

File No. 101055

Committee Item No. \_\_\_\_\_  
Board Item No. 10

### COMMITTEE/BOARD OF SUPERVISORS AGENDA PACKET CONTENTS LIST

Committee \_\_\_\_\_ Date \_\_\_\_\_

Board of Supervisors Meeting Date 2/7/12

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Motion in Board 12/6/11

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Completed by: Arthur Khoo Date 2/2/12

Completed by: \_\_\_\_\_ Date \_\_\_\_\_

An asterisked item represents the cover sheet to a document that exceeds 20 pages. The complete document is in the file.

1 [Environment Code - Checkout Bags; Checkout Bag Charge]

2  
3 Ordinance amending the San Francisco Environment Code by: 1) amending  
4 Section 1702, to extend the restrictions on checkout bags from supermarkets and  
5 chain pharmacies to all retail establishments and food establishments in the City, and  
6 clarify terms; 2) adding Section 1703.5, to require stores to add a checkout bag charge  
7 of 10 cents, ~~rising to 25 cents~~, if they provide a customer with a checkout bag;  
8 3) setting an operative date of October July 1, 2012; and, 4) making environmental  
9 findings.

10  
11 NOTE: Additions are *single-underline italics Times New Roman*;  
12 deletions are *strike-through italics Times New Roman*.  
13 Board amendment additions are double-underlined;  
14 Board amendment deletions are ~~strikethrough normal~~.

15 Be it ordained by the People of the City and County of San Francisco:

16 Section 1. Environmental Findings. The Planning Department has determined that the  
17 actions contemplated in this ordinance comply with the California Environmental Quality Act  
18 (Cal. Pub. Res. Code §§ 21000 et seq.), and, on November 10, 2011, issued a Categorical  
19 Exemption Determination for the the proposed amendments under CEQA Guidelines Classes  
20 7 and 8 (14 Cal. Code Regs. §§ 15307 and 15308). Said determination is on file with the  
21 Clerk of the Board of Supervisors in File No. 101055 and is incorporated herein by reference.  
22 In approving this ordinance, and upon consideration of the whole record, including public  
23 testimony, the Board hereby affirms and adopts the Categorical Exemption Determination.

24 Section 2. Findings.

1           1. The City and County of San Francisco has adopted citywide goals of 75 percent  
2 landfill diversion by 2010 and zero waste by 2020.

3           2. The broad use of single-use checkout bags and their typical disposal creates an  
4 impediment to achievement of San Francisco's landfill diversion goals.

5           3. Plastic checkout bags are difficult to recycle and contaminate material that is  
6 processed through San Francisco's recycling and composting programs.

7           4. Single-use checkout bags create significant litter problems in San Francisco's  
8 neighborhoods, and also litter parks, community beaches, sewer systems, and the San  
9 Francisco Bay.

10          5. The production and disposal of single-use checkout bags has significant  
11 environmental impacts, including the contamination of the environment, the depletion of  
12 natural resources, use of non-renewable polluting fossil fuels, and the increased clean-up and  
13 disposal costs.

14          6. Of all single-use checkout bags, plastic checkout bags have the greatest impacts on  
15 litter and marine life.

16          7. Governments in several countries have placed fees on bags, including the Republic  
17 of Ireland, which achieved a 90 percent decrease in the use of single-use plastic checkout  
18 bags due to the fee.

19          8. Studies document that banning plastic checkout bags and placing a mandatory  
20 charge on paper checkout bags will dramatically reduce the use of both types of bags and  
21 increase customers' use of reusable bags.

22          9. Reusable bags are readily available with numerous sources and vendors for these  
23 bags. Many stores in San Francisco and throughout the Bay Area already offer reusable bags  
24 for sale at a price as low as 25 cents.

1 Section 3. The San Francisco Environment Code is hereby amended by amending  
2 Section 1702 and adding Section 1703.5, to read as follows:

3 **SEC. 1702. DEFINITIONS.**

4 For the purposes of this Ordinance, the following words shall have the following  
5 meanings:

6 (a) "ASTM Standard" means the American Society for Testing and Materials (ASTM)'s  
7 International Standard Specification for Compostable Plastics D6400 ~~standard D6400 for~~  
8 ~~compostable plastic~~, as that standard may be amended from time to time.

9 (b) "Compostable Plastic Bag" means a plastic Checkout Bag bag that ~~(1)~~ conforms to at  
10 least the minimum standards of California labeling law (Public Resources Code Section 42355 et  
11 seq.), and meets which requires meeting the current ASTM D6400 Standard Specifications for  
12 compostability; ~~(2) is certified and is~~ labeled as meeting the ASTM Standard by a recognized  
13 third-party independent verification entity, such as the Biodegradable Product Institute, and is  
14 labeled "Compostable" on both sides of the bag either in green color lettering that is at least one inch  
15 in height, or as otherwise specified, or within a green color band that is at least one inch in height in  
16 order to be readily and easily identifiable. ; ~~(3) conforms to requirements to ensure that the renewable~~  
17 ~~based product content is maximized over time as set forth in Department of the Environment~~  
18 ~~regulations; (4) conforms to requirements to ensure that products derived from genetically modified~~  
19 ~~feedstocks are phased out over time as set forth in Department of the Environment regulations; and (5)~~  
20 ~~displays the phrase "Green Cart Compostable" and the word "Reusable" in a highly visible manner on~~  
21 ~~the outside of the bag.~~

22 (c) "Checkout Bag bag" means a carryout bag that is provided by a store to a customer  
23 at the point of sale. "Checkout Bag" does not include:

24 (1) Bags used by consumers inside stores to: (A) package loose bulk items, such as  
25 fruit, vegetables, nuts, grains, candy, cookies, or small hardware items; (B) contain or wrap frozen

1 foods, meat, or fish, whether prepackaged or not; (C) contain or wrap flowers, potted plants, or other  
2 items where damage to or contamination of other goods placed together in the same bag  
3 dampness may be a problem; or (D) contain unwrapped prepared foods or bakery goods; or,

4 (2) Bags provided by pharmacists to contain prescription drugs; or,

5 (3) (2) Newspaper bags, door-hanger bags, laundry-dry cleaning bags, or bags sold in  
6 packages containing multiple bags intended for use as garbage, pet waste, or yard waste bags.

7 (d) "Department" means the Department of the Environment.

8 (e) "Director" means the Director of the Department of the Environment.

9 (f) "Food Establishment" means a "food preparation and service establishment" as defined in  
10 Health Code Section 451 and permitted under Health Code Section 452. "Highly visible manner"  
11 means (1) for compostable plastic bags, displaying both of the following in green lettering contrasting  
12 with the bag's background color that is at least two inches high: (i) the phrase "Green Cart  
13 Compostable" "either on the front and back of the bag together with a solid green band at least one-  
14 half inch thick circling the circumference of the bag, or repeatedly, as a band of text or text alternating  
15 with solid stripe, circling the circumference of the bag, and (ii) the word "Reusable" displayed on the  
16 front and/or back of the bag; and (2) for recyclable paper bags, displaying the words "Reusable" and  
17 "Recyclable" on the front and/or back of the bag in blue lettering contrasting with the bag's  
18 background color that is at least two inches high, and (3) for both compostable plastic bags and  
19 recyclable paper bags, as otherwise required by Department of the Environment regulations.

20 (g) "Person" means an individual, trust, firm, joint stock company, corporation,  
21 cooperative, partnership, or association.

22 ~~(h) "Pharmacy" means a retail use where the profession of pharmacy by a pharmacist licensed~~  
23 ~~by the State of California in accordance with the Business and Professions Code is practiced and~~  
24 ~~where prescriptions (and possibly other merchandise) are offered for sale, excluding such retail uses~~  
25 ~~located inside a hospital.~~

1            ~~(h)~~ ~~(i)~~ "Recyclable" means material that can be sorted, cleansed, and reconstituted  
2 using San Francisco's available recycling collection programs for the purpose of using the  
3 altered form in the manufacture of a new product. Recycling does not include burning,  
4 incinerating, converting, or otherwise thermally destroying solid waste.

5            ~~(i)~~ ~~(j)~~ "Recyclable Paper Bag" means a paper *Checkout Bag bag* that meets all of the  
6 following requirements: (1) is 100 % recyclable, using the standards for San Francisco's  
7 available curbside recycling collection program; (2) contains no old growth fiber; (3) ~~(2)~~ is  
8 made of 100% recycled content, including recyclable overall and contains a minimum of 40%  
9 post-consumer recycled content, and the Department may modify the requirements for  
10 recycled content by regulation adopted after a public hearing and at least 60 days' notice,  
11 based upon environmental benefit, cost, and market availability; and (4) (3) is labeled  
12 displays the word ~~words "Reusable" and "Recyclable"~~ on the front and/or back of the bag in blue  
13 lettering contrasting with the bag's background color, in lettering that is at least one inch in  
14 height in a highly visible manner on the outside of the bag; and, (4) is labeled with the name of  
15 the manufacturer, the location (country) where manufactured, and the percentage of  
16 post-consumer recycled content in an easy-to-read size font.

17            ~~(j)~~ ~~(k)~~ "Reusable Bag" means a *Checkout Bag bag* with handles that is specifically  
18 designed and manufactured for multiple reuse and meets all of the following requirements:

19                    (1) Has a minimum lifetime capability of 125 or more uses carrying 22 or more pounds  
20 over a distance of at least 175 feet;

21                    (2) Is capable of being washed so as to be cleaned and disinfected at least  
22 100 times hot water machine washable;

23                    (3) If made of plastic, is at least 2.25 mils thick and contains at least 60 percent  
24 recycled content, including a minimum of 30 percent post-consumer recycled content;

1 (4) Meets the standards of the California Toxics in Packaging Prevention Act (Cal.  
2 Health & Safety Code §§ 25214.11-25214.26), as amended, or any successor legislation;

3 (5) Meets any standards for minimum recycled content established by  
4 regulation adopted by the Department after a public hearing and at least 60 days' notice,  
5 based upon environmental benefit and market availability.

6 (6) Garment bags that meet the above criteria shall be considered reusable  
7 even if they do not have handles.

8 ~~(5) Is labeled "Reusable" on the front and/or back of the bag in lettering at least~~  
9 ~~one inch in height; and,~~

10 ~~(6) Has printed on the bag, or on a tag that is permanently affixed to the bag,~~  
11 ~~the name of the manufacturer, the country where the bag was made, and the percentage of~~  
12 ~~post consumer recycled material used, if any, in the manufacture of the bag.~~

3 ~~(k) (4)~~ "Store" means the following:

14 (1) Until July 1, 2013, "Store" shall mean a retail establishment located within the  
15 geographical limits of the City and County of San Francisco. A "retail establishment" includes  
16 any public commercial establishment engaged in the sale of personal consumer or household items to  
17 the customers who will use or consume such items. that meets either of the following requirements:

18 (2) Beginning July 1, 2013, "Store" shall also include any Food Establishment located  
19 within the geographical limits of the City and County of San Francisco.

20 ~~(1) Is a full-line, self-service supermarket with gross annual sales of two million dollars~~  
21 ~~(\$2,000,000), or more, and which sells a line of dry grocery, canned goods, or nonfood items and some~~  
22 ~~perishable items. For purposes of determining which retail establishments are supermarkets, the City~~  
23 ~~shall use the annual updates of the Progressive Grocer Marketing Guidebook and any computer~~  
24 ~~printouts developed in conjunction with the guidebook; or~~

1                   (2) ~~Is a retail pharmacy with at least five locations under the same ownership within the~~  
2 ~~geographical limits of San Francisco.~~

3  
4 **SEC. 1703.5. CHECKOUT BAG CHARGE.**

5                   **(a) Imposing a Checkout Bag Charge.**

6                   (1) Beginning October July 1, 2012, no Store shall provide a Recyclable Paper Bag or  
7 Reusable Bag to a customer at the point of sale, unless the Store charges the customer a Checkout Bag  
8 Charge of at least ten cents (\$0.10) per bag.

9                   (2) Beginning October July 1, 2013, no Store, including a Food Establishment, shall  
10 provide a Compostable Plastic Bag to a customer at the point of sale, unless the Store charges the  
11 customer a Checkout Bag Charge of at least ten cents (\$0.10) per bag.

12                   (3) ~~Beginning July 1, 2014, no Store, including a Food Establishment, shall~~  
13 ~~provide a Recyclable Paper Bag, Reusable Bag, or Compostable Plastic Bag to a customer at~~  
14 ~~the point of sale, unless the Store charges the customer a Checkout Bag Charge of at least~~  
15 ~~twenty five cents (\$0.25) per bag.~~

16                   (3) (4) No Food Establishment shall be required to charge its customers a  
17 Checkout Bag Charge for a bag provided for a customer's left-over food from sit-down  
18 restaurant dining.

19                   **(b) Controller's Report.** After January 2013 2012, and not later than January 2014,  
20 the Controller shall perform an assessment and review of the economic impacts on  
21 businesses, both large and small, of the 10 cent Checkout Bag Charge, and attempt to  
22 forecast how that impact might change when the Charge increases to 25 cents. Based on  
23 such assessment and review, the Controller shall submit an analysis to the Board of  
24 Supervisors. The analysis shall be based on criteria deemed relevant by the Controller, but  
25



1 should include a survey of whether and how the Checkout Bag Charge specifically has  
2 impacted businesses' profits and losses.

3 (c) (b) Checkout Bag Charge to be Separately Stated on Receipt. The amount charged  
4 pursuant to subsection (a) shall be separately stated on the receipt provided to the customer at the time  
5 of sale and shall be identified as the Checkout Bag Charge. Any other transaction fee charged by the  
6 Store in relation to providing a Checkout Bag shall be identified separately from the Checkout Bag  
7 Charge.

8 (d) (e) Exemptions.

9 (1) A Store shall not charge the Checkout Bag Charge required under subsection (a)  
10 where providing a Checkout Bag to a customer as part of a transaction paid for in whole or in  
11 part through to a customer participating in the Special Supplemental Food Program for Women,  
12 Infants, and Children (Article 2 (commencing with Section 123275) of Chapter 1 of Part 2 of Division  
13 106 of the Health and Safety Code), or a customer participating in the State Department of Social  
14 Services Food Stamp Program.

15 (2) A Store shall not charge the Checkout Bag Charge required under  
16 subsection (a) for a Reusable Bag which meets the requirements of this Chapter and which is  
17 distributed to a customer without charge during a limited duration promotional event, not to  
18 exceed 12 seven days per year.

19 (e) (d) Waivers. Any owner or operator of a Store may petition the Director of the Department  
20 of the Environment for a full or partial waiver of the requirements of this Section, for a period of up  
21 to one year, if the owner or operator can (1) demonstrate that application of this Section would  
22 create undue hardship or practical difficulty for the Store not generally applicable to other  
23 stores in similar circumstances, or (2) establish that the business as a whole cannot, under the  
24 terms of this Section, generate a return that is commensurate with returns on investments in  
25

1 other enterprises having corresponding risks and is sufficient to attract capital a fair rate of  
2 return on investment under the terms of this Section.

3 (f) (e) Violations. Violations of this Section may be punished under the provisions of  
4 Section 1705. Collection of the Checkout Bag Charge shall not excuse any violation of any other  
5 provisions of this Chapter 17.

6  
7 Section 4. Additional Uncodified Provisions.

8 (a) Operative Date. The provisions of this ordinance shall be operative on October  
9 July 1, 2012, except as specifically provided otherwise in Section 1703.5(a)(2) and (3).

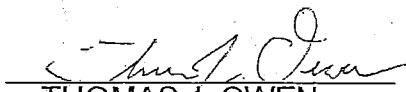
10 (b) General Welfare. In adopting and implementing this ordinance, the City and  
11 County of San Francisco is assuming an undertaking only to promote the general welfare. It is  
12 not assuming, nor is it imposing on its officers and employees, an obligation for breach of  
13 which it is liable in money damages to any person who claims that such breach proximately  
14 caused injury.

15 (c) Conflict with State or Federal Law. This ordinance shall be construed so as not to  
16 conflict with applicable federal or State laws, rules or regulations. Nothing in this ordinance  
17 shall authorize any City agency or department to impose any duties or obligations in conflict  
18 with limitations on municipal authority established by State or federal law at the time such  
19 agency or department action is taken.

20 (d) Severability. If any of the provisions of this ordinance or the application thereof to  
21 any person or circumstance is held invalid, the remainder of those provisions, including the  
22 application of such part or provisions to persons or circumstances other than those to which it  
23 is held invalid, shall not be affected thereby and shall continue in full force and effect. To this  
24 end, the provisions of this ordinance are severable.

1 (e) Amendments. In enacting this Ordinance, the Board intends to amend only those  
2 words, phrases, paragraphs, subsections, sections, articles, numbers, punctuation, charts,  
3 diagrams, or any other constituent part of the Environment Code that are explicitly shown in  
4 this legislation as additions, deletions, Board amendment additions, and Board amendment  
5 deletions in accordance with the "Note" that appears under the official title of the legislation.  
6

7 APPROVED AS TO FORM:  
8 DENNIS J. HERRERA, City Attorney

9  
10 By:   
11 THOMAS J. OWEN  
12 Deputy City Attorney  
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**LEGISLATIVE DIGEST**

(Amendment of the Whole, dated 12/6/2011)

[Environment Code – Checkout Bags; Checkout Bag Charge]

**Ordinance amending the San Francisco Environment Code by: 1) amending Section 1702, to extend the restrictions on checkout bags from supermarkets and chain pharmacies to all retail establishments and food establishments in the City, and clarify terms; 2) adding Section 1703.5, to require stores to add a checkout bag charge of 10 cents if they provide a customer with a checkout bag; 3) setting an operative date of October 1, 2012; and, 4) making environmental findings.**

Restrictions on Checkout Bags

City law currently states that supermarkets and chain pharmacies may only provide three kinds of checkout bags to customers: recyclable paper bags, compostable plastic bags, and reusable bags. Supermarkets and chain pharmacies may not provide customers with any other kinds of single-use disposable checkout bags, whether the bags are made of paper or plastic.

The proposal would amend the Environment Code to extend these requirements to all retail establishments (in October 2012) and all food establishments (in October 2013) in the City. It would also modify various definitions used in the Chapter.

Checkout Bag Charge

Current City law does not require stores to collect any sort of charge for checkout bags that they provide to customers. California Public Resources Code Section 42254(b)(2) generally prohibits a city or county from imposing a plastic carryout bag fee. Section 42254 will expire by operation of law on January 1, 2013, unless the Legislature acts to extend it.

Beginning July 1, 2012, the amendment would require all stores to add a Checkout Bag Charge of ten cents for each recyclable paper or reusable checkout bag they provide to a customer. (These stores may only provide recyclable paper, compostable plastic, or reusable checkout bags to customers. As noted above, the City may not impose a fee on the compostable plastic bags prior to 2013.) The stores would keep the money that they collected.

Beginning July 1, 2013, the amendment would require all stores, now including food establishments, to add a Checkout Bag Charge of ten cents (\$0.10) for compostable plastic checkout bags as well as for recyclable paper or reusable checkout bags.

Prior to January 2014, the Controller would study and report to the Board on the impact of the Checkout Bag Charge on businesses at 10 cents per bag.

Stores would have to show the Checkout Bag Charge as a separate charge on the customer's receipt.

Stores would not collect a Checkout Bag Charge when providing a Checkout Bag to a customer as part of a transaction paid for in whole or in part through the Special Supplemental Food Program for Women, Infants, and Children, or the State Department of Social Services Food Stamp Program.

The owner or operator of a store could petition the Director of the Department of the Environment for a full or partial waiver of these requirements, for up to one year, under limited circumstances.

The City could punish violations of these requirements with administrative fines.

\* \* \*

*The amendment of whole, dated 12/6/2011, makes three significant changes to the legislation on file, dated 11/22/2011:*

- *The amendment of the whole eliminates the provision that would have automatically increased the Checkout Bag Charge to \$.25 on July 1, 2014.*
- *It delays the operative date of the legislation by three months, from July 1, 2012 to October 1, 2012.*
- *It allows merchants to distribute free Reusable Bags up to 12 days a year, rather than seven days.*



CITY AND COUNTY OF SAN FRANCISCO

OFFICE OF THE CONTROLLER

RECEIVED  
BOARD OF SUPERVISORS  
SAN FRANCISCO

2011 NOV 30 PM 4:42  
c

Ben Rosenfield  
Controller

Monique Zmuda  
Deputy Controller

November 30, 2011

The Honorable Board of Supervisors  
City and County of San Francisco  
Room 244, City Hall

Angela Calvillo  
Clerk of the Board of Supervisors  
Room 244, City Hall

**Re: Office of Economic Analysis Impact Report for File Number 101055**

Dear Madam Clerk and Members of the Board:

The Office of Economic Analysis is pleased to present you with its economic impact report on file number 101055 "Bag Checkout Fee: Economic Impact Report." If you have any questions about this report, please contact me at (415) 554-5268.

Best Regards,

Ted Egan  
Chief Economist

# City and County of San Francisco

Office of the Controller – Office of Economic Analysis

## Checkout Bag Charge: Economic Impact Report

Office of Economic Analysis

November 30, 2011

Item #101055



# City and County of San Francisco

Office of the Controller - Office of Economic Analysis

## Main Conclusions

- The proposed legislation extends the City's 2007 plastic checkout bag ban to all retailers in San Francisco, including food service establishments. It also requires retailers to charge customers for each paper, compostable plastic, or reusable bag they require. The charge is set to \$0.10 in 2012, and will rise to \$0.25 in 2014. The Office of Economic Analysis (OEA) has issued this report because, when the legislation was introduced, the OEA believed the legislation might have a material economic impact on San Francisco.
- After conducting an economic impact analysis, the OEA estimates that the legislation will have a very slight positive impact on the economy, with job creation of less than 25 jobs per year on average, under a wide range of assumptions.
- The OEA expects the legislation to substantially reduce the use of checkout bags in San Francisco. Similar charges or fees in other cities and countries have had powerful impacts on consumer behavior. Nevertheless, some consumers will continue to request single-use bags. The OEA estimates that these San Francisco consumers will be spending \$20 million annually in checkout bag charges by 2014, although retail prices will also fall, benefiting consumers. In addition, consumers will be spending more on reusable bags, and on home garbage can liners.
- The legislation will have the environmental benefits of reducing litter, and reducing waste and recycling costs. The benefits from the plastics ban cannot be fully quantified, because the economic value of future environmental benefits cannot be estimated with certainty. Most of the benefits from the bag charge are easier to quantify. It is likely that the costs to consumers of the bag charge will exceed the City's savings in litter and waste disposal costs.
- Retailers will be the prime financial beneficiary of the legislation. They will retain the bag charge as higher profits. In addition, the reduction in plastic and paper bag use will reduce retailers' overhead costs, also directly increasing their profits. However, the OEA's modeling suggests that competition will force down retail prices, and roughly half of this higher profit will be returned to consumers in the form of lower prices. When this reduction in prices is taken into effect, the net cost to consumers is projected to lie in the \$10-12 million range annually by 2014.
- The City may wish to defer the increase from \$0.10 to \$0.25. Annual charge revenue at a \$0.10 charge is estimated to total \$11 million. Again about half of that would be returned to consumers through lower prices, and thus the net cost to consumers would total \$5-6 million annually, with a \$0.10 charge.





## Introduction

- The proposed legislation modifies how checkout bags may be used in San Francisco, in two ways:
  - It extends the City's 2007 ban on plastic bags to all retailers as of July 1, 2012. Restaurants will be included in the ban as of July 1, 2013. Currently, the ban only applies to supermarkets and chain pharmacies.
  - It imposes a \$0.10 charge on all other checkout bags, including recyclable paper bags, compostable bags, and reusable checkout bags. The charge will rise to \$0.25 on July 1, 2014.
- Some other bags, such as plastic bags used within stores, laundry bags, and newspaper bags, are not affected by the current ban or the proposed legislation.



## Background

- Because single-use checkout bags are included in the price of retail goods, consumers do not have an economic incentive to limit their use, and may waste them.
- The Department of the Environment's fact sheet on the proposed legislation states that single-use plastic bags harm marine life, contaminate recycling streams, and interfere with the City's zero-waste goals.
- The Department further states that single-use recyclable and compostable bags generate pollution, use dwindling resources, and create litter.
- The charge also applies to reusable bags, although these are normally purchased separately by consumers, and the re-use of these bags is intended to replace the use of single-use bags. The Department believes the falling price of reusable bags is leading to their misuse as single-use bags. Applying the charge to these bags should encourage consumers to re-use them.



### Current Checkout Bag Use in San Francisco

- The proposed legislation affects three kinds of retailers differently:
  1. Supermarkets and chain pharmacies, which are already affected by the 2007 plastic bag ban. The only change affecting these retailers will be the bag charge, starting in July 2012.
    - The OEA projects these establishments now distribute 0 plastic and 134 million paper/compostable bags per year.
  2. Food service establishments, which are not affected by the 2007 ban. They would be affected by the plastic bag ban, and the checkout charge, in July 2013.
    - The OEA projects these establishments now distribute 61 million plastic and 15 million paper bags per year.
  3. All other retailers, which are not affected by the 2007 ban. They would be affected by the plastic bag ban, and the checkout charge, in July 2012.
    - The OEA projects these establishments now distribute 106 million plastic bags, and 59 million paper bags per year.
- Details on the estimates can be found in the Appendix.



# City and County of San Francisco

Office of the Comptroller - Office of Economic Analysis

## Consumer Responses to Bag Charges

- Bag charges or fees have led to significant reductions in bag use in other jurisdictions. Rather than paying the charge, most consumers have switched to a free alternative.
- Because the proposed legislation bans single-use plastic bags, as well as imposes a mandatory charge on paper and compostable plastic bags, the *overall* reduction in single-use bags should exceed the experience of other places.
- However, because the charge effects every all new permitted checkout bags, the reduction in paper and compostable bags will likely not match the experience of other charges.

Location	Date	Bags Affected	Retailers Affected	Charge	Reduction in Affected Bags	Notes/ Source
Ireland	2002	Plastic	All	€0.15 (\$0.21)	90%	Sources: Herrera Environmental Consultants, ICF International, Hyder Consulting. Increased from 15 euro cents to 21 in 2007.
Washington DC	2010	Plastic & Paper	All stores selling food	\$0.05	60%	Satway stores reported a 60% decline in both paper and plastic bags distributed at its DC stores. This is the most accurate available pre-and post-estimate.
Denmark	1994	Plastic & Paper	All	\$0.03/\$0.12	66%	The fee is included in the price of bags to the retailer. Sources: Herrera Environmental Consultants, San Jose and Seattle Bag Studies, Nolan-ITU, AECOM.
Taiwan	2007	Plastic	All	\$0.10	68%	Reduction in plastic bags is 68%; reduction in all bags is 57% due to some consumers switching to paper bags. Sources: Herrera Environmental Consultants, Nolan-ITU, GHK.
Victoria, Australia	2008	Plastic	Grocery	\$0.10	79%	Based on actual results from trial \$0.10 charge for carryout bags in 3 cities over a 4 week period in 2008. KPMG, "Trial of a Government and Industry Charge for Plastic Bags," Australia.
IKEA (retailer)	2007	Plastic	NA	\$0.05	92%	During trial period of IKEA's 'bag the plastic bag' program, consumers were offered IKEA's reusable bags for \$0.59, or they could purchase a plastic bag for \$0.05. Source: IKEA



## Economic Impact Factors

- The checkout charge will affect the economy in two primary ways:
  1. A decline in consumer spending on items unrelated to checkout bags:
    - Some consumers—likely relatively few—will pay the bag charge.
    - Consumer spending on re-usable bags will increase.
    - Since some single-use bags are re-used as bag liners in the home, consumer spending on bag liners will increase.
    - Consequently, consumer spending on other items will decline by an equal amount.
  2. An increase in retailer profits:
    - Retailers will receive the bag charge revenue.
    - Retailers will experience reduced overhead costs, as consumers switch away from single-use bags to re-usable bags that they (consumers) pay for.
    - In time, competition among retailers will return some of these profits back to consumers in the form of lower prices. All consumers will benefit from this.
- The extended plastic bag ban will lead consumers to switch to other alternatives, as it did in 2007. This will marginally raise retailer costs. However, the benefits from the bag charge will weigh against these higher costs.



# City and County of San Francisco

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## Estimation of Charge Revenue

	Now	Jul-12	Jul-13	Jul-14
<b>Supermarkets and Chain Pharmacies</b>				
Plastic bags used (M)	0	0	0	0
Paper/Compostable bags used (M)	134	47	47	34
New Reusable bags needed (M)	0	1.4	1.4	1.6
Total Bags Consumed (M)	134	48	48	35
Charge per bag	\$0.00	\$0.10	\$0.10	\$0.25
Charge Revenue (\$M)	\$0.0	\$4.7	\$4.7	\$8.4
<b>Restaurants and Food Services</b>				
Plastic bags used (M)	61	61	0	0
Paper/Compostable bags used (M)	15	15	20	14
New Reusable bags needed (M)	0	0.0	0.6	0.7
Total Bags Consumed (M)	76	76	20	15
Charge per bag	\$0.00	\$0.00	\$0.10	\$0.25
Charge Revenue (\$M)	\$0.0	\$0.0	\$2.0	\$3.5
<b>All Other Retailers</b>				
Plastic bags used (M)	106	0	0	0
Paper/Compostable bags used (M)	59	45	45	32
New Reusable bags needed (M)	0	1.3	1.3	1.6
Total Bags Consumed (M)	165	47	47	34
Charge per bag	\$0.00	\$0.10	\$0.10	\$0.25
Charge Revenue (\$M)	\$0.00	\$4.53	\$4.53	\$8.10
Total Charge Revenue (\$M)	\$0.0	\$9.2	\$11.2	<b>\$20.0</b>

The OEA modeled how the proposed legislation might affect bag use, based on a number of assumptions discussed in the Appendix.

Under the OEA's most likely scenario, total charge revenue paid by the minority of consumers who continue to use single-use bags will total \$20 million per year by 2014. All consumers will also benefit from lower retail prices, and these savings are not quantified here.

The plastic bag ban at restaurants and other retailers will force a shift to paper and other alternatives, even as the charge discourages the use of these alternatives. Thus, the initial decline in paper bag use will not be as great at those stores as it will at supermarkets and chain pharmacies.



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## Additional Retailer Savings and Consumer Costs

	Jul-12	Jul-13	Jul-14
<b>Savings from Bag Reductions: All Retailers</b>			
Change in plastic bags used (M)	-106	-61	0
Average cost	\$0.03	\$0.03	\$0.03
Change in paper/compostable bags used (M)	-101	4	-39
Average cost:	\$0.08	\$0.08	\$0.08
Total Retailer Savings (\$M)	\$11.01	\$1.36	<u>\$3.12</u>
<b>Consumer Costs from Single-Use Bag Substitutes</b>			
New reusable bags (M)	2.7	3.3	3.9
Average cost	\$1.15	\$1.15	\$1.15
New bin liners (M)	21	26	30
Average cost	\$0.05	\$0.05	<u>\$0.05</u>
Total Consumer Costs (\$M)	\$4.18	\$5.14	<u>\$6.05</u>

Retailers are also projected to save an additional \$3 million because they will need to spend less on single-use bags to serve their customers. Again, some of these savings will be returned to consumers in the form of lower prices.

In addition to the charge revenue, consumers are projected to spend \$6 million annually, by 2014, on reusable bags and bag liners to replace the single-use bags they no longer use. These estimates are highly uncertain, however, as no rigorous studies of reusable bag and bin liner consumption have been found.

The bulk of the burden will fall on the relatively few consumers that continue to use single-use bags.



## Economic Impact Assessment

- The OEA's REMI model was used to estimate the net economic impact of the bag charge, higher consumer spending on alternatives, and retailer overhead savings.
- Using the estimates detailed on the previous pages, the total impact on private non-farm employment in San Francisco was positive but very small—less than 10 jobs per year.
- Under sensitivity testing (as described in the Appendix), the jobs impact remained positive in every case, but always totaled less than 25 jobs per year on average.
- Together, the checkout charge revenue and the additional consumer costs are approximately equivalent to a 0.2% sales tax increase on consumers as a whole. Consumer prices are projected to fall by approximately 0.1% on average.
- This indicates that roughly half of consumers costs will be returned to consumers in the form of lower prices.
- The net cost to consumers will range between \$10-12 million.





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## Benefits of the Legislation: Expanded Plastic Bag Ban

- As the proposed legislation both broadens the City's ban on plastic checkout bags, and imposes a charge on permitted checkout bags, it is helpful to consider the benefits of the legislation in two parts.
- The extension of the ban on plastic bags will have the following benefits:
  - Reducing the amount of plastic waste material that is sent to landfill, where it may not degrade for many years, and reducing the City's cost of waste disposal.
  - Reducing litter that is collected and disposed of by the City, and the City's cost of litter collection.
  - Reducing litter that is not collected by the City, and therefore pollutes the environment until it degrades.
- The potential reduction in City costs from waste disposal and litter collection of single-use plastic bags may be quantified, based on projected bag reductions. The OEA estimates affected plastic bags represent 0.6% of the city's litter, and 0.4% of its waste and recycled materials. The savings are estimated at \$0.1 million annually for litter, and \$0.6 million for waste.
- However, the other benefits are harder to value and quantify because the number of littered bags that remain in the environment as pollution is unknown, and their future remediation costs are unknown.



## Benefits of the Legislation: Bag Charge

- Unlike single-use plastic bags, the paper and compostable bags that are subject to the charge do not remain in the environment for long periods of time without degrading. Thus, they create much less of a long-term environmental problem than single-use plastic bags.
- The primary benefits of the checkout bag charge are:
  - Reduction in litter, and the City's litter collection costs.
  - Reduction in the City's costs of recycling these bags.
- The OEA estimates that bag reduction caused by the charge will eliminate up to 1.5% of the City's waste/recycling needs, and 0.5% of its litter. The City stands to save up to an estimated \$2.4 million in reduced recycling costs, and \$0.1 million in litter collection costs.
- By 2014, given the expected consumer costs, the expected reduction in retail prices that will benefit consumers, and these savings in City costs, the net cost to consumers will be over three times the City's savings in waste and litter costs.



### Conclusions and Recommendations

- Because the full amount of checkout charge revenue will be received by local retailers that have essentially the same multiplier effects as consumer spending, the net impact of the legislation, for the San Francisco economy as a whole, will be very small, though positive.
- The proposed Checkout Bag Charge will be equivalent to a 0.1% sales tax increase to consumers, after projected retail price declines occur. Most consumers are expected to use reusable bags for most of their shopping. The bulk of the checkout charge will be paid by relatively few consumers that do not change their behavior. All consumers, however, stand to benefit from reduced retail prices.
- Under the most likely scenario, the cost of the charge to consumers, as a whole, significantly exceeds the benefits of lower City recycling and litter abatement costs.
- Evidence from other places suggests that an initial charge creates a greater change in behavior than a subsequent increase. This implies consumers will be paying more in charge revenue when the charge increases to \$0.25, than they will when the charge is first instituted.
- The City may wish to defer the increase from \$0.10 to \$0.25 a bag until the impact of the initial charge is fully understood. Annual charge revenue at a \$0.10 charge is estimated to total \$1.1 million (see page 8 for 2013 impacts). Again about half of that would be returned to consumers through lower prices, and thus the net cost to consumers would total \$5-6 million at a \$0.10 charge.
- In order to conduct a meaningful study of the initial impact of the legislation, the City should consider requiring retailers to report annual Checkout Bag Charge revenue to the Department of the Environment.



## Appendix: Key Assumptions

- The OEA developed a "most likely" model of consumer response to the checkout bag charge, as well as high- and low-impact alternative assumptions for sensitivity testing.
- The assumptions used in all three models are listed below. Details are provided in the pages that follow.

Assumption	Most Likely Scenario	Low Impact Scenario	High Impact Scenario
Average wholesale price - plastic bag	\$0.03	\$0.03	\$0.03
Average wholesale price - paper/compostable	\$0.08	\$0.08	\$0.08
Average retail price - reusable	\$1.15	\$1.15	\$1.15
Average retail price - bin liner	\$0.05	\$0.05	\$0.05
Bin liners needed per single-use bag saved	0.10	0.025	0.25
Reusable bags: average times re-used	50	200	25
Bag reduction caused by initial \$0.10 charge	65%	95%	50%
Further bag reduction from increasing charge to \$0.25	30%	30%	30%
Number of bags used today (as % of most likely case)	100%	90%	110%



### Appendix: Assumption Details

- Wholesale and retail bag prices:
  - See detail on next 2 pages.
- Bin liner and reusable bag substitution:
  - Very little solid evidence exists on how consumers re-use single-use bags as bin liners, and how many single-use bags a reusable bag can replace. Wide estimates for these assumptions were therefore used in the sensitivity testing.
- Bag reduction due to charge:
  - Initial bag reduction is difficult to assess because pre-charge bag use can only be estimated. 65% is near the mid-range of the experience of other places. Ireland and Victoria, Australia provide evidence on what happens when an existing fee is increased; the secondary reduction is lower than the initial reduction. The figure used here is based on an average of the Ireland and Victoria experiences.
- Number of Bags:
  - Before the 2007 plastic bag ban went into effect, the Department of the Environment estimated that 150 million plastic checkout bags were being used annually at affected stores. Sales tax data was used to estimate bag use for all grocery and pharmacy stores. Based on estimates of the distribution of bag use across different types of retailers from Australian data, overall estimates of bag use in San Francisco were estimated. See Nolan-ITU, 2002 "Plastic Shopping Bags-Analysis of Levies" and Hyder Consulting, 2006 "Plastic Retail Carry Bag Use," both for Environment Australia.



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## Appendix: Bag Types and Prices

Bag Type/ Source	Bag Size	Per Bag Cost Range			Year
		Average	Low	High	
<b>Regular Plastic "T-Shirt" Bag</b>					
<i>Regular Plastic "T-Shirt" Bag</i>					
<i>OEA, ULINE, Stewarts Packaging, other online outlets.</i>					
	12x7x22 to 10x6x21	\$ 0.028	\$ 0.017	\$ 0.037	2011
	Herrera Environmental Consultants, "San Jose Single-Use Carryout Bag Fee Fiscal Analysis," 7/12/2010, Table F-1	\$ 0.024	\$ 0.012	\$ 0.037	2010
	AECOM, "Economic Impact Analysis - Proposed Ban on Plastic Carryout Bags in Los Angeles County," 11/3/2010, Table 3.	\$ 0.020	\$ 0.015	\$ 0.025	2010
	Overview of Carryout Bags in LA, 2007 Pg 36 (in R3 Santa Monica report)	\$ 0.030	\$ 0.020	\$ 0.050	2007
<b>AVERAGE of Range</b>					
		\$ 0.026	\$ 0.016	\$ 0.037	
<b>Compostable Plastic Bag</b>					
<i>OEA, ULINE, Stewarts Packaging</i>					
	12x7x22 to 10x6x21	\$ 0.053	\$ 0.046	\$ 0.060	2011
<b>AVERAGE of Range</b>					
		\$ 0.053	\$ 0.046	\$ 0.060	
<b>Regular Paper Handled Grocery Bags - &lt; 40% Recycled Content</b>					
<i>Regular Paper Handled Grocery Bags - &lt; 40% Recycled Content</i>					
<i>OEA, ULINE, Stewarts Packaging, other online outlets.</i>					
	12x7x17	\$ 0.088	\$ 0.078	\$ 0.097	2011
	Herrera Environmental Consultants, "San Jose Single-Use Carryout Bag Fee Fiscal Analysis," 7/12/2010, Table F-1	\$ 0.129	\$ 0.090	\$ 0.180	2010
	AECOM, "Economic Impact Analysis - Proposed Ban on Plastic Carryout Bags in Los Angeles County," 11/3/2010, Table 3	\$ 0.100	\$ 0.050	\$ 0.150	2010
	Overview of Carryout Bags in LA, 2007 Pg 36 (in R3 Santa Monica report)	\$ 0.100	\$ 0.050	\$ 0.230	2007
<b>AVERAGE of Range</b>					
		\$ 0.104	\$ 0.067	\$ 0.164	
<b>Recycled Paper Handled Grocery Bags - 100% Recycled Content, minimum 40% Post Consumer</b>					
<i>Recycled Paper Handled Grocery Bags - 100% Recycled Content, minimum 40% Post Consumer</i>					
<i>OEA, ULINE, Stewarts Packaging, other online outlets, grocers</i>					
	12x7x17, 12x7x14	\$ 0.110	\$ 0.076	\$ 0.163	2011
	City of Santa Monica Nexus Study, January 2010, by R3 Consulting Group, Based on store interviews, pg 15	\$ 0.148	\$ 0.060	\$ 0.250	2010
	Herrera Environmental Consultants, "San Jose Single-Use Carryout Bag Fee Fiscal Analysis," 7/12/2010, Table F-1	\$ 0.161	\$ 0.140	\$ 0.220	2010
<b>AVERAGE of Range</b>					
		\$ 0.155	\$ 0.099	\$ 0.211	
<b>Regular Paper White Prescription Drug (small, dispensed at pharmacy)</b>					
<i>Regular Paper White Prescription Drug (small, dispensed at pharmacy)</i>					
	5x2x10	\$ -	\$ -	\$ -	2011
<b>AVERAGE</b>					
		\$0.026	\$ 0.025	\$ 0.027	

Source: OEA, various online outlets



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## Appendix: Bag Types and Prices

Bag Type/ Source	Bag Size	Per Bag Cost Range			Year
		Average	Low	High	
Regular Paper Grocery/Food Service Bags - < 40% Recycled Content (smaller size)	4.5x2.5x8.25 to 7x16	\$ -			2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.030</b>	<b>\$ 0.009</b>	<b>\$ 0.048</b>	
Recycled Paper Grocery/Food Service Bags - 100% Recycled (smaller size)	4.5x2.5x8.25 to 7x16				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.040</b>	<b>\$ 0.022</b>	<b>\$ 0.064</b>	
Regular Paper Merchandise Bags - Regular Unbleached, < 40% Recycled Content (smaller size)	6.25x9.25 to 16x4x24				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.048</b>	<b>\$ 0.019</b>	<b>\$ 0.127</b>	
Recycled Paper Merchandise Bags - 100% Recycled (smaller size)	6.25x9.25 to 16x4x24				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.055</b>	<b>\$ 0.023</b>	<b>\$ 0.135</b>	
Regular Paper Merchandise Bags - Specialty Retailer - Boutique Handled Bags (non recycled)	6.5x3.5x6.5 to 16x7x19				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.704</b>	<b>\$ 0.316</b>	<b>\$ 1.120</b>	
Regular Specialty Retailer Paper Merchandise Bags - Boutique Handled Bags (non recycled)	5x3.5x8 to 16x6x19				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.300</b>	<b>\$ 0.252</b>	<b>\$ 0.385</b>	
Recycled Specialty Retailer Paper Merchandise Bags - Boutique Handled Bags	5x3.5x8 to 16x6x19				2011
Source: OEA, various online outlets					
<b>AVERAGE</b>		<b>\$0.334</b>	<b>\$ 0.260</b>	<b>\$ 0.435</b>	
Reusable Bag - Non-Woven Polypropylene, or Cotton					
Source: <b>OEA field survey, Whole Foods, Safeway, REI, ULINE wholesale cost</b>					
Herrera Environmental Consultants, "San Jose Single-Use Carryout Bag Fee Fiscal Analysis," 7/12/2010, Table F-1		\$ 1.152	\$ 0.590	\$ 1.990	2011
AECOM, "Economic Impact Analysis - Proposed Ban on Plastic Carryout Bags in Los Angeles County," 11/9/2010, Table 3.		\$ 1.000	\$ 1.000	\$ 1.000	2010
Overview of Carryout Bags in LA, 2007 Pg 36 (in RA Santa Monica report)		\$ 0.870	\$ 0.750	\$ 0.990	2010
		\$ 2.990	\$ 2.990	\$ 2.990	2007
<b>AVERAGE</b>		<b>\$1.503</b>	<b>\$ 1.333</b>	<b>\$ 1.743</b>	



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