTIN ALVIN ABRAM	620 SAND HILL RD #311D
MARY K. STAHL FINE ART	425 CREEKSIDE DR
MARY LOU MCCOURT	270 DAVENPORT WAY
MASSAGE THERAPY CENTER	368 S CALIFORNIA AVE
MATHEWS CARLSEN BODY WORKS	2480 FABER PL
MATRA RAJ	450 MELVILLE AVE
MAUREEN JANE MORAVICK	3125 STOCKTON PL
MAURICIOARIAS.COM	304 BRYANT ST

MAX MARA	180 EL CAMINO REAL #F187
MAXIMART PHARMACY	240 Cambridge Avenue
MAXTON MEN	2333 WILLIAMS ST
MCLAREN	4192 EL CAMINO REAL
MCROSKEY AIRFLEX MATTRESS	220 HAMILTON AVE
MECHINACA AUTOMOTIVE	788 SAN ANTONIO RD
MEDALLION RUG GALLERY	323 UNIVERSITY AVE
MEDICAL PLAZA PHARMACY	1101 WELCH RD
MEET BOOKS	806 SEALE AVE
MEISSNER AUTOMOTIVE	811 E CHARLESTON RD
MERIDIAN I.D.	847 E GREENWICH PL
MERIVALE	804 FOREST AVE
MERLIN ANTIQUES	734 TORREYA CT
MESA ASSOCIATES	2600 EL CAMINO REAL #224
MICHAEL KORS	180 EL CAMINO REAL #12
MICHAEL LUCICH INTERNATIONAL	460 UNIVERSITY AVE
MICHAEL TOMPERT	514 HIGH ST
MICHAELA'S FLOWER SHOP	453 WAVERLEY ST
MICHAL SHALON DESIGNS	155 ISLAND DR
MICHELLE B.FURBERSHAW	171 FOREST AVE
MICROAIRE SURGICAL INSTRMNT	1820 EMBARCADERO RD
MIDAS MUFFLER SHOP	4200 EL CAMINO REAL
MIDORI STUDIO	971 CELIA DR
MID-PENINSULA ACCESS	900 SAN ANTONIO RD
MIDTOWN SHOE REPAIR	2796 MIDDLEFIELD RD
MIKE'S BICYCLE CENTER	3001 EL CAMINO REAL
MILLER STEIN INCORPORATED	4151 MIDDLEFIELD RD #100
MILLIE FLORES HAIR DESIGN	2343 BIRCH ST
MILLS THE FLORIST	235 UNIVERSITY AVE
MIMI & TAYLOR SALON	522 BRYANT ST
MINA CONCEPTS	1037 RAMONA ST
MINUTE KEY INC.	340 PORTAGE AVE
MIRABELLE JEWELERS	550 HAMILTON AVE #226
MIRIAM E.& WILLIAM R.WEHREND	746 GREER RD
MIRIAM'S WELL	3921 FABIAN WAY
MISSION 6 SALON	460 CAMBRIDGE AVE
MOBILEKANGAROO	2115 EL CAMINO REAL
MODERN BOOK	494 UNIVERSITY AVE
MOLDAW FAMILY RESIDENCE	899 E CHARLESTON RD
MOLLIE STONE'S	164 S. California Ave
MOMEL INCORPORATED	875 BLAKE WILBUR DR
MONIKA STONE SKIN	1795 EL CAMINO REAL
MONTOYA JEWELRY & GIFTS	101 S CALIFORNIA AVE
MOONSTONE DREAMS	205 WILTON AVE
MRS PEOPLES	2126 UNIVERSITY AVE
MRS. MOSKOWITZ'S	1941 TASSO ST
MURRAY ANN KOCH	1466 DANA AVE
MUSEUM OF AMERICAN HERITAGE	351 HOMER AVE
MVLA TREES	50 EMBARCADERO RD
MY BLUE DOTS	262 SANTA RITA AVE
MY DIRECTOR'S CUT	3239 EL CAMINO REAL #200

MY GYM PALO ALTO	2655 MIDDLEFIELD RD
MYTE MEDIA CORPORATION	541 COWPER ST #D
MYWIN CENTER	414 ALDER LN
NAARTJIE CUSTOM KIDS	180 EL CAMINO REAL #210
NADINE PRIESTLEY PHOTOGRAPHY	1112 HAMILTON AVE
NAIL N'JOY	453 S CALIFORNIA AVE
NANCY BIEBEL ALEXANDER	435 SANTA RITA AVE
NANCY COWALL CUTLER INTERIOR	435 SHERIDAN AVE #303
NANCY FAYE RIFE	25 CHURCHILL AVE
NANCY MELTON INTERIORS	557 W CRESCENT DR
NANOO	855 EL CAMINO REAL #34
NATALIE SALON IV	539 ALMA ST
NATALYA BRENERMAN MINER	744 SAN ANTONIO RD #1
NATURAL HEALTH CALIFORNIA	616 UNIVERSITY AVE
NATURAL HEALTH RESOURCES	145 N CALIFORNIA AVE #2
NATURE REFINE	4156 HUBBARTT DR
NATURE'S ALLEY	2675 MIDDLEFIELD RD #C
NEFERTARI	750 W GREENWICH PL
NEIMAN MARCUS DEPARTMENT STORE	180 EL CAMINO REAL #401
NELSON ROBERT HOLCOMB	1433 ALMA ST
NEW URBAN GARDENS	667 KENDALL AVE
NEWTON PARK PUBLISHING	2225 E BAYSHORE RD #200
NIKE WOMEN	180 EL CAMINO REAL #6C
NINA BOGDAN	3921 SABIAN WAY
NINE MINUTE OIL & LUBE	3839 EL CAMINO REAL
NO. CALIF. 9/11 TRUTH ALLIANCE	4060 VERDOSA DR
NOERR PROGRAMS CORP.	180 EL CAMINO REAL #660
NORDSTROM DEPARTMENT STORE	180 EL CAMINO REAL #550
NORWELL	2250 PARK BLVD
NORZIN COLLECTIONS	486 UNIVERSITY AVE
NOTO MOTORS	906 INDUSTRIAL AVE
NOUVELLE BRIDAL BOUTIQUE	3705 EL CAMINO REAL
NTT SKIN	460 S CALIFORNIA AVE #100
OBD INCORPORATED	210 HIGH ST
OFJCC	3921 FABIAN WAY
OIL CHANGERS	780 SAN ANTONIO AVE
ONCOMDX LABORATORIES	2454 EMBARCADERO WAY
ONE INTERIORS	1181 LINCOLN AVE
ONE MILLION LIGHTS INC.	1461 DANA AVE
OPAL'Z	719 COLORADO AVE
OPPORTUNITIES	4275 MCKELLAR LN #9
OPULENCE HAIR LOUNGE	412 FLORENCE ST
OREN'S HUMMUS SHOP	261 UNIVERSITY AVE
OUT PATIENT CLINIC PHARMACY	300 PASTEUR DR #A100
P2PVENDING SERVICES	755 PAGE MILL RD #B
PACIFIC NATUROPATHIC	4153 EL CAMINO WAY #B
PACIFIC SKYLINE COUNCIL	1305 MIDDLEFIELD RD
PACIFIC SUNWEAR	180 EL CAMINO REAL #206
PACIFICOTTON	515 COWPER ST
PADRAC	101 ALMA ST #105
PALO ALTO AERO SERVICE	1901 EMBARCADERO RD #1
PALO ALTO ART CLUB	668 RAMONA ST

PALO ALTO AUTO REPAIR	3508 EL CAMINO REAL
PALO ALTO BICYCLES	171 UNIVERSITY AVE
PALO ALTO BIMMER	799 ALMA ST
PALO ALTO CAR WASH	841 EL CAMINO REAL
PALO ALTO CLINIC	795 EL CAMINO REAL
PALO ALTO CLUB	567 MELVILLE AVE
PALO ALTO COMMUNITY CHILD CARE	3990 VENTURA CT
PALO ALTO COMMUNITY CHURCH	3391 MIDDLEFIELD RD
PALO ALTO CONCOURS D'ELEGANCE	800 SAN ANTONIO RD #6
PALO ALTO CULTURAL CENTER	1313 NEWELL RD
PALO ALTO DENTAL SURGERY	4157 EL CAMINO WAY #B

PALO ALTO DOWNTOWN SHOPPING AND PROFESSIONAL ASSOCIATION	400 Mitchell Lane
PALO ALTO EYEWORKS	461 S CALIFORNIA AVE
PALO ALTO FINE GOODS	606 CHIMALUS DR
PALO ALTO FUEL SERVICE	1901 EMBARCADERO RD #13
PALO ALTO GERMAN CAR CORP	3939 EL CAMINO REAL
PALO ALTO HARDWARE	875 ALMA ST
PALO ALTO HILLS COUNTRY CLUB	3000 ALEXIS DR
PALO ALTO HISTORICAL ASSOC.	1213 NEWELL RD
PALO ALTO LASER & SKIN CARE	151 FOREST AVE
PALO ALTO MED FNDTN FOR HLTH	795 EL CAMINO REAL
PALO ALTO MEDICAL FOUNDATION	795 EL CAMINO REAL
Palo Alto Medical Foundation Pharmacy	795 El Camino Real
PALO ALTO PLUMBING HEATING A/C	716 SAN ANTONIO RD #F
PALO ALTO RUG GALLERY	500 UNIVERSITY AVE
PALO ALTO SPEEDOMETER & A/C	718 EMERSON ST
PALO ALTO SPORT SHOP & TOYS	526 WAVERLEY ST
PALO ALTO TOY SHOPPE	542 HILBAR LN
PALO ALTO TROPHY/T-SHIRT STOP	4074 FABIAN WAY
PALO ALTO VIOLINS	345 S CALIFORNIA AVE #7
PAMELA GARLICK	100 ADDISON AVE
PAMELA GARLICK	340 LOWELL AVE
PAMELA PENNINGTON STUDIOS	947 INDUSTRIAL AVE
PAPER PIZZAZZ	4150 MIDDLEFIELD RD
PAPERWHIRL	230 UNIVERSITY AVE
PAPYRUS	180 EL CAMINO REAL #11
PARADISE VALLEY SPAS	2001 EL CAMINO REAL
PARASOL BEAUTY ATELIER	470 HAMILTON AVE
PARENTS LEADERSHIP INSTITUTE	555 WAVERLEY ST #23
PARK AUTOMOTIVE SERVICE	3040 PARK BLVD
PARK AVENUE MOTORS	3241 PARK BLVD
PARROT CELLULAR	476 UNIVERSITY AVE
PARTNERSHIPS FOR A SUSTAINABLE	1023 CORPORATION WAY
PASSION FLOWER STUDIO	1554 WALNUT DR
PATAGONIA	525 ALMA ST
PATIO @ RUDY'S	412 EMERSON ST
PATRICIA A.JARMAN	2580 EMERSON ST
PATRICIA WONG MD	735 COWPER ST
PATRICK JAMES	855 EL CAMINO REAL #40
PAUL INTERIORS	780 SEALE AVE

PAUL'S EUROPEAN COBBLERY	410 S CALIFORNIA AVE
PC DESIGN	228 FULTON ST
PEAK SURGICAL	2464 EMBARCADERO WAY
PEMBROKE	4073 BEN LOMOND DR
PENINSULA BEAUTY SUPPLY	250 UNIVERSITY AVE
PENINSULA CHILDRENS CENTER	3860 MIDDLEFIELD RD
PENINSULA HARDWARE	2676 MIDDLEFIELD RD
PENINSULA MUSIC AND REPAIR	4333 EL CAMINO REAL
PENINSULA OPTICAL	417 UNIVERSITY AVE
PENINSULA PEACE & JUSTICE CTR.	625 HAMILTON AVE
PENINSULA PIANO BROKERS	4333 EL CAMINO REAL
PEONY	1844 HAMILTON AVE
PERSPECTIVES IN WOOD	2417 EMBARCADERO WAY
PET FOOD DEPOT	3127 EL CAMINO REAL
PET FOOD EXPRESS	3910 MIDDLEFIELD RD
PETE MOFFAT CONSTRUCTION	947 INDUSTRIAL AVE
PETERSEN SUPPLY COMPANY	876 BOYCE AVE
PFW ENTERPRISES	2140 COLUMBIA ST
PHILHARMONIA BAROQUE ORCHESTRA	625 HAMILTON AVE
PHOTOGRAPH & FRAME	2086 EL CAMINO REAL
PHOTOGRAPHY RICK SAAL	896 ALTAIRE WALK
PHYLLIS	540 RAMONA ST
PIAZZA'S FINE FOODS	3922 Middlefield Rd
PICABOO CORPORATION	654 HIGH ST #200
PICCADILLY PETS	512 HAMILTON AVE
PIERCE COMPANY	1135 GUINDA ST
PILLOW-POURRI	703 ADDISON AVE
PINKBERRY	180 EL CAMINO REAL #C14
PLANTOYS	508 UNIVERSITY AVE
PLUMITA JEWELRY	440 SEQUOIA AVE
POLA	1050 N CALIFORNIA AVE
POLO RALPH LAUREN	180 EL CAMINO REAL #650
POMEGRANATE	366 S CALIFORNIA AVE #24
POT OF GOLD	1560 SAND HILL RD #405
POTTERY BARN	180 EL CAMINO REAL #V800
POTTERY BARN KIDS	180 EL CAMINO REAL #D88
PRANITA SINGH	933 EMERSON ST
PRECIOUS QUEST JEWELRY	3473 PARK BLVD
PRECISION AUTOMOTIVE SERVICE	439 LAMBERT AVE
PREMIER BOUTIQUE	534 RAMONA ST
PREMIER PERSONAL TRAINING	744 SAN ANTONIO RD #2
PRESIDENT BARBER SHOP	490 UNIVERSITY AVE
PRESTIGE	855 EL CAMINO REAL #37
PRESTON PIPELINES	1101 WELCH RD
PRINTABLES	219 SEALE AVE
PROJECT HAPPINESS	261 HAMILTON AVE #404
PROJECTJ CORPORATION	855 EL CAMINO REAL #350-5
PROMETHEUS ATHLETICS	716 SAN ANTONIO RD #L
PROSPECTACLES OPTOMETRY	180 EL CAMINO REAL #605
PRS INTERNATIONAL	100 ADDISON AVE
PURI DESIGN	974 VAN AUKEN CIR
P-VERS CLOTHING LIFE	3275 ALMA ST

PWC	962 VAN AUKEN CIR
QUAIL HILL DESIGN	898 NORTHAMPTON DR
QUANTUM AGE WATER	1239 CEDAR ST
RACKET WEB	533 RAMONA ST #A
RADHA SOAMI SOCIETY	461 FLORENCE ST
RAMONA NAILS	530 RAMONA ST #B
RAPHAEL DESIGNS	880 UNIVERSITY AVE
RAS DESIGN AND FINE ART	759 TALISMAN CT
RAT DOG INK	409 PRATT LN
RC EFFECTS	528 UNIVERSITY AVE
REACH FITNESS CLUB	707 HIGH ST
READYBUZZ	2999 EL CAMINO REAL
REBEL METTLE	4250 POMONA AVE
REBUILDING TOGETHER PENINSULA	180 EL CAMINO REAL
RED DOOR MOVIES	2123 EL CAMINO REAL
RED MANGO	429 UNIVERSITY AVE
RED THISTLE DANCERS	1750 UNIVERSITY AVE
REGENCY TEAK	230 PORTAGE AVE
RENINGER	817 COLORADO AVE
REO & COMPANY	1519 BYRON ST
RESALE DESIGN CONSULTANTS	1595 CHANNING AVE
RESTORATION HARDWARE	281 UNIVERSITY AVE
RESUMES BY LYNDA	4131 EL CAMINO REAL #8
REVETI JEWELS	851 MOANA CT
RG PARTNERSHIP	3921 FABIAN WAY
RGB LANDSCAPES	66 MORTON WAY
RIBBONS	921 LINCOLN AVE
RICE PAPER	38 ERSTWILD CT
RICE THAI CUISINE	3924 EL CAMINO REAL
RINA ZOLOTUSKY	3120 MIDDLEFIELD RD
ROBERT KROHN SHOES	855 EL CAMINO REAL #20
ROBOTEX	1400 PAGE MILL RD #100
ROBYN HATCH CRUMLY	850 WEBSTER ST #723
ROCHELLE FORD METAL SCULPTOR	1155 WAVERLEY ST
ROD SEARCEY PHOTOGRAPHY	3642 ARBUTUS AVE
ROLLER HAPGOOD & TINNEY	980 MIDDLEFIELD RD
ROMI	624 EMERSON ST
RONALD A ANDREWS	481 NEVADA AVE
RONALD MC DONALD HOUSE	520 SAND HILL RD
ROSITA CORDERO VIGDOR	50 EMBARCADERO RD
RUCHUN LIN	3260 MORRIS DR
RUSKIN GARDENS COMPANY	174 WALTER HAYS DR
RUTHANN RICHTER HAMMER	3512 RAMONA ST
RUTH'S ANTIQUES	100 ADDISON AVE
RUTI CLOTHING AND LIFESTYLE	2102 OLD PAGE MILL RD
S. PREMA WYLIE	667 COWPER ST
SABRA JEWELRY DESIGN	670 SAN ANTONIO RD #24
SAGE R&D	3161 ALMA ST
SAINT MICHAELS ALLEY	140 HOMER AVE
SAINT MICHAELS ALLEY	806 EMERSON ST
SAMBA GLOW	520 BRYANT ST
SAN ANTONIO AUTO SERVICE	699 SAN ANTONIO RD

SANANTONIO CABINETS	716 SAN ANTONIO RD #H
SANDRA HENNEMAN	972 HAMILTON AVE
SANFORD RESS	253 SEALE AVE
SANGHATI	739 ADDISON AVE
SAY RAY FOREIGN AUTO SERVICE	3251 ASH ST
SBSC CRAFTS	1095 CHANNING AVE
SBSC CRAFTS	1140 COWPER ST
SBSC CRAFTS	2621 GREER RD
SBSC CRAFTS	670 E MEADOW DR
SCANDIA DOWN SHOPS	180 EL CAMINO REAL #132
SCANDINAVIAN ARTISAN XCHANGE	2091 PARK BLVD
SCHAUB'S MEAT FISH & POULTRY	221 UNIVERSITY AV
SCIENCE OF THE SOUL	461 FLORENCE ST
SEASON'S	440 PORTAGE AVE
SELIX FORMAL WEAR	164 UNIVERSITY AVE
SENTREHEART	2468 EMBARCADERO WAY
SEPHORA	180 EL CAMINO REAL #355
SEQUOIA HOSPITAL GIFT SHOP	725 WELCH RD
SEUNG K KIM, MD	1515 EL CAMINO REAL #F
SF AUXILIARY FOR CHILDREN	400 HAMILTON AVE #340
SHADY LANE GALLERY	441 UNIVERSITY AVE
SHALINI DESIGN	1022 N CALIFORNIA AVE
SHANTI PRODUCTIONS	1081 MORENO AVE
SHARLEEN ISACKSON FIDDAMAN	2255 WEBSTER ST
SHARON CHINEN	814 RICHARDSON CT
SHARON DOUGHERTY INTR DESIGNER	159 GREENMEADOW WAY
SHASKA	472 UNIVERSITY AVE
SHELL SERVICE STATIONS	1161 EMBARCADERO RD
SHELL SERVICE STATIONS	2200 EL CAMINO REAL
SHELL SERVICE STATIONS	3601 EL CAMINO REAL
SHELLEY GEORGE JONES DESIGN	786 MELVILLE AVE
SHEMAINE PAGE DESIGNS	826 WINTERGREEN WAY
SHERATON HOTEL	625 EL CAMINO REAL
SHERMANS AUTO SERVICE	710 SAN ANTONIO RD
SHEYNA TRADING COMPANY	116 HAMILTON AVE
SHOBANA	3000 ALEXIS DR
SHREVE & COMPANY JEWELERS	180 EL CAMINO REAL #329
SHUTTER PUBLISHING GROUP	2456 W BAYSHORE RD #2
SIERRA CLUB LOMA PRIETA CHAPTR	3921 E BAYSHORE RD #204
SIGNOSTICS INC	1717 EMBARCADERO RD
SIGONA FARMERS MKT	542 RAMONA ST
SIKH FOUNDATION	580 COLLEGE AVE
SILVER CINEMAS	430 EMERSON ST
SILVERLEAF ANTIQUES	100 ADDISON AVE
SIMPLY BE SALON	528 UNIVERSITY AVE
SINGULARITY HUB	806 SEALE AVE
SIZTO TECH CORPORATION	892 COMMERCIAL ST
SKADDEN ARPS SLATE MEAGHER	525 UNIVERSITY AVE #520
SKIN & BODY BY CHRISTINE	2750 MIDDLEFIELD RD #200
SKIN SPIRIT	701 EMERSON ST
SKY MAGIC PRODUCTIONS/SKY MAGI	4377 MILLER AVE
SKYLINE DESIGN STUDIO	4020 FABIAN WAY #301

SKYSHADES	2468 W BAYSHORE RD #10
SLEEP TRAIN MATTRESS CENTER	2098 EL CAMINO REAL
SMART LOOK	156 HAMILTON AVE #A
SMART TUBE	1229 CLARK WAY
SMART-REG INT'L INC	990 SAN ANTONIO RD
SMITH-ANDERSEN GALLERY	440 PEPPER AVE
SNIP-ITS	855 EL CAMINO REAL #125
SNOWDROP ACCESSORY	275 VENTURA AVE #31
SOLE DI PARADISO	855 EL CAMINO REAL #65
SOLID ELECTRIC	265 S CALIFORNIA AVE
SOLSTICE MARKETING CONCEPTS	180 EL CAMINO REAL #857
SONA HAVLIK DESIGN	892 NORTHAMPTON DR
SONY STYLE	180 EL CAMINO REAL #359
SOO LING CHAN	3469 GREER RD
SOOK JIN KIM	180 EL CAMINO REAL #6
SOULFUL MOON	329 RAMONA ST
SOUTER STUDIOS	4189 BAKER AVE
SOUTH BAY COURSE OFFICE	1101 EMBARCADERO RD
SPAZIO TR INC.	180 EL CAMINO REAL BLVD #385
SPIRIT HALLOWEEN SUPERSTORES	355 UNIVERSITY AVE
SPORTISSIMO	855 EL CAMINO REAL
SPORTS GALLERY	318 UNIVERSITY AVE
SPRINT NEXTEL	499 UNIVERSITY AVE
SQUAREHIT TENNIS	1121 SAN ANTONIO RD
STA TRAVEL	267 UNIVERSITY AVE
STANDFORD PHOTO	4250 EL CAMINO REAL #D337
STANFORD ARCO AUTO CARE	1963 EL CAMINO REAL
STANFORD CANCER CENTER PHARMACY	MC 5834
STANFORD ELECTRIC WORKS	301 HIGH ST
STANFORD FLORAL DESIGN	433 HAMILTON AVE
STANFORD FLORAL DESIGN	620 EMERSON ST
STANFORD HOSPITAL	300 PASTEUR DR
STANFORD MYOFASCIAL INSTITUTE	260 SHERIDAN AVE #B40
STANFORD PET CLINIC	4111 EL CAMINO REAL
STANFORD THEATRE FOUNDATION	180 EL CAMINO REAL, # 3
STANFORD UNIVERSITY HOSPITAL	211 QUARRY RD #N121
STEPHANIE ANDERSON INTERIOR	1103 FOREST AVE
STEPHEN EDWARD LONGSTRETH	2800 EMERSON ST
STEPHEN HEALY JOYNES	2621 SOUTH CT
STICH-TE NAKU WEAVING	4161 ALMA ST
STRAVA	609 COWPER ST #A
STREETFX CUSTOMS	748 SAN ANTONIO RD
STREETWERKE	292 LAMBERT AVE
STUDIO KICKS PALO ALTO	796 SAN ANTONIO RD
SUANN M & KEVIN G KISER AUTHOR	356 GRANT AVE
SUD WEST PARTNERS	1030 PALO ALTO AVE
SUE YOUNG PARK	439 WAVERLEY ST
SUMFRAME INC	628 EMERSON ST
SUMMERWINDS NURSERY	725 SAN ANTONIO RD
SUN SHADE OPTIQUE	180 EL CAMINO REAL BLVD #660
SUNDANCE FLYING CLUB	1901 EMBARCADERO RD #109
SUNDAY PRESS BOOKS	450 MONROE DR

SUNGLASS HUT	180 EL CAMINO REAL #168
SUNGLASS HUT	180 EL CAMINO REAL #192
SUNGLASS HUT	250 UNIVERSITY AVE #104
SUNRISE OF PALO ALTO	2701 EL CAMINO REAL
SUNRISE WEBSTER HOUSE	401 WEBSTER ST #60062
SUNWASHED	2323 HARVARD ST
SUR LA TABLE	855 EL CAMINO REAL #57
SUSAN MURRAY DENNIS	1274 PITMAN AVE
SUSTAINABLE HOME	471 MATADERO AVE
SUZANNE MANTELL	1965 COWPER ST
SWATCH WATCH	180 EL CAMINO REAL #151
SWEET BUDS FLORAL	339 KELLOGG AVE
TAILOR MAID	180 EL CAMINO REAL #675
TALBOTS STORE	180 EL CAMINO REAL #820
TALY GERZBERG-KATZ	3729 ORTEGA CT
TALY SHEMY	3921 FABIAN WAY
TASHI GIFT SHOP	25 CHURCHILL AVE
TED MOCK CREATIVE PHOTOGRAPHY	415 UNIVERSITY AVE
TEMPLE WINDOW SYSTEMS	425 PORTAGE AVE
TENNISTOWN & COUNTRY	855 EL CAMINO REAL #99B
TERASCOUT	1852 BRET HARTE ST
TERCERA GALLERY ONLINE	964 COLONIAL LN
TESLA MOTORS	3500 DEER CREEK RD
THE 3RD DOOR	131 LYTTON AVE
THE ACE OF SANDWICHES	3864 EL CAMINO REAL
THE BARF STORE.COM	350 MONROE DR
THE BIKE CONNECTION	2011 EL CAMINO REAL
THE BODY SHOP	180 EL CAMINO REAL #703
THE COIN BROKER	855 EL CAMINO REAL #91
THE CRESCENT COLLECTION	27 CRESCENT DR
THE DECISION EDUCATION FOUNDTN	745 EMERSON ST
THE DIGITAL GIRAFFE	932 BRYANT ST
THE GAP	180 EL CAMINO REAL #F165
THE HEALING LAB	460 S CALIFORNIA AVE #102
THE INDUSTRY HAIR ARTISTS	2426 PARK BLVD
THE MARTINDALE PRESS	345 FOREST AVE #406
THE MASTER COBBLER	855 EL CAMINO REAL #43
THE MAYFIELD HOUSE	855 EL CAMINO REAL #110
THE MODERN LIVING	524 UNIVERSITY AVE
THE NATURAL MATTRESS STORE	135 UNIVERSITY AVE
THE NORTH FACE	217 ALMA ST
THE OUGHTRED SOCIETY	2160 MIDDLEFIELD RD
THE PAPER DOLL HOUSE	2351 RAMONA ST
THE PAPER SHAK	1736 OAK CREEK DR #415
THE PETER FOX PHOTOGRAPHY	2844 RAMONA ST
THE PINK PILLOW	2751 BYRON ST
THE PLAY STORE	508 UNIVERSITY AVE
THE SCHOOL OF SLEEP MEDICINE	260 SHERIDAN AVE #100
THE TERRITORY AHEAD	180 EL CAMINO REAL #D71
THE UNEXPECTED GARDEN	461 MATADERO AVE
THE UPS STORE	2625 MIDDLEFIELD RD
THE UPS STORE	555 BRYANT ST

THE UPS STORE	855 EL CAMINO REAL #13A
THE VILLAGE COBBLER SHOP	825 EMERSON ST
THE WALKING STORE	855 EL CAMINO REAL #20
THE WINE ROOM	520 RAMONA ST
THE WORKSHOP BURGERS	233 UNIVERSITY AVE
THERANOS	3200 HILLVIEW AVE
THOMAS ANDREW FRANCO	2921 RAMONA ST
THOMAS SOLOMON ANGELO	195 BRYANT ST #B
THREE SISTERS FLOWERS	1048 COLORADO AVE
THREE STORY STUDIO	761 SOUTHAMPTON DR
TI GLOBAL PARTNERS	798 MONTROSE AVE
TIFFANY & COMPANY	180 EL CAMINO REAL #149
TILE SOURCE	951 COMMERCIAL ST
TITLE 9 SPORTS	208 HAMILTON AVE
TL'S SALON	2720 MIDDLEFIELD RD
TM CONSTRUCTION	716 SAN ANTONIO RD #K
T-MOBILE	165 UNIVERSITY AVE
T-MOBILE	2675 EL CAMINO REAL #B
TODD DI PIETRO SALON	2307 BIRCH ST
TOMMY BAHAMA	180 EL CAMINO REAL #D74
TOOTSIE'S	700 WELCH RD
TORY BURCH	180 EL CAMINO REAL #181
TOTAL QUALITY MAINTENANCE	895 COMMERCIAL ST
TOUS PALO ALTO	180 EL CAMINO REAL #A4
TOWN AND COUNTRY VILLAGE	855 El Camino Real
TRADER JOES	855 EL CAMINO REAL
TRAVELEX CURRENCY SERVICES	180 EL CAMINO REAL #606
TREASURE CENTER RESALE	843 ROSS CT
TREASURE ISLAND STAMPS & COINS	3703 EL CAMINO REAL
TRUE SALON	299 S CALIFORNIA AVE
TRUNK SHOW COUTURE	540 BRYANT ST #100B
T'S DESIGN	71 MORTON WAY
TUTUSCHIC	3928 LOUIS RD
TWITTER TWATTER MUSIC	2297 HARVARD ST
TWRMI	315 HOMER AVE #303
U S S D	2675 MIDDLEFIELD RD #B
U THREADS	855 EL CAMINO REAL
UBER EYES OPTOMETRY OF PALO AL	2750 MIDDLEFIELD RD
UFORIA STUDIOS	819 RAMONA ST
UNDISCOVERED COUNTRY TOURS	3101 AVALON CT
UNION 76 SERVICE STATIONS	835 SAN ANTONIO RD
UNITED NATIONS ASSOCIATION USA	552 EMERSON ST
UNIVERSITY ART CENTER	267 HAMILTON AVE
UNIVERSITY CHIROPRACTIC INC.	540 BRYANT ST
UNIVERSITY CLUB	3277 MIRANDA AVE
UNIVERSITY OPTOMETRY	725 UNIVERSITY AVE #A
UNIVERSITY VILLAGE STATIONERS	310 S CALIFORNIA AVE
URBAN OUTFITTERS	180 EL CAMINO REAL #A313
URBAN WOODCRAFTS	1231 PARKINSON AVE
US HINDI FOUNDATION (USHF)	4177 HUBBARTT DR
USABLENDER.COM	788 MAYVIEW AVE
VAE SUN	1560 PORTOLA AVE

VALERO SERVICE STATIONS	1963 EL CAMINO REAL
VALERO SERVICE STATIONS	705 SAN ANTONIO RD
VAM! EVENTS HAPPENING	530 WEBSTER ST #7
VANCE BROWN	3197 PARK BLVD
VANS	222 UNIVERSITY AVE
VAUGH BROEDER LIGHTING	100 ADDISON AVE
VCA ANIMAL HOSPITAL	4111 EL CAMINO REAL
VDL	501 FOREST AVE #401
VECTRART	2079 EDGEWOOD DR
VELO TECH CYCLES	732 EMERSON ST
VELOELECTRIC EBIKES	855 EL CAMINO REAL
VENCOA VENDING MACHINES	2600 EL CAMINO REAL #418
VERDANCE FINE GARDEN DESIGN	345 S CALIFORNIA AVE #6
VERIZON WIRELESS	219 UNIVERSITY AVE
VERO	530 BRYANT ST
VICTOR AVIATION SERVICES	2415 EMBARCADERO WAY
VICTORIA'S SECRET	180 EL CAMINO REAL #N305
VIKING MOTOR BODY	2904 ASH ST
VILLAGE FLOWER SHOPPE	2237 EL CAMINO REAL
VINEYARD CHRISTIAN FELLOWSHIP	445 SHERMAN AVE #S
VIOLET VON	365 FOREST AVE #2C
VIRGINIA FERGUSON CERAMICS	2124 CORNELL ST
VIRGINIA WADE	1020 MOFFETT CIR
VISIBLE ENERGY INC	2666 E BAYSHORE RD #A
VISIBLE RESULTS	3106 BANDERA DR
VISUAL GROUP	345 S CALIFORNIA AVE #4
VITAL SIGNS HEALTH EDUCATION	801 MIDDLEFIELD RD #11
VIVIANE P.SCHUPBACH	270 STANFORD AVE
VIVRE STUDIOS	611 EMERSON ST
VM WARE	3401 HILLVIEW AVE
VOLE LA NUIT	100 ADDISON AVE
Walgreens #06869	2605 MIDDLEFIELD RD
Walgreens #0781	300 UNIVERSITY AV
Walgreens #12141	328 University Ave
Walgreens #13596	300 University Ave
Walgreens #2147	875 BLAKE WILBUR DR #CC1101
Walgreens #3344	4170 El Camino Real
WALKABOUT GALLERY / ANZUS IMPO	901 HUTCHINSON AVE
WATERCOURSE WAY SPA	165 CHANNING AVE
WAVERLEY SURGERY CENTER	400 FOREST AVE
WAYNE STEWART	661 COWPER ST
WEST COAST GLASS	4020 FABIAN WAY #B
WEST VALLEY AIRCRAFT SERVICES	1901 EMBARCADERO RD
WESTERN DINING	607 HANSEN WAY
WESTIN HOTEL & RESORT	675 EL CAMINO REAL
WHITE HOUSE/BLACK MARKET	180 EL CAMINO REAL BLVD #608
WHOLE FOODS MARKET	774 EMERSON ST
WIDMAR & STEWART	1580 WALNUT DR
WILBY OPTICAL INC.	855 EL CAMINO REAL #102
WILKES BASHFORD	180 EL CAMINO REAL #450
WILLIAM BALDWIN GROUP	2190 SAINT FRANCIS DR
WILLIAMS CUTLERY COMPANY	855 EL CAMINO REAL #15

WILLIAMS-SONOMA	180 EL CAMINO REAL #M379
WONG ELECTRIC INC.	4067 TRANSPORT ST
WONG GREENTECH	241 FULTON ST
WOOF AND WEAR	3633 SOUTH CT
WRAP IT-NATURALLY	2751 LOUIS RD
WRIGHT HALL SCHICKLI	913 CLARA DR
YEAMAN AUTO BODY	2025 E BAYSHORE RD
YEHSIR!	457 E MEADOW DR
YES CATERING	739 COLORADO AVE
YMCA	3412 ROSS RD
YMCA	755 PAGE MILL RD #B
YOSH SALON & SPA	240 UNIVERSITY AVE
YOSUKE MAXWELL MIZUHARA	4072 SUTHERLAND DR
YOUR ENERGY SYSTEMS	829 FOREST AVE
YUMMY	3251 HANOVER ST
ZARA MEDITERRANEAN RESTAURANT	260 S CALIFORNIA AVE
ZEN GARDEN NAIL SPA	409 S CALIFORNIA AVE
ZEN INTERIOR	100 ADDISON AVE
ZHENYU QUI	368 S CALIFORNIA AVE
ZOMBIERUNNER	429 S CALIFORNIA AVE
ZUMO	700 EMERSON ST
ZVART ALTERATIONS	855 EL CAMINO REAL #47
ZZEBRA	906 ADDISON AVE
ZZS ACCESSORIES	151 JASMINE WAY

Gonsalves, Ronna

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE

From: Bill Leikam <wcleikam@gmail.com>
Sent: Tuesday, March 05, 2013 1:34 PM
To: Council, City
Subject: Palo Alto Disposable Bag Ordinance

13 MAR -6 AM 8:11

Dear Council Members:

As a Palo Alto resident for the past 40 years, I heartily support the Palo Alto Disposable Bag Ordinance. Additionally, based on observations during my research on the gray foxes at the baylands, I have seen instances where the fox's scat is laced with pieces of plastic bags. These fox get into dumpsters and will rip apart plastic bags to get at discarded, left-over food.

I think it wise policy to pass the Palo Alto Disposable Bag Ordinance, not only to keep our city-scape free of these bags, but the local wild animal population will thank you for passing it too.

Sincerely,
Bill Leikam, aka The Fox Guy
Director, Independent Urban Gray Fox Research Project
Member: Urban Wildlife Research Project
Website: www.uwrp.wordpress.com/documentary
Volunteer: Don Edwards San Francisco Bay National Wildlife Refuge
Public lectures and guided tours
Phone: 650 - 856 - 3041

Gonsalves, Ronna

CITY CLERK'S OFFICE

From: Phyllis Kidd <ptkidd@comcast.net>
Sent: Friday, March 01, 2013 2:56 PM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

13 MAR -4 AM 9:26

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Phyllis Kidd
2140 Bryant St.
Palo Alto, CA 94301

Gonsalves, Ronna

From: Alma Phillips <alma482@pacbell.net>
Sent: Friday, March 01, 2013 11:14 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

ALMA PHILLIPS
PALO ALTO, CA
CITY CLERK'S OFFICE

13 MAR -4 AM 9:27

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Alma Phillips
482 Ferne Ave.
482 Ferne Ave, Palo Alto 94306
Palo Alto, CA 94306

Gonsalves, Ronna

From: Mary Rodocker <mmr355@aol.com>
Sent: Friday, March 01, 2013 11:00 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE

13 MAR -4 AM 9:27

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Mary Rodocker
355 Iris Way
Palo Alto, CA 94303

Gonsalves, Ronna

From: Marilyn Hansen <phsen14@comcast.net>
Sent: Friday, March 01, 2013 10:34 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE
13 MAR -4 AM 9:28

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Marilyn Hansen
4082 Ben Lomond Dr.
Palo Alto, CA 94306

Gonsalves, Ronna

From: Stepheny McGraw <stepheny@earthlink.net>
Sent: Friday, March 01, 2013 10:11 AM
To: activist@cleanwater.org
Cc: Council, City
Subject: Bags are needed!

CITY CLERK'S OFFICE

13 MAR -4 AM 9:28

I do NOT approve of this ban! Palo Altans are very litter conscious. We reuse this bags to line trashcans, collect dog and cat poop, or simply to tote leaky or wet things about. With this proposal, we now must buy commercially available and sadly, non-biodegradable bags for these purposes.

A better solution would be to require that these bags be biodegradable. These would be good for the industry and good for the environment.

Stepheny McGraw

On Mar 1, 2013, at 8:00 AM, Samantha Meyer - Clean Water Action wrote:

x

Dear Stepheny,

You can help expand the ban on single-use plastic bags in Palo Alto!

Palo Alto was one of the first California cities to ban single-use plastic bags in 2009, but the city is falling behind California jurisdictions that have stricter bag bans. You can help us make sure the city updates and expands its ban – take action today!

We need you now! Plastic bags litter city streets. Plastic debris absorbs toxins like PCBs and oil contaminants and they break apart into small pieces and end up in our waterways, plaguing the Bay and ocean. Our opponents in the plastics industry are working hard to fight plastic bag bans at the state and local level by telling elected officials that stores should recycle bags. State law has required plastic bag recycling since 2006 and there has been no measurable increase in the amount of plastic bags recycled or any decrease in

x

We need you to email City Council and let them know you support the ordinance! Showing your support in person is fantastic! Clean Water Action will be there to testify and we would love to have your help. Join us at the Palo Alto City Council meeting on March 11th!

Palo Alto City Council Meeting

**Monday March 11, 2013
6:00pm
250 Hamilton, Palo Alto, CA**

Thanks for taking action!

-Samantha Meyer, CA Zero Waste Program Coordinator



San Francisco Office

111 New Montgomery Street, Suite 600 | San Francisco, CA 94105 | 415.369.9160

National Office

1010 Vermont Ave | Suite 400 | Washington D.C. | 20005 202.895.0420

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Gonsalves, Ronna

From: Michelle Cooper <coopermc7@yahoo.com>
Sent: Friday, March 01, 2013 8:04 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE
13 MAR -4 AM 9:29

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Michelle Cooper
870 Sharon Ct.
Palo Alto, CA 94301

Gonsalves, Ronna

13 MAR 01 09:29 AM
CITY CLERK'S OFFICE

From: C Price <lprice@vcn.bc.ca>
Sent: Friday, March 01, 2013 8:08 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

Sincerely,

C Price
350 Edlee Ave.
Palo Alto, CA 94306

Gonsalves, Ronna

From: Lynn C. Sanchez <lcsan@pacbell.net>
Sent: Friday, March 01, 2013 8:10 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE

13 MAR -4 AM 9:29

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Lynn C. Sanchez
3427 South Ct.
Palo Alto, CA 94306

Gonsalves, Ronna

From: Howard Cohen <howard@cohensw.com>
Sent: Friday, March 01, 2013 8:12 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE
13 MAR -4 AM 9:29

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Howard Cohen
3272 Cowper Street
Palo Alto, CA 94306

Gonsalves, Ronna

CITY OF PALO ALTO, CA
CITY CLERK'S OFFICE

From: Prerana Vaidya <vaidya.prerana@gmail.com>
Sent: Friday, March 01, 2013 8:20 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

13 MAR -4 AM 9:29

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Prerana Vaidya
3533 La Mata Way
Palo Alto, CA 94306

Gonsalves, Ronna

From: Roland Hsu <rohsu@stanford.edu>
Sent: Friday, March 01, 2013 8:22 AM
To: Council, City
Subject: Please Expand the Plastic Bags Ban and Require Stores Charge for Paper Bags

PALETO, CA
CITY CLERK'S OFFICE
13 MAR -4 AM 9:29

Dear Members of the City Council,

I respectfully request you take action to expand the ban on single use plastic bags and place a fee on recycled paper bags in Palo Alto.

I support this measure because it will encourage a shift toward re-usable bags. Plastic litter degrades our neighborhoods and local waterways. It is hazardous to public health, wildlife, and is difficult to collect once it becomes litter. As a taxpayer, I believe our budget for litter removal must be spent wisely. An expansion of the single use plastic bag ban will reduce spending taxpayer dollars on the cleanup of plastic debris.

I look forward to your response.

Sincerely,

Roland Hsu
3266 Ramona St.
Palo Alto, CA 94306