

**ORDINANCE TO BAN PLASTIC CARRYOUT BAGS  
IN THE CITY OF GLENDALE**

**ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT  
(SCH No. 200911104)**

**PREPARED FOR:**

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## **SECTION 1.0 INTRODUCTION**

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This Addendum to the Environmental Impact Report (EIR) has been prepared by the City of Glendale (City) to assess the environmental consequences of the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance). This document is prepared as an addendum to the previously certified EIR that was adopted by the County of Los Angeles (County) Board of Supervisors on November 16, 2010 (SCH #2009111104).<sup>1</sup> As one of the 88 incorporated cities within the County, the City proposes an ordinance to ban plastic carryout bags consistent with the ordinance analyzed in the County's Final EIR and adopted by the County Board of Supervisors. The addendum is required to address the possible environmental effects associated with adoption of such an ordinance within the City. The proposed ordinance would ban the issuance of plastic carryout bags at all supermarkets and other grocery stores, pharmacies, drug stores, convenience food stores, food marts, liquor stores, City -sponsored events, events held at City facilities, events on City property, and farmers markets, and would place a 10-cent charge on the issuance of paper carryout bags. The ordinance would also require the affected stores to provide or make available to a customer only recyclable paper carryout bags or reusable bags.

This document is prepared in accordance with the State California Environmental Quality Act (CEQA) Guidelines Section 15164, which requires that an Addendum to an EIR be prepared when changes to an approved project require minor modifications to the previous EIR rather than major changes due to the potential for new or substantially more adverse environmental effects. CEQA requires that an EIR be prepared for projects that may have a significant effect on the environment.<sup>2</sup> If changes to a project are necessary after an EIR has been certified and are not considered significant,<sup>3</sup> CEQA states that an Addendum to an EIR can be prepared to document minor technical changes or additions to a previously approved project.<sup>4</sup>

The project analyzed in the certified EIR included an ordinance to ban the issuance of plastic carryout bags at certain stores within the unincorporated areas of the County. The proposed ordinance for which this Addendum to the EIR is prepared similarly proposes to ban the issuance of plastic carryout bags and place a 10-cent charge on the issuance of paper carryout bags in the City. The City is one of the 88 incorporated cities that were included in the EIR analysis for the County's ordinance. The City would adopt an ordinance similar to the County's plastic carryout bag ordinance with a few minor changes specific to Glendale. These minor revisions would cause no new significant environmental effects beyond those identified in the County's certified EIR. Since the proposed ordinance does not require substantial changes to the County's ordinance, major revisions to the EIR analysis are not warranted. As such, a subsequent EIR pursuant to Section 15162 of the State CEQA Guidelines would not be warranted and an addendum is the appropriate environmental document under CEQA. The City is the lead agency for the proposed ordinance pursuant to CEQA.

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> *California Public Resources Code*, Division 13, Section 21002.1.

<sup>3</sup> *California Code of Regulations*, Title 14, Chapter 3, Article 11, Section 15162.

<sup>4</sup> *California Code of Regulations*, Title 14, Chapter 3, Article 11, Section 151624(a).

## 1.1 PURPOSE AND SCOPE OF THE ADDENDUM TO THE EIR

The City has prepared this Addendum to the EIR to demonstrate that the proposed ordinance satisfies the requirements contained in Section 15164 of the State CEQA Guidelines for the use of an Addendum to an EIR. The proposed ordinance does not require the preparation of a Subsequent or Supplemental EIR pursuant to Sections 15162 and 15163, respectively, of the State CEQA Guidelines due to the absence of new or substantially more adverse significant impacts than those analyzed in the certified EIR.

This Addendum to the EIR neither controls nor determines the ultimate decision for approval of the proposed ordinance. The information presented in this Addendum to the EIR will be considered by the City to make findings concerning the modifications to the certified EIR.<sup>5</sup>

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<sup>5</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

## **SECTION 2.0**

### **PROJECT DESCRIPTION**

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Consistent with the requirements of Section 15124 of the State California Environmental Quality Act (CEQA) Guidelines,<sup>1</sup> this section of the Addendum to the Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County<sup>2</sup> describes the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (City) (proposed ordinance). The project description includes the location and boundaries of the proposed ordinance; a brief characterization of existing bag usage conditions within the City; a statement of objectives for the proposed ordinance; and a general delineation of the technical, economic, and environmental characteristics of the proposed ordinance. The “project,” as defined by CEQA, being considered by the City is an ordinance to ban the issuance of plastic carryout bags and place a charge on the issuance of paper carryout bags within the City.

#### **2.1 PROJECT LOCATION**

The proposed ordinance would affect an area of approximately 30 square miles encompassing the incorporated City of Glendale within the County of Los Angeles (County), California. The area is bordered on the north by the foothill communities of La Cañada Flintridge, La Crescenta, and Tujunga; to the south by the Atwater Village community in the City of Los Angeles; to the east by the City of Pasadena and the community of Eagle Rock; and to the west by the City of Burbank. (Figure 2.1-1, *Project Location Map*).

#### **2.2 BACKGROUND**

##### **2.2.1 Contribution of Plastic Carryout Bags to Litter Stream**

The California Integrated Waste Management Board (CIWMB) estimates that plastic carryout bags make up 0.4 percent of California’s overall disposed waste stream by weight but have been shown to make a more significant contribution to litter, particularly within catch basins.<sup>3</sup> In 2008, the City of San Francisco Litter Audit showed that plastic materials are the second most prevalent form of litter, with 4.7 percent of all litter collected being unidentified miscellaneous plastic litter and branded plastic carryout bags constituting 0.6 percent of the total number of large litter items collected.<sup>4</sup> As an example of the prevalence of plastic bag litter found in catch basins, plastic bags constituted 25 percent by weight and 19 percent by volume of the trash collected from 30 catch basins in the Los Angeles River during the Great Los Angeles River Clean Up.<sup>5</sup> In a California Department of Transportation (Caltrans) study of catch basins alongside freeways in Los Angeles,

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<sup>1</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>2</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>3</sup> California Environmental Protection Agency, Integrated Waste Management Board. December 2004. “Table ES-3: Composition of California’s Overall Disposed Waste Stream by Material Type, 2003.” *Contractor’s Report to the Board: Statewide Waste Characterization Study*, p. 6. Produced by: Cascadia Consulting Group, Inc. Berkeley, CA. Available at: <http://www.ciwmb.ca.gov/Publications/default.asp?pubid=1097>

<sup>4</sup> City of San Francisco, San Francisco Environment Department. 2008. *The City of San Francisco Streets Litter Re-audit*. Prepared by: HDR; Brown, Vence & Associates, Inc.; and MGM Management Environmental and Management Service. San Francisco, CA. Available at: [http://www.sfenvironment.org/downloads/library/2008\\_litter\\_audit.pdf](http://www.sfenvironment.org/downloads/library/2008_litter_audit.pdf)

<sup>5</sup> City of Los Angeles. 18 June 2004. *Characterization of Urban Litter*. Pages 1-5. Prepared by: Ad Hoc Committee on Los Angeles River and Watershed Protection Division. Los Angeles, CA.



**FIGURE 2.1-1**  
Project Location Map

plastic film composed 7 percent by mass and 12 percent by volume of the total trash collected.<sup>6</sup> According to research conducted by the Los Angeles County Department of Public Works (LACDPW), approximately 6 billion plastic carryout bags are used in the County each year, equivalent to approximately 1,600 bags per household per year.<sup>7,8,9</sup> Each year, public agencies in California spend more than \$375 million on litter prevention, cleanup, and disposal.<sup>10</sup> The County of Los Angeles Flood Control District alone spends more than \$18 million annually for prevention, cleanup, and enforcement efforts to reduce litter.<sup>11,12,13,14</sup> In 2008–2009, the County of Los Angeles Flood Control District spent over \$24 million on these activities, including \$1.9 million on maintenance of structural and treatment control best management practices (BMPs), \$9.3 million on municipal street cleaning, \$1.9 million on catch basin cleaning, \$9.6 million on trash collection and recycling, and \$1.3 million on capital costs.<sup>15</sup> Survey data obtained from employees of solid waste facilities within the County indicated that plastic carryout bags pose serious operational problems for landfills and serious litter issues due to their lightweight nature and propensity to become airborne.<sup>16,17</sup> Survey respondents indicated that providing clean-up crews to address the plastic bag litter problem in areas adjacent to landfills is costly and time consuming.<sup>18</sup>

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<sup>6</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. 2001. *Results of the Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation. Available at: <http://www.owp.csus.edu/research/papers/papers/PP020.pdf>

<sup>7</sup> California Integrated Waste Management Board. 12 June 2007. Board Meeting Agenda, Resolution: Agenda Item 14. Sacramento, CA.

<sup>8</sup> U.S. Census Bureau. 2000. "State & County Quick Facts: Los Angeles County, California." Available at: <http://quickfacts.census.gov/qfd/states/06/06037.html>

<sup>9</sup> At an average of slightly fewer than three persons per household

<sup>10</sup> California Department of Transportation. Accessed on: 18 August 2011. "Facts at a Glance." *Don't Trash California*. Available at: <http://www.dontrashcalifornia.info/pdf/Statistics.pdf>

<sup>11</sup> Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form. October 2009. Available at: <http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2009/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/Principal%20Permittee%20Annual%20Report.pdf>

<sup>12</sup> Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form. October 2008. Available at: <http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2008/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/Principal%20Permittee%20&%20County%20Annual%20Report%20FY07-08.pdf>

<sup>13</sup> Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form. October 2007. Available at: <http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2007/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/Annual%20Rpt%2006-07.pdf>

<sup>14</sup> Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form. October 2006. Available at: [http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2006/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/PrincipalPermittee\\_AnnualReportFY05-06.pdf](http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2006/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/PrincipalPermittee_AnnualReportFY05-06.pdf)

<sup>15</sup> Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form. October 2009. Available at: <http://dpw.lacounty.gov/wmd/NPDESRSA/AnnualReport/2009/Appendix%20D%20-%20Principal%20Permittee%20Annual%20Report/Principal%20Permittee%20Annual%20Report.pdf>

<sup>16</sup> County of Los Angeles Department of Public Works. 2007. Survey – All Solid Waste Facilities: Plastic Bag Analysis for the County of Los Angeles.

<sup>17</sup> County of Los Angeles Department of Public Works. 2007. Survey – All Solid Waste Facilities: Plastic Bag Analysis for the County of Los Angeles.

<sup>18</sup> County of Los Angeles Department of Public Works. 2007. Survey – All Solid Waste Facilities: Plastic Bag Analysis for the County of Los Angeles.

## 2.2.2 Definitions

For the purposes of this Addendum to the EIR, the following terms are defined as follows:

- *Reusable bag(s)*: a bag with handles that is specifically designed and manufactured for multiple reuse and meets all of the following requirements: (1) has a minimum lifetime of 125 uses, which means the capability of carrying a minimum of 22 pounds 125 times over a distance of at least 175 feet; (2) has a minimum volume of 15 liters; (3) is machine washable or is made from a material that can be cleaned or disinfected; (4) does not contain lead, cadmium, or any other heavy metal in toxic amounts; (5) has printed on the bag, or on a tag that is permanently affixed to the bag, the name of the manufacturer, the location (country) where the bag was manufactured, a statement that the bag does not contain lead, cadmium, or any other heavy metal in toxic amounts, and the percentage of postconsumer recycled material used, if any; and (6) if made of plastic, is a minimum of at least 2.25 mils thick.
- *Paper carryout bag(s)*: a carryout bag made of paper that is provided by a store to a customer at the point of sale and can contain some percentage of post-consumer recycled content. Can be interchangeably referred to as a recyclable paper carryout bag.
- *Plastic carryout bag(s)*: any bag made predominantly of plastic derived from either petroleum or a biologically-based source, such as corn or other plant sources, which is provided to a customer at the point of sale. "Plastic carryout bag" includes compostable and biodegradable bags but does not include reusable bags, produce bags, or product bags.
- *Recyclable paper carryout bag(s)*: a paper bag that meets all of the following requirements: (1) contains no old growth fiber, (2) is one hundred percent (100%) recyclable overall and contains a minimum of forty percent (40%) post-consumer recycled material; (3) is capable of composting, consistent with the timeline and specifications of the American Society of Testing and Materials (ASTM) Standard D6400; (4) is accepted for recycling in curbside programs in the City; (5) has printed on the bag the name of the manufacturer, the location (country) where the bag was manufactured, and the percentage of postconsumer recycled material used; and (6) displays the word "Recyclable" in a highly visible manner on the outside of the bag.

## 2.2.3 Carryout Bag Bans and Fees

To date, numerous city and county governments in California have imposed bans on the issuance of plastic carryout bags: City and County of San Francisco, City of Malibu, City of Palo Alto, City of Manhattan Beach, City of Pasadena, City of Long Beach, City of Calabasas, City of Santa Monica, City of West Hollywood, County of Los Angeles, and the incorporated Town of Fairfax. In addition, a plastic carryout bag fee ordinance is in effect in the District of Columbia, and ordinances to ban the issuance of plastic carryout bags are in effect in Marshall County, Iowa; Telluride, Colorado; and the Outer Banks of North Carolina.

Outside of the United States, Ireland, Switzerland, South Africa, Taiwan, Bangladesh, Belgium, China, and American Samoa have also banned or placed fees on the issuance of plastic carryout bags.

## 2.2.4 Litigation History

In the past, numerous city and county governments in California, including the City of Oakland, City of Manhattan Beach, City of Palo Alto, Santa Clara County, City of San Diego, City of Morgan Hill, City of Mountain View, City of San Jose, Marin County, the City of Encinitas, and the City of Long Beach have attempted to ban plastic carryout bags through ordinances but have been challenged by members of the plastic bag industry.

On August 12, 2008, Save the Plastic Bag Coalition filed a lawsuit against the City of Manhattan Beach for adopting an ordinance to ban the issuance of plastic carryout bags without first preparing an EIR.<sup>19</sup> On February 20, 2009, the Los Angeles Superior Court ruled that the City of Manhattan Beach should have prepared an EIR for the ordinance.<sup>20</sup> The trial court found that substantial evidence supported a fair argument that the ordinance may cause increased use of paper bags, which may have a significant negative impact on the environment, thus requiring an EIR for further evaluation of the potential environmental impacts.<sup>21</sup> On January 27, 2010, the Court of Appeal affirmed the trial court decision and vacated the ordinance and disallowed reenactment, pending preparation of an EIR.<sup>22</sup> On July 14, 2011, the California Supreme Court overturned the decision and ruled in the case of Manhattan Beach that “a negative declaration was sufficient to comply with the requirements of the California Environmental Quality Act.” The ordinance was classified by the City of Manhattan Beach as “[a]n activity directly undertaken by [a] public agency,” and was therefore classified as a project under section 21065, subdivision (a) of CEQA. The Supreme Court stated that the legal “analysis would be different for a ban on plastic bags by a larger governmental body, which might precipitate a significant increase in paper bag consumption.”

## 2.3 EXISTING CONDITIONS

### 2.3.1 Plastic Carryout Bags

In 1977, supermarkets began offering to customers plastic carryout bags designed for single use.<sup>23,24</sup> By 1996, four out of every five grocery stores were using plastic carryout bags.<sup>25,26</sup> Plastic carryout

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<sup>19</sup> Law Offices of Stephen L. Joseph, Esq., Tiburon, California. 12 December 2008. Action filed: 12 August 2008. Petitioner’s Notice of Motion and Motion for Preliminary Injunction Staying Plastic Bag Ordinance; Declarations of Stephen L. Joseph, Peter M. Grande and Catherine Brown. Save the Plastic Bag Coalition v. City of Manhattan Beach, City Council of Manhattan Beach. Case No. BS116362. On behalf of Save the Plastic Bag Coalition, San Francisco, CA. Available at: <http://www.savetheplasticbag.com/UploadedFiles/STPB%20mot%20for%20preliminary%20inj%20against%20Manhattan%20Beach.pdf>

<sup>20</sup> Superior Court of California, County of Los Angeles. Hearing on Petition for Writ of Mandate. Save the Plastic Bag Coalition v. City of Manhattan Beach et al. Case No. BS116362. Ruling: 20 February 2009. Available at: <http://www.savetheplasticbag.com/UploadedFiles/Manhattan%20Beach%20ruling.pdf>

<sup>21</sup> Court of Appeal of the State of California, Second Appellate District, Division Five. Decision: 27 January 2009. Appeal from a judgment of the Superior Court of Los Angeles County, David P. Yaffe, Judge. Save the Plastic Bag Coalition v. City of Manhattan Beach. Available at: <http://www.savetheplasticbag.com/UploadedFiles/Manhattan%20Beach%20appeal%20decision.pdf>

<sup>22</sup> Court of Appeal of the State of California, Second Appellate District, Division Five. Decision: 27 January 2009. Appeal from a judgment of the Superior Court of Los Angeles County, David P. Yaffe, Judge. Save the Plastic Bag Coalition v. City of Manhattan Beach. Available at: <http://www.savetheplasticbag.com/UploadedFiles/Manhattan%20Beach%20appeal%20decision.pdf>

<sup>23</sup> SPI: The Plastics Industry Trade Association. 2007. Web site. Available at: <http://www.plasticsindustry.org/>

<sup>24</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>25</sup> SPI: The Plastics Industry Trade Association. 2007. Web site. Available at: <http://www.plasticsindustry.org/>

bags have been found to contribute substantially to the litter stream and have adverse effects on marine wildlife.<sup>27,28,29,30,31,32</sup> The prevalence of litter from plastic bags in the urban environment also compromises the efficiency of systems designed to channel storm water runoff. Furthermore, plastic bag litter leads to increased cleanup costs for the City, the County, Caltrans, and other public agencies, and are ultimately paid by tax payers.<sup>33,34,35</sup> The presence of litter also contributes to degradation of the environment and the quality of life of residents and visitors.<sup>36</sup> In particular, the prevalence of plastic bag litter in the storm water system and coastal waterways hampers the ability of, and increases the cost to, local agencies to comply with the National Pollution Discharge Elimination System (NPDES) and total maximum daily loads (TMDL) limits for trash pursuant to the federal Clean Water Act (CWA).<sup>37,38</sup>

The CIWMB estimates that approximately 3.9 percent of plastic waste can be attributed to plastic carryout bags related to grocery and other merchandise, which represents approximately 0.4 percent of the total waste stream in California.<sup>39,40</sup> Several organizations have studied the effects of

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<sup>26</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>27</sup> United Nations Environment Programme. April 2009. *Marine Litter: A Global Challenge*. Nairobi, Kenya. Available at: [http://www.unep.org/regionalseas/marinelitter/publications/docs/Marine\\_Litter\\_A\\_Global\\_Challenge.pdf](http://www.unep.org/regionalseas/marinelitter/publications/docs/Marine_Litter_A_Global_Challenge.pdf)

<sup>28</sup> California Integrated Waste Management Board. 12 June 2007. Board Meeting Agenda, Resolution: Agenda Item 14. Sacramento, CA.

<sup>29</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>30</sup> Bjorndal, K. et. al. 1994. "Ingestion of marine debris by juvenile sea turtles in coastal Florida habitats." *Marine Pollution Bulletin*, 28 (3). Available at: [http://accstr.ufl.edu/publications/BjorndalEtAl\\_1994\\_IngestionOfMarineDebrisByJuvenileSeaTurtlesInCostalFlorida.pdf](http://accstr.ufl.edu/publications/BjorndalEtAl_1994_IngestionOfMarineDebrisByJuvenileSeaTurtlesInCostalFlorida.pdf)

<sup>31</sup> Okeanos Ocean Research Foundation. 1989. *Marine Mammal and Sea Turtle Encounters with Marine Debris in the New York Bight and the Northeast Atlantic*. Available at: [http://swfsc.noaa.gov/publications/TM/SWFSC/NOAA-TM-NMFS-SWFSC-154\\_P562.PDF](http://swfsc.noaa.gov/publications/TM/SWFSC/NOAA-TM-NMFS-SWFSC-154_P562.PDF)

<sup>32</sup> Gomerčić, H. et. al. *European Journal of Wildlife Research*. 2006. "Biological aspects of Cuvier's beaked whale (*Ziphius cavirostris*) recorded in the Croatia part of the Adriatic Sea." DOI 10.1007/s10344-006-0032-8

<sup>33</sup> California Integrated Waste Management Board. 12 June 2007. Board Meeting Agenda, Resolution: Agenda Item 14. Sacramento, CA.

<sup>34</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>35</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. 1998–2000. *Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation.

<sup>36</sup> Keep America Beautiful. Accessed August 18, 2011. Litter Prevention. Available at: [http://www.kab.org/site/PageServer?pagename=focus\\_litter\\_prevention](http://www.kab.org/site/PageServer?pagename=focus_litter_prevention)

<sup>37</sup> *United States Code*, Title 33, Section 1313, "Water Quality Standards and Implementation Plans." Clean Water Act, Section 303(d).

<sup>38</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>39</sup> California Environmental Protection Agency, Integrated Waste Management Board. December 2004. "Table ES-3: Composition of California's Overall Disposed Waste Stream by Material Type, 2003." *Contractor's Report to the Board: Statewide Waste Characterization Study*, p. 6. Produced by: Cascadia Consulting Group, Inc. Berkeley, CA. Available at: <http://www.ciwmb.ca.gov/Publications/default.asp?pubid=1097>

plastic litter: Caltrans conducted a study on freeway storm water litter;<sup>41</sup> the Friends of Los Angeles River conducted a waste characterization study on the Los Angeles River;<sup>42</sup> the City of Los Angeles conducted a waste characterization study on 30 storm drain basins;<sup>43</sup> and LACDPW conducted a trash reduction and a waste characterization study of street sweeping and trash capture systems near and within the Hamilton Bowl in Long Beach, California.<sup>44</sup> These studies showed that plastic film (including plastic bag litter) composed between 7 to 30 percent by mass and between 12 to 34 percent by volume of the total litter collected. Despite implementation of BMPs; installation of litter control devices, such as cover fences for trucks, catch basins, and facilities to prevent airborne bags from escaping; and the use of roving patrols to pick up littered bags, plastic bag litter remains prevalent throughout the County.<sup>45</sup>

Assembly Bill (AB) 2449 requires all supermarkets (grocery stores with more than \$2 million in annual sales) and retail businesses of at least 10,000 square feet with a licensed pharmacy to establish a plastic carryout bag recycling program at each store. As of July 1, 2007, each store must provide a clearly marked bin that is easily available for customers to deposit plastic carryout bags for recycling. The stores' plastic bags must display the words "please return to a participating store for recycling."<sup>46</sup> In addition, the affected stores must make reusable bags available to their patrons. These bags can be made of cloth, fabric, or plastic with a thickness of 2.25 mils or greater.<sup>47</sup> The stores are allowed to charge their patrons for reusable bags.<sup>48</sup> Store operators must maintain program records for a minimum of three years and make the records available to the local jurisdiction.<sup>49</sup> Despite the implementation of AB 2449, the Department of Resources Recycling and Recovery (CalRecycle) reported that the most recent statewide recycling rate for regulated plastic carryout bags was only about 3 percent.<sup>50</sup>

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<sup>40</sup> Note: Plastics make up approximately 9.5 percent of California's waste stream by weight, including 0.4 percent for plastic carryout bags related to grocery and other merchandise, 0.7 percent for non-bag commercial and industrial packaging film, and 1 percent for plastic trash bags.

<sup>41</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. 1998–2000. *Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation.

<sup>42</sup> Friends of the Los Angeles River and American Rivers. 2004. *Great Los Angeles River*. Los Angeles and Nevada City, CA.

<sup>43</sup> City of Los Angeles, Sanitation Department of Public Works. June 2006. *Technical Report: Assessment of Catch Basin Opening Screen Covers*. Los Angeles, CA.

<sup>44</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>45</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>46</sup> *Public Resources Code*, Section 42250–42257. 2006. Assembly Bill 2449.

<sup>47</sup> *Public Resources Code*, Section 42250–42257. 2006. Assembly Bill 2449.

<sup>48</sup> *Public Resources Code*, Section 42250–42257. 2006. Assembly Bill 2449.

<sup>49</sup> California Integrated Waste Management Board. 12 June 2007. Board Meeting Agenda, Resolution: Agenda Item 14. Sacramento, CA.

<sup>50</sup> CalRecycle. Last updated: 6 April 2011. *2009 Statewide Recycling Rate for Plastic Carryout Bags*. Available at: <http://www.calrecycle.ca.gov/Plastics/AtStore/AnnualRate/2009Rate.htm>

### 2.3.2 Paper Bags

The production, distribution, and disposal of paper carryout bags also have known adverse effects on the environment.<sup>51,52</sup> A considerable amount of energy that is used, trees felled, and pollution generated in the production of paper carryout bags.<sup>53,54</sup> The CIWMB's 2004 Statewide Waste Characterization Study indicates that approximately 117,000 tons of paper carryout bags are disposed of each year by consumers throughout the County. This amount accounts for approximately 1 percent of the total 12 million tons of solid waste generated each year.<sup>55</sup> However, paper bags have the potential to biodegrade if they are sufficiently exposed to oxygen, sunlight, moisture, soil, and microorganisms (such as bacteria); they are denser and less susceptible to becoming airborne; and they are generally recycled more than plastic bags. The U.S. Environmental Protection Agency (USEPA) reported that the recycling rate for high-density polyethylene plastic bags and sacks was 11.9 percent in 2007 compared to 36.8 percent of paper bags and sacks.<sup>56</sup> The paper used to make standard paper carryout bags is originally derived from wood pulp, which is a naturally biodegradable and compostable material. Based on available evidence, paper carryout bags are less likely than plastic carryout bags to become litter. The brown paper bags commonly found at supermarkets are made from Kraft paper.<sup>57</sup>

There are no known facilities in the County or in the City that manufacture and produce paper carryout bags for retail establishments. The California Paper Bag Co., located at 1829 Dana Street in Glendale, is a manufacturer of paper bags for fast-food establishments, such as McDonalds and Burger King,<sup>58</sup> but not for retail, supermarket, and small market establishments that are affected by the proposed ordinance. The proposed ordinance would not apply to paper bag use in restaurant establishments. Therefore, the California Paper Bag Co. was not considered in the analysis of environmental impacts from the proposed ordinance. Section 2.5 provides further clarification of the establishments affected by the proposed ordinance.

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<sup>51</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. October 2008. *County of Los Angeles Single Use Bag Reduction and Recycling Program – Program Resource Packet*. Alhambra, CA.

<sup>52</sup> Green Cities California. March 2010. *Master Environmental Assessment on Single-Use and Reusable Bags*. Prepared by ICF International. San Francisco, CA.

<sup>53</sup> County of Los Angeles Board of Supervisors. 22 January 2008. *Single Use Bag Reduction and Recycling Program (Resolution and Alternative 5)*. Los Angeles, CA. Available at: <http://dpw.lacounty.gov/epd/PlasticBags/Resources.cfm>

<sup>54</sup> County of Los Angeles, Department of Public Works, Environmental Programs Division. October 2008. *County of Los Angeles Single Use Bag Reduction and Recycling Program – Program Resource Packet*. Alhambra, CA.

<sup>55</sup> California Environmental Protection Agency, Integrated Waste Management Board. December 2004. *Contractor's Report to the Board: 2004 Statewide Waste Characterization Study*. Produced by: Cascadia Consulting Group, Inc. Berkeley, CA. Available at: <http://www.ciwmb.ca.gov/publications/localasst/34004005.pdf>

<sup>56</sup> U.S. Environmental Protection Agency. November 2008. "Table 21: Recovery of Products in Municipal Solid Waste, 1960 to 2007." *Municipal Solid Waste in the United States: 2007 Facts and Figures*. Washington, DC. Available at: <http://www.epa.gov/waste/nonhaz/municipal/pubs/msw07-rpt.pdf>. The referenced table included the recovery of post-consumer wastes for the purposes of recycling or composting, it did not include conversion/fabrication scrap. The report includes the recovery of plastic bags, sacks, and wraps (excluding packaging) for a total of 9.1 percent of plastic recovered in this category. The County of Los Angeles conservatively estimates that the percentage of plastic bags in this category for the County of Los Angeles is less than 5 percent.

<sup>57</sup> American Forest and Paper Association. Accessed August 18, 2011. Web site. Facts about Paper. Available at: <http://www.afandpa.org/FunFacts.aspx>

<sup>58</sup> Representative of California Paper Bag Co., Glendale, California. 9 February 2012. Telephone conversation with Roland Ok, Sapphos Environmental, Inc., Pasadena, California.

### 2.3.3 Reusable Bags

Reusable bags offer an alternative to plastic carryout bags, compostable plastic carryout bags, and paper carryout bags. The utility of a reusable bag has been noted in various reports, such as the 2008 report by Green Seal, which estimates that the life of a reusable bag is between two and five years.<sup>59</sup> In 1994, the Green Seal report encouraged an industry standard for reusable bags of a least 300 uses. Today, Green Seal recommends a more ambitious minimum standard of 500 uses under wet conditions (bag testing under wet conditions is more stringent testing).<sup>60</sup> Furthermore, life cycle studies for plastic products have documented the adverse impacts related to various types of plastic and paper bags; however, life cycle studies have also indicated that reusable bags are the preferable option to both paper bags and plastic bags.<sup>61,62,63,64</sup>

Reusable bags are intended to provide a viable alternative to the use of paper or plastic carryout bags.<sup>65</sup> Currently, some stores within the City, such as certain Whole Foods stores, do not offer plastic carryout bags at checkout and instead offer reusable bags for sale and provide rebates if patrons bring their own reusable bags. Other stores, such as certain Ralphs stores offer reusable bags for purchase at registers and offer various incentives such as store rewards or store credit to customers who use reusable bags.<sup>66</sup>

## 2.4 STATEMENT OF OBJECTIVES

### 2.4.1 Program Goals

The proposed ordinance supports the general goals of the adopted Greener Glendale Plan for conserving energy and natural resources, reducing the volume of landfill waste, reducing litter, protecting the watershed, and promoting a clean and sustainable environment.<sup>67</sup> The proposed ordinance would support Objective 5 of the Greener Glendale Plan. Objective 5 states that the City should adopt a citywide law that reduces the use of a disposable, toxic, or

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<sup>59</sup> Green Seal, Inc. is an independent non-profit organization that uses science-based standards and the power of the marketplace to provide recommendations regarding sustainable products, standards, and practices.

<sup>60</sup> Green Seal, Inc. 13 October 2008. *Green Seal Proposed Revised Environmental Standard For Reusable Bags (GS-16)*. Washington, DC. Available at: [http://www.greenseal.org/certification/gs-16\\_reusable\\_bag\\_proposed\\_revised\\_standard\\_background%20document.pdf](http://www.greenseal.org/certification/gs-16_reusable_bag_proposed_revised_standard_background%20document.pdf)

<sup>61</sup> Reusable bag manufacturers in the United States are expected to enforce industry standards and recommendations to reduce adverse environmental impacts.

<sup>62</sup> Green Seal, Inc. 13 October 2008. *Green Seal Proposed Revised Environmental Standard For Reusable Bags (GS-16)*. Washington, DC. Available at: [http://www.greenseal.org/certification/gs-16\\_reusable\\_bag\\_proposed\\_revised\\_standard\\_background%20document.pdf](http://www.greenseal.org/certification/gs-16_reusable_bag_proposed_revised_standard_background%20document.pdf)

<sup>63</sup> Boustead Consulting & Associates, Ltd. 2007. *Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper*. Available at: [http://www.americanchemistry.com/s\\_plastics/doc.asp?CID=1106&DID=7212](http://www.americanchemistry.com/s_plastics/doc.asp?CID=1106&DID=7212)

<sup>64</sup> Green Cities California. March 2010. *Master Environmental Assessment on Single-Use and Reusable Bags*. Prepared by: ICF International. San Francisco, CA.

<sup>65</sup> Green Seal, Inc. 13 October 2008. *Green Seal Proposed Revised Environmental Standard For Reusable Bags (GS-16)*. Washington, DC. Available at: [http://www.greenseal.org/certification/gs-16\\_reusable\\_bag\\_proposed\\_revised\\_standard\\_background%20document.pdf](http://www.greenseal.org/certification/gs-16_reusable_bag_proposed_revised_standard_background%20document.pdf)

<sup>66</sup> Ralphs Grocery Company. 2009. "Doing Your Part: Try Reusable Shopping Bags." Web site. Available at: [http://www.ralphs.com/healthy\\_living/green\\_living/Pages/reusable\\_bags.aspx](http://www.ralphs.com/healthy_living/green_living/Pages/reusable_bags.aspx)

<sup>67</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

nonrenewable product category by at least 50 percent in seven years.<sup>68</sup> In addition, Objective WS1 of the Greener Glendale Plan calls for implementation of a Zero Waste Plan (under review by the City of Glendale City Council), which explores a citywide ban on stores distributing free single-use plastic shopping bags, in an effort to divert trash away from landfills.<sup>69,70</sup> The Greener Glendale Plan recommends adoption of a citywide ordinance, such as the proposed ordinance, that is designed to reduce the use of single-use plastic bags.<sup>71</sup>

## 2.4.2 Objectives

The City's objectives for the proposed ordinance would be similar to the County's objectives for the Countywide ordinance. The County's objectives are as follow:<sup>72</sup>

- Conduct outreach to all 88 incorporated cities of the County to encourage adoption of comparable ordinances
- Reduce the Countywide consumption of plastic carryout bags from the estimated 1,600 plastic carryout bags per household in 2007, to fewer than 800 plastic bags per household in 2013
- Reduce the Countywide contribution of plastic carryout bags to litter that blights public spaces Countywide by 50 percent by 2013
- Reduce the County's, Cities', and Flood Control District's costs for prevention, clean-up, and enforcement efforts to reduce litter in the County by \$4 million
- Substantially increase awareness of the negative impacts of plastic carryout bags and the benefits of reusable bags, and reach at least 50,000 residents (5 percent of the population) with an environmental awareness message

The City's proposed ordinance has five objectives that are consistent with the County's objectives:

- Reduce the Citywide use of plastic carryout bags
- Reduce litter
- Assist the County in reducing costs for prevention, clean-up, and enforcement efforts to reduce litter
- Substantially increase awareness of the negative impacts of plastic carryout bags and the benefits of reusable bags
- Reduce Citywide disposal of plastic carryout bags

## 2.5 PROPOSED PROJECT

The proposed ordinance would ban the issuance of plastic carryout bags and place a charge of 10 cents on the issuance of paper carryout bags at certain retail establishments in the City. Six months following adoption of the proposed ordinance by the Glendale City Council, the proposed

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<sup>69</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>71</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>71</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>72</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

ordinance would apply to farmers markets and large stores within the City, including those that (1) meet the definition of a “supermarket” as found in the California Public Resources Code, Section 14526.5 and (2) are buildings that have a 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law and have a pharmacy licensed pursuant to Chapter 9 of Division 2 of the Business and Professions Code. Twelve months following the adoption of the proposed ordinance by the Glendale City Council, the proposed ordinance would apply to all other stores, which include drug stores, supermarkets, pharmacies, grocery stores, convenience food stores, food marts, and other entities engaged in the retail sale of a limited line of goods that includes milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 license issued by the Department of Alcoholic Beverage Control. Vendors at City-sponsored events, City-run facilities, or City-owned property will also be required to comply with the proposed ordinance within the first half of 2014.

The proposed ordinance provides an exemption for stores that are required to provide plastic carryout bags as a condition of use or as required to abate a nuisance. In addition, restaurants and fast food establishments are not within the scope of the proposed ordinance. The ordinance also allows recyclable paper carryout bags to be distributed free of charge at farmers markets and explicitly provides an exemption to protect low-income consumers.

The proposed ordinance is substantially similar to the ordinance adopted by the County Board of Supervisors that was analyzed in the certified EIR as Alternative 5, Ban Plastic Carryout Bags and Impose a Fee on Paper Carryout Bags for All Supermarkets and Other Grocery Stores, Convenience Stores, Pharmacies, and Drug Stores in Los Angeles County.<sup>73</sup> The key differences between the City’s proposed ordinance and the ordinance adopted by the County include the following:

- The County’s ordinance does not specify farmers markets, but the City’s proposed ordinance would also apply to farmers markets.
- The proposed ordinance would apply to vendors at City-sponsored events, in City-owned facilities, and on City-owned property.
- The City’s ordinance requires affected stores to keep records of the total number of recyclable paper carryout bags provided, the total amount of money collected for providing recyclable paper carryout bags, and a summary of any efforts a store has undertaken to promote the use of reusable bags. Such records must be made available to the Department of Public Works for review when necessary.
- The City’s proposed ordinance would take effect 6 months after City Council adoption for supermarkets with gross annual sales of \$2 million or more and stores of at least 10,000 square feet with a licensed pharmacy. For stores smaller than 10,000 square feet, the City’s ordinance would take effect 12 months after the ordinance is adopted by City Council, rather than the operative date for the County’s ordinance.

The differences between the City and County ordinances as listed above are minor changes that would not result in any new or significantly more adverse environmental impacts than those analyzed in the certified EIR (adopted November 16, 2010). As such, the City’s proposed ordinance is consistent with the County’s ordinance but would be specific to the City of Glendale.

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<sup>73</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

**SECTION 3.0**  
**ENVIRONMENTAL ANALYSIS**

The environmental analysis provided in this section describes the information that was considered in evaluating the questions contained in the Environmental Checklist of the State California Environmental Quality Act Guidelines.<sup>1</sup> The information used in this evaluation is derived from literature review (see Section 4.0, *References*, for a list of reference material consulted), field reconnaissance, and consultation with the City of Glendale conducted in support of the proposed Ordinance to Ban Plastic Carryout Bags (proposed ordinance). The evaluation of potential environmental impacts considered the existing conditions within the City of Glendale and the surrounding County of Los Angeles. Environmental impacts that have the potential to result from implementation of the proposed ordinance in the City of Glendale are summarized in Table 3-1, *Summary of Impacts from Proposed Ordinance*.

**TABLE 3-1**  
**SUMMARY OF IMPACTS FROM PROPOSED ORDINANCE**

Impact	Level of Significance	Compared to the County's Certified EIR
<b>Aesthetics</b>		
None	No impact	Same; no new impacts
<b>Agricultural and Forest Resources</b>		
None	No impact	Same; no new impacts
<b>Air Quality</b>		
Indirect increase in demand for paper carryout bags and potential subsequent increase in criteria pollutant emissions from manufacture, distribution, and disposal of paper carryout bags; to be partially offset by reduction in plastic carryout bags and increase in reusable bags	Less than significant	Same; no new impacts
<b>Biological Resources</b>		
Beneficial	No adverse impact, but beneficial impact	Same; no new impacts
<b>Cultural Resources</b>		
None	No impact	Same; no new impacts
<b>Geology and Soils</b>		
None	No impact	Same; no new impacts
<b>Greenhouse Gas Emissions</b>		
Indirect increase in demand for paper carryout bags and potential subsequent increase in greenhouse emissions from manufacture, distribution, and disposal; to be partially offset by reduction in plastic carryout bags and increase in reusable bags	Direct: less than significant  Cumulative: potentially significant; accordingly, the City will adopt a Statement of Overriding Considerations*	Same; no new impacts

<sup>1</sup> California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

**TABLE 3-1,  
SUMMARY OF IMPACTS FROM PROPOSED ORDINANCE, *Continued***

<b>Impact</b>	<b>Level of Significance</b>	<b>Compared to the County's Certified EIR</b>
<b>Hazards and Hazardous Materials</b>		
None	No impact	Same; no new impacts
<b>Hydrology and Water Quality</b>		
Indirect increase in demand for paper carryout bags with potential subsequent increase in eutrophication impacts from manufacture; to be partially offset by reduction in use of plastic carryout bags (i.e. plastic bag litter in waterways)	Less than significant	Same; no new impacts
<b>Land Use and Planning</b>		
None	No impact	Same; no new impacts
<b>Mineral Resources</b>		
None	No impact	Same; no new impacts
<b>Noise</b>		
None	No impact	Same; no new impacts
<b>Population and Housing</b>		
None	No impact	Same; no new impacts
<b>Public Services</b>		
None	No impact	Same; no new impacts
<b>Recreation</b>		
None	No impact	Same; no new impacts
<b>Transportation and Traffic</b>		
None	No impact	Same; no new impacts
<b>Utilities and Service Systems</b>		
Indirect increase in demand for paper carryout bags and subsequent increase in consumption of water and energy and generation of wastewater and solid waste due to manufacture, distribution, and disposal; to be partially offset by reduction in use of plastic carryout bags	Less than significant	Same; no new impacts

**NOTE:**

\* The "potentially significant" determination is project-specific and is based on the following: (1) worst-case scenario; (2) lack of local, regional, State, or federal cumulative significance threshold; (3) claim by certain representatives of the plastic bag industry that paper bags are significantly worse for the environment from a greenhouse gas emissions perspective. This conclusion is the same as the presented in the County's certified EIR.

### 3.1 AESTHETICS

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to aesthetics from those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Aesthetics within the City of Glendale (City) were evaluated with regard to the California Department of Transportation Scenic Highway Program designations,<sup>2</sup> the Greener Glendale Plan,<sup>3</sup> and previously published information regarding the visual character of the City, including scenic resources and vistas as discussed in the City of Glendale General Plan.<sup>4</sup>

The potential for the proposed ordinance, compared to the approved ordinances, to result in new or substantially more adverse significant impacts to aesthetics was evaluated in relation to four questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>5,6</sup>

Would the proposed ordinance:

- (a) Have a substantial adverse effect on a scenic vista?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to aesthetics; therefore, this environmental issue area was not carried forward for analysis in the certified EIR.<sup>7</sup> As with the approved ordinances, the proposed ordinance would not have any adverse effect on a scenic vista. The City is surrounded by mountains and hillsides. The Verdugo Mountains and the San Rafael Hills are identified in the Open Space and Conservation Element as the most significant physical landmarks in the community; their topographic features flank the central portion of the City.<sup>8</sup> The proposed ordinance, which aims to significantly reduce the amount of litter that can be attributed to plastic carryout bags, would potentially improve the visual character of scenic vistas in the City. As indicated in the County of Los Angeles (County) staff report on plastic bags, due to their light weight, plastic bags are easily carried by wind to become entangled in brush, tossed

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> California Department of Transportation. Updated 19 May 2008. "Eligible (E) and Officially Designated (OD) Routes." *California Scenic Highway Program*. Available at: <http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>

<sup>3</sup> City of Glendale, Community Development Department. November 2011. *Green Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>4</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>5</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

along freeways, and caught on fences throughout the County and become eyesores.<sup>9,10</sup> Furthermore, the distinct bright colors of plastic bags and the difficulty of collecting the bags result in a greater potential for visual impacts than other types of litter. The proposed ordinance would be expected to reduce the visual prominence of plastic bag litter, and thus would potentially reduce the negative impacts of plastic bags to scenic vistas within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to aesthetics related to substantial adverse effects to scenic vistas.

- (b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to aesthetics; therefore, this environmental issue was not carried forward for the analysis in the certified EIR.<sup>11</sup> There are no designated scenic highways in the City.<sup>12</sup> The Open Space and Conservation Element of the General Plan identifies several “urban hikeways” as part of the City’s unique urban form.<sup>13</sup> The urban hikeways consist of self-guided routes that cross through the Financial/Fremont Park District, the Brand Shopping District, and the Civic Center District.<sup>14</sup> The proposed ordinance, which aims to significantly reduce the amount of litter that can be attributed to the use of plastic carryout bags, would potentially lead to an improvement in the quality of scenic resources and scenic highway areas within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to aesthetics related to substantial damage to scenic resources within a state scenic highway.

- (c) Substantially degrade the existing visual character or quality of the site and its surroundings?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to aesthetics; therefore, this environmental issue was not carried forward for the analysis in the certified EIR.<sup>15</sup> The proposed ordinance would not be expected to result in impacts to aesthetics in relation to the

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<sup>9</sup> County of Los Angeles Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>10</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. 1998–2000. *Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation.

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>12</sup> California Department of Transportation. Updated 19 May 2008. “Eligible (E) and Officially Designated (OD) Routes.” *California Scenic Highway Program*. Available at: <http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>

<sup>13</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>14</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

substantial degradation of the existing visual character of the City. Topography plays an important role in the form of the City. The Open Space and Conservation Element of the General Plan identifies the mountains and hills surrounding the City as the primary natural resources in the community. The City is bordered on the north by the San Gabriel Mountains, on the northwest by the Verdugo Mountains, and on the east by the San Rafael Hills.<sup>16</sup> To the southwest, just beyond the City boundary is Griffith Park in the City of Los Angeles and the easternmost edge of the Santa Monica Mountains.<sup>17</sup> The Open Space and Conservation Element identifies these resources as serving as essential aesthetic features that contain natural beauty, prominent topographical stature, unique physical features, and an interesting visual effect.<sup>18</sup> The proposed ordinances would potentially improve the existing visual character of the City by reducing the occurrence of plastic bag litter in public places. Therefore, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to aesthetics related to degradation of the existing visual character of the City.

- (d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to aesthetics; therefore, this environmental issue was not carried forward for the analysis in the certified EIR.<sup>19</sup> The proposed ordinance would not be expected to result in impacts to aesthetics related to the creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views within the City. The proposed ordinance would ban plastic carryout bags issued by certain stores and would not be expected to create additional sources of light or glare. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to aesthetics related to the creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

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<sup>16</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>17</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>18</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>19</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

### 3.2 AGRICULTURAL AND FOREST RESOURCES

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to agricultural and forest resources than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Bags in Los Angeles County (approved ordinances).<sup>1</sup> Agricultural and forest resources in the City of Glendale (City) were evaluated with regard to the California Department of Conservation's (CDC's) Farmland Mapping and Monitoring Program (FMMP),<sup>2</sup> the County of Los Angeles General Plan,<sup>3</sup> City of Glendale General Plan,<sup>4</sup> and City of Glendale Municipal Code.<sup>5</sup>

The State California Environmental Quality Act (CEQA) Guidelines [§21060.1(a) Public Resources Code 21000-21177] define agricultural land as "prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California," and is herein collectively referred to as "Farmland." Public Resources Code section 12220(g) defines forest land as "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."

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to agricultural and forest resources was evaluated in relation to five questions recommended for consideration by the State CEQA Guidelines and the City of Glendale Checklist.<sup>6,7</sup>

Would the proposed ordinance:

- (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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to agricultural and forest resources; therefore, this environmental issue area was not carried forward for analysis in the

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. 2004. *Important Farmland in California, 2002*. Sacramento, CA.

<sup>3</sup> County of Los Angeles Department of Regional Planning. November 1980. *County of Los Angeles General Plan*. Los Angeles, CA.

<sup>4</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>5</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>

<sup>6</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>7</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

EIR.<sup>8</sup> The City is a fully developed and urbanized area surrounded by the Verdugo Mountains to the north, the City of Pasadena to the east, Griffith Park to the west, and the community of Atwater Village to the south. The City contains no prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps pursuant to the FMMP of the California Resources Agency.<sup>9</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not alter the existing land uses within the City. The proposed ordinance would not require the conversion of any existing area designated for agricultural land use or Farmland, as it would not require any construction, demolition, or road-paving activities. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to agricultural and forest resources related to the conversion of Farmland.

(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to agricultural and forest resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>10</sup> Williamson Act contracts are agreements between local government and private landowners to restrict specific parcels of land to agricultural or related open-space uses. The City has no land zoned specifically for agricultural use.<sup>11,12</sup> Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to agricultural and forest resources related to a conflict with existing zoning for agricultural use or a Williamson Act contract.

(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to agricultural and forest resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> Based on a review of City of Glendale General Plan and Municipal Code, there is no

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<sup>8</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>9</sup> California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. 2004. *Important Farmland in California, 2002*. Sacramento, CA.

<sup>10</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>12</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

timberland designated or zoned within the City's jurisdiction.<sup>14,15</sup> The Public Resources Code section 12220(g) defines forest land as "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."

Public Resources Code section 4526 states,

"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.<sup>16</sup>

Government Code section 51104 (g) states,

"Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone."<sup>17</sup>

Sections 51112 and 51113 relate to timberland production within timberland production zones.<sup>18</sup> Finally, subdivision (h) states that a "'compatible use' is any use which does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber" and provides six specific instances where such uses would be "'contrary' or inconsistent with the land being considered a 'compatible use.'"<sup>19</sup>

According to the Department of Forestry and Fire Protection, the state of California consists of approximately 5,418,979 acres of land that has been classified as TPZ.<sup>20</sup> TPZ is designated in 32 counties within the state. The County does not contain land that is designated as TPZ.<sup>21,22</sup> The

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<sup>14</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>15</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>

<sup>16</sup> *California Public Resources Code*, Section 4526.

<sup>17</sup> *California Government Code*, Article 1, General Provisions, Sections 51100–51104; Section 51104 (g).

<sup>18</sup> *California Government Code*, Article 2, Timberland Production Zones, Sections 51110–51119.5; Sections 51112–51113.

<sup>19</sup> *California Government Code*, Article 1, General Provisions, Sections 51100–51104; Section 51104 (h).

<sup>20</sup> Department of Forestry and Fire Protection. 3 January 2002. *Timberland Site Class on Private Lands Zoned for Timber Production*. Technical working paper. Sacramento, CA. Available at: [http://frap.cdf.ca.gov/publications/Timberland\\_Site\\_Class\\_on\\_Private\\_Lands\\_Zoned\\_for\\_Timber\\_Production.pdf](http://frap.cdf.ca.gov/publications/Timberland_Site_Class_on_Private_Lands_Zoned_for_Timber_Production.pdf)

<sup>21</sup> Department of Forestry and Fire Protection. 3 January 2002. *Timberland Site Class on Private Lands Zoned for Timber Production*. Technical working paper. Sacramento, CA. Available at: [http://frap.cdf.ca.gov/publications/Timberland\\_Site\\_Class\\_on\\_Private\\_Lands\\_Zoned\\_for\\_Timber\\_Production.pdf](http://frap.cdf.ca.gov/publications/Timberland_Site_Class_on_Private_Lands_Zoned_for_Timber_Production.pdf)

<sup>22</sup> County of Los Angeles Department of Regional Planning. November 1980. *County of Los Angeles General Plan*. Los Angeles, CA.

proposed ordinance would ban the issuance of plastic carryout bags at certain stores and would not conflict with land zoned for forest land, timberland, or timberland production. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to agricultural and forest resources in relation to a conflict with existing zoning for, or cause rezoning of, forest land [as defined in Public Resources Code section 12220(g)], timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production [as defined by Government Code section 51104(g)].

(d) Result in the loss of forest land or conversion of forest land to non-forest use?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to agricultural and forest resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>23</sup> Based on a review of City of Glendale General Plan and Municipal Code, there is no forest land designated or zoned within the City's jurisdiction.<sup>24,25</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to agricultural and forest resources in relation to the loss of forest land or conversion of forest land to non-forest use.

(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to agricultural and forest resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>26</sup> Based on a review of City of Glendale General Plan and Municipal Code, there is no agricultural or forest land designated or zoned within the City's jurisdiction.<sup>27,28</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not require any construction, conversion, demolition, or road-paving activities. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to agricultural and forest resources related to

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<sup>23</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>24</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>25</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>

<sup>26</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>27</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>28</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>

changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

### 3.3 AIR QUALITY

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to air quality than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Air quality in the City of Glendale (City) was evaluated with regard to the South Coast Air Quality Management District *CEQA Air Quality Handbook*,<sup>2</sup> the National Ambient Air Quality Standards,<sup>3</sup> the California Ambient Air Quality Standards,<sup>4</sup> the federal Clean Air Act (CAA),<sup>5</sup> and a review of life-cycle assessments (LCAs) of plastic and paper carryout bags.<sup>6,7</sup>

Data on existing air quality conditions in the South Coast Air Basin (SCAB), in which the City is located, are monitored by a network of air monitoring stations operated by the California Environmental Protection Agency, the California Air Resources Board (CARB), and the SCAQMD. The air quality assessment considers all phases of project planning, construction, and operation. The conclusions reflect guidelines outlined in the SCAQMD *CEQA Air Quality Handbook*.<sup>8</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to air quality was evaluated in relation to five questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>9,10</sup>

Would the proposed ordinance:

- (a) Conflict with or obstruct implementation of the applicable air quality plan?

As a result of the analysis undertaken in the certified EIR, it was determined that impacts to air quality as a result of the approved ordinances would be below the level of significance.<sup>11</sup> The proposed ordinance would not be expected to create a new or substantially more adverse significant impact

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*. Diamond Bar, CA.

<sup>3</sup> U.S. Environmental Protection Agency. Updated 18 April 2011. "National Ambient Air Quality Standards (NAAQS)." *Air and Radiation*. Available at: <http://www.epa.gov/air/criteria.html>

<sup>4</sup> California Air Resources Board. Reviewed 24 November 2009. *California Ambient Air Quality Standards (CAAQS)*. Available at: <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>

<sup>5</sup> U.S. Environmental Protection Agency. Updated 1 March 2011. "Title I - Air Pollution Prevention and Control." *Federal Clean Air Act*. Available at: <http://www.epa.gov/air/caa/>

<sup>6</sup> 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.

<sup>7</sup> 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.

<sup>8</sup> South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*. Diamond Bar, CA.

<sup>9</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>10</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

to air quality related to a conflict with or obstruction of implementation of the applicable air quality plan. The proposed ordinance would affect certain stores in the City, which is located within the SCAQMD portion of the SCAB, in which the pollutant of greatest concern is ozone (O<sub>3</sub>). Many sources of O<sub>3</sub> precursors are spread throughout the SCAB. The County is currently designated as a federal nonattainment area for fine particulate matter (PM<sub>2.5</sub>), an extreme nonattainment area for O<sub>3</sub> and a serious nonattainment area for suspended particulate matter (PM<sub>10</sub>).<sup>12</sup> However, the SCAB has achieved the federal 1-hour and 8-hour carbon monoxide (CO) air quality standards since 1990 and 2002, respectively, and the County has met the federal air quality standards for nitrogen dioxide (NO<sub>2</sub>) since 1992.<sup>13</sup>

The most recent update to the SCAQMD Air Quality Management Plan (AQMP) was prepared in order for air quality improvements to meet both state and federal CAA planning requirements for all areas under AQMP jurisdiction. CARB adopted the update on September 27, 2007, for inclusion in the State Implementation Plan. The AQMP sets forth strategies for attaining the federal PM<sub>10</sub> and PM<sub>2.5</sub> air quality standards and the federal 8-hour O<sub>3</sub> air quality standard, and for meeting state standards at the earliest practicable date. With the incorporation of new scientific data, emission inventories, ambient measurements, control strategies, and air quality modeling, the 2007 AQMP focuses on O<sub>3</sub> and PM<sub>2.5</sub> attainments.

Existing air quality within the City and vicinity is characterized by a mix of local emission sources that include stationary activities, such as space and water heating, landscape maintenance, and consumer products, as well as mobile sources. Motor vehicles are the primary source of pollutants within the City and vicinity and have the potential to generate localized concentrations of CO called CO "hotspots."

SCAQMD evaluates projects in terms of air pollution thresholds.<sup>14</sup> The proposed ordinance would be considered significant if implementation of the proposed ordinance results in daily construction- or operation-related emissions that cause or exceed the SCAQMD significance thresholds. The proposed ordinance would not include demolition, construction, or operation of any physical structures that would directly impact air quality. The proposed ordinance would not be expected to result in a change to the population growth assumptions used by SCAQMD for attainment planning.

Studies show that production of paper carryout bags generally produces more air pollutant emissions than the production of plastic carryout bags.<sup>15,16</sup> Although certain representatives of the plastic bag industry have argued that similar ordinances have the potential to increase the demand for paper carryout bags, the proposed ordinance would place a 10-cent charge on the issuance of paper carryout bags to encourage the use of reusable bags.<sup>17</sup> Nevertheless, the potential for criteria

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<sup>12</sup> U.S. Environmental Protection Agency. 21 April 2011. *The Green Book Nonattainment Areas for Criteria Pollutants*. Available at: <http://www.epa.gov/oar/oaqps/greenbk/>

<sup>13</sup> South Coast Air Quality Management District. June 2007. *Final 2007 Air Quality Management Plan*. Diamond Bar, CA.

<sup>14</sup> South Coast Air Quality Management District. 1993. "Developing Baseline Air Quality Information." *CEQA Air Quality Handbook*. Diamond Bar, CA.

<sup>15</sup> 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.

<sup>16</sup> Boustead Consulting and Associates Ltd. 2007. *Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper*. Prepared for the Progressive Bag Affiliates.

<sup>17</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

pollutant emissions during the manufacture of paper carryout bags and reusable bags was evaluated consistent with the analysis in the certified EIR.<sup>18</sup>

One way to analyze impacts of the production, manufacture, distribution, and disposal of various types of bags is to review available LCAs. An LCA evaluates environmental impacts by analyzing the entire life cycle of a product, process, or activity, including extraction and processing of raw materials, manufacturing, transportation and distribution, use/reuse/maintenance, recycling, and disposal.<sup>19</sup> Ecobilan, a department of PricewaterhouseCoopers that analyzes the environmental performance of products and services, prepared a comprehensive LCA in 2004 that quantifies the environmental impacts of paper carryout bags, reusable low-density polyethylene plastic bags, and plastic carryout bags made of high-density polyethylene.<sup>20,21</sup> The County used the Ecobilan study in the EIR analysis because it is relatively recent; contains relatively sophisticated modeling and data processing techniques; considers a wide range of environmental indicators; considers paper, plastic, and reusable bags; was critically reviewed by the French Environment and Energy Management Agency; and contains detailed emission data for individual pollutants.

This analysis assumes scenario where, upon implementation of the proposed ordinance, 50 percent of consumers would switch from plastic carryout bags to paper carryout bags and the other 50 percent of consumers would switch to reusable bags. This assumption is consistent with Alternative 5 in the certified EIR. The air quality model conservatively assumed that all grocery stores and pharmacies greater than 10,000 square feet in size currently use 10,000 plastic carryout bags per day, and all grocery stores and pharmacies less than 10,000 square feet in size currently use 5,000 carryout bags per day. Based on the conservative scenario and LCA data from the Ecobilan study, the proposed ordinance would be expected to result in an overall decrease in emissions of CO, PM, SO<sub>x</sub>, and volatile organic compounds (VOCs), but would be expected to result in an increase in NO<sub>x</sub> (Table 3.3-1, *Estimated Daily Emission Changes Due to 50-percent Conversion from Plastic to Paper Carryout Bags Based on Ecobilan Data*, and Appendix A). These results are largely inconclusive because the conversion from plastic carryout bags to paper carryout bags would be expected to result in both beneficial and adverse impacts to air quality, depending on which criteria pollutants are analyzed. In addition, these results cannot be evaluated in relation to the SCAQMD significance thresholds because the thresholds are intended for specific projects located in the SCAB, whereas LCA data cover all stages of production, distribution, and end-of-life procedures related to a particular product. The production of plastic carryout bags and paper carryout bags is not limited to the SCAB, as manufacturing facilities are located in other air basins in the United States and in other countries that may have different emission thresholds and regulations.

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<sup>18</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>19</sup> Green Cities California. March 2010. *Master Environmental Assessment on Single-Use and Reusable Bags*. Prepared by ICF International. San Francisco, CA.

<sup>20</sup> Ecobilan. Company Web site. Accessed on: 8 March 2010. Available at: [https://www.ecobilan.com/uk\\_who.php](https://www.ecobilan.com/uk_who.php)

<sup>21</sup> 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.

**TABLE 3.3-1  
ESTIMATED DAILY EMISSION CHANGES DUE TO 50-PERCENT CONVERSION FROM  
PLASTIC TO PAPER CARRYOUT BAGS BASED ON ECOBILAN DATA**

Emission Sources	Air Pollutants (Pounds/Day) <sup>2</sup>				
	VOCs <sup>1</sup>	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM
City Ordinance – 164 stores within Glendale <sup>3</sup>	-90	35	-166	-39	-64
County Ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	-2,729	1,058	-5,004	-1,190	-1,936

**NOTES:**

1. Total VOCs include all compounds defined in the Ecobilan Study as contributors to the formation of photochemical oxidants, apart from methane, ethane, and acetone, which are not included in the SCAQMD definition of VOCs under Rule 102.

2. A negative number for emissions indicates the extent of the reduction in air pollutants generated by paper carryout bags in comparison to the air pollutants generated by plastic carryout bags by subtracting the data for plastic carryout bags from the data for paper carryout bags.

3. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:** 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.

County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, P. 12-41. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

Other LCAs indicate that overall air pollutant emissions due to the life cycle of paper carryout bags would be higher than those emitted during the life cycle of plastic carryout bags.<sup>22,23</sup> However, as with the Ecobilan data, the majority of these criteria pollutant emissions are likely to originate from processes that occur early in the life cycle of paper and plastic carryout bags, such as extraction of raw materials and product manufacturing. Since the majority of paper carryout bags supplied to the greater Los Angeles metropolitan area are imported from outside of California or from foreign countries, such as Canada, it is not necessary to extrapolate LCA data to determine emission levels for the SCAQMD portion of the SCAB.<sup>24,25</sup> In the case of *Save the Plastic Bag Coalition v. Manhattan Beach*, the Supreme Court stated, “the impacts of this project in areas outside Manhattan Beach itself are both indirect and difficult to predict,” and “the city could hardly be expected to trace the provenance of all paper bags that might be purchased by Manhattan Beach establishments, in order to evaluate the particular impacts resulting from their manufacture.”<sup>26</sup>

Although the paper bag manufacturing facilities that supply the affected stores in the City are not located within the SCAB, landfills that accept plastic and paper carryout bag waste are located within this air basin. Therefore, emissions from the transport of carryout bags to landfills and the

<sup>22</sup> Franklin Associates, Ltd. 1990. *Resource and Environmental Profile Analysis of Polyethylene and Unbleached Paper Grocery Sacks*. Prairie Village, KS.

<sup>23</sup> 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.

<sup>24</sup> Watt, Stephanie, Sapphos Environmental, Inc., Santa Monica, CA. 15 July 2009. Telephone communication with Ms. Carol Trout, Customer Service Department, Duro Bag Manufacturing Company, Florence, KY.

<sup>25</sup> National Council for Air and Stream Improvement. 5 February 2010. *Life Cycle Assessment of Unbleached Paper Grocery Bags*. Prepared for: American Forest and Paper Association and Forest Product Association of Canada.

<sup>26</sup> *Save the Plastic Bag Coalition v. City of Manhattan Beach*, 52 Cal. 4th 155 (Cal. 2011).

decomposition of carryout bags in landfills would have the potential to impact air quality in the SCAB. Using the Ecobilan data, a countywide ordinance with a fee on the issuance of paper carryout bags would yield an increase in NO<sub>x</sub> emissions of approximately 110 pounds per day from the transport of paper carryout bags to landfills (Table 3.3-2, *Estimated NO<sub>x</sub> Emission Increases Due to End of Life Based on Ecobilan Data*). The proposed ordinance, when considered separately, would yield an increase in NO<sub>x</sub> emissions of approximately 4 pounds per day. These emissions cannot be applied to the SCAQMD operational thresholds, which are only applicable to individual development projects, as they do not apply to cumulative development (note that the proposed ordinance does not include any development). In addition, any increases in air pollutant emissions as an indirect impact of the proposed ordinance would be controlled by SCAQMD Rule 1193 and the CARB Solid Waste Collection Vehicle Rule. Therefore, impacts to air quality due to vehicle trips for transportation of paper carryout bag waste to landfills would be expected to be below the level of significance.

**TABLE 3.3-2  
ESTIMATED NO<sub>x</sub> EMISSION INCREASES DUE TO END OF LIFE BASED ON  
ECOBILAN DATA**

Emission Source	50-percent Conversion from Plastic to Paper Carryout Bags <sup>1</sup> NO <sub>x</sub> Emission (Pounds/Day)
City Ordinance – 164 stores within Glendale <sup>2</sup>	4
County Ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	110

**NOTES:**

1. Assuming 36.8 percent of paper carryout bags are diverted from landfills and 11.9 percent of plastic carryout bags are diverted from landfills, based on the 2007 USEPA recycling rates for bags and sacks.
2. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. U.S. Environmental Protection Agency. November 2008. *Municipal Solid Waste in the United States: 2007 Facts and Figures*. Washington, DC. Available at: <http://www.epa.gov/waste/nonhaz/municipal/pubs/msw07-rpt.pdf>
3. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-44. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

As with the approved ordinances, the proposed ordinance would be expected to cause an increase in delivery truck trips required to transport paper carryout bags and reusable bags to affected stores. Assuming that the proposed ordinance would affect 58 stores that each use 10,000 plastic carryout bags per day and 106 stores that each use 5,000 plastic carryout bags per day, a 50-percent conversion to paper carryout bags would be expected to generate fewer than 4 additional truck trips per day to transport the additional paper and reusable bags (Table 3.3-3, *Estimated Daily Operational Emissions from Increased Truck Trips*, and Appendix A).<sup>27</sup> Based on the URBEMIS 2007 model, the unmitigated emissions from delivery truck trips would be expected to be well below the SCAQMD significance thresholds (Table 3.3-3).

<sup>27</sup> (106 stores x 5,000 plastic carryout bags per day / 2,304,000 plastic carryout bags per truck) + (58 stores x 10,000 plastic carryout bags per day / 2,304,000 plastic carryout bags per truck) x 13 ÷ 2 ≈ 3.1 daily truck trips

**TABLE 3.3-3  
ESTIMATED DAILY OPERATIONAL EMISSIONS FROM INCREASED TRUCK TRIPS**

Emission Source	Air Pollutants (Pounds/Day)					
	VOCs	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
4 delivery truck trips in the City of Glendale	0.04	0.08	0.47	0.00	0.02	0.09
96 delivery truck trips in the entire County	0.80	1.90	12.02	0.01	0.46	2.24
<b>SCAQMD Threshold</b>	55	55	550	150	55	150
<b>Exceedance of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

**SOURCES:**

1. URBEMIS 2007 v9.2.4 (see Appendix A)
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-45. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

The proposed ordinance would also be expected to increase the use of reusable bags. However, as discussed in the certified EIR, when considered on a per-use basis, air quality impacts from the life cycle of a reusable bag would be less than the impacts from the life cycle of a plastic or paper carryout bag, and any conversion from plastic carryout bags to reusable bags would be expected to result in an environmental benefit.<sup>28</sup> By definition (see Section 2.2.2), reusable bags must have a minimum lifespan of 125 uses. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to conflicts with or obstruction of implementation of the applicable air quality plan.

- (b) Violate any air quality standard or contribute substantially to existing or projected air violation?

As a result of the analysis undertaken in the certified EIR, it was determined that impacts to air quality as a result of the approved ordinances would be below the level of significance.<sup>29</sup> The proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to violating air quality standards or contributing to existing or projected air violations. The proposed ordinance would not include demolition, construction, or operation of any physical structures that would impact air quality. As discussed in the response to (a) above, life cycle emissions due to the proposed ordinance would result in both beneficial and adverse air quality impacts, depending on which criteria pollutants are analyzed. Plastic bag manufacturing facilities are located outside of the City elsewhere in United States and in other countries, which may have different emission thresholds and regulations. Consequently, emissions from the transport of carryout bags in the City would be well below the SCAQMD significance thresholds. In addition, as discussed in the certified EIR, impacts to air quality would be lower from the life cycle of reusable bags than from plastic or paper carryout bags, when considered on a per-use basis; any conversion from the use of plastic carryout bags to reusable bags would be expected to

<sup>28</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-44. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>29</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

result in an environmental benefit.<sup>30</sup> Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to a violation of any air quality standard or substantial contribution to existing or projected air violation.

- (c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As a result of the analysis undertaken in the certified EIR, it was determined that impacts to air quality as a result of the approved ordinances would be below the level of significance.<sup>31</sup> The proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality in relation to a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment than those disclosed in the certified EIR. The certified EIR evaluated cumulative impacts by assuming that all 88 incorporated cities in the County, including the City of Glendale, would adopt similar ordinances. The analysis concluded that the proposed ordinances would be expected to result in a less than significant cumulative impact to air quality.<sup>32</sup> The City of Glendale is located within the SCAB, which is designated as a nonattainment area according to the state and federal O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> standards. The proposed ordinance would not include demolition, construction, or operation of any physical structures that would create direct impacts related to air quality. O<sub>3</sub> precursors are emitted during the manufacture and transport of paper carryout bags and reusable bags. However, the production of paper carryout bags and reusable bags is not limited to locations within the SCAB, as there are manufacturing facilities located in other air basins in the United States and in other countries that may have different emission thresholds and regulations. As discussed in the response to (a) above, emissions due to the transport of carryout bags in the City would be well below the SCAQMD thresholds of significance. Therefore, the proposed ordinance would be expected to result in a less than significant incremental impact to cumulative criteria pollutant emissions. In addition, as discussed in the certified EIR, air quality impacts due to the life cycle of a reusable bag would be expected to be significantly lower than the air quality impacts of a plastic or paper carryout bag when considered on a per-use basis, and any conversion from the use of plastic carryout bags to reusable bags would be reasonably expected to result in an environmental benefit.<sup>33</sup> Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to a cumulatively considerable net increase of any criteria pollutant.

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<sup>30</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-44. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>31</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>32</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-30 to 3.1-31. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>33</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-44. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

(d) Expose sensitive receptors to substantial pollutant concentrations?

As a result of the analysis undertaken in the certified EIR, it was determined that impacts to air quality as a result of the approved ordinances would be below the level of significance.<sup>34</sup> The proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to exposure of sensitive receptors to substantial pollutant concentrations than those disclosed in the certified EIR. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The proposed ordinance would not include demolition, construction, or operation of any physical structures that would create air quality impacts to sensitive receptors in the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality or sensitive receptors related to criteria pollutants.

(e) Create objectionable odors affecting a substantial number of people?

As a result of the analysis undertaken in the certified EIR, it was determined that impacts to air quality as a result of the approved ordinances would be below the level of significance.<sup>35</sup> The proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to air quality related to creating objectionable odors than those disclosed in the certified EIR. According to the *CEQA Air Quality Handbook*, odor nuisances are associated with land uses and industrial operations, including agricultural uses, waste water treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities.<sup>36</sup> Since the proposed ordinance does not fall into any of these categories, operational odor impacts from the proposed ordinance would be below the level of significance. Any indirect increase in odor emissions from paper carryout bag manufacturing facilities that would be affected by the proposed ordinance—though none are located in the City or the SCAB—would be controlled by the owners of the manufacturing facilities pursuant to applicable local, regional, and national air quality standards.<sup>37</sup> Any indirect increase in odor emissions from the decomposition of paper carryout bags in landfills (such as Scholl Canyon) would also be controlled by landfill managers in compliance with SCAQMD Rule 1150.1, Control of Gaseous Emissions from Active Landfills. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more significant impacts to air quality related to objectionable odors.

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<sup>34</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>35</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.1-31 and 12-40 to 12-46. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>36</sup> South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook*. Diamond Bar, CA.

<sup>37</sup> California Paper Bag Co. is located in the City of Glendale; however this company manufactures paper bags for restaurant establishments, which are not affected by the proposed ordinance, and does not manufacture bags for retail or supermarket establishments, which are affected by the proposed ordinance.

### 3.4 BIOLOGICAL RESOURCES

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to biological resources than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances). As a result of the Initial Study prepared in 2009, the County of Los Angeles (County) determined that the approved ordinances would not result in significant adverse impacts to biological resources.<sup>1</sup> However, one of the County's goals in considering the approved ordinances was to provide improved aquatic habitats for plant and wildlife resources through the reduction of litter through a ban on plastic carryout bags. Therefore, the biological resources issue area was carried forward for detailed analysis in the EIR to characterize the anticipated beneficial effects of the approved ordinances on biological resources.<sup>2</sup>

Biological resources within the City of Glendale (City) were evaluated with regard to the Open Space and Conservation Element of the General Plan,<sup>3</sup> information provided by the National Oceanic and Atmospheric Administration,<sup>4</sup> the U.S. Fish and Wildlife Service (USFWS),<sup>5</sup> California Department of Fish and Game (CDFG).<sup>6</sup> The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to biological resources was evaluated in relation to six questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>7,8</sup>

Would the proposed ordinance:

- (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?

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>3</sup> City of Glendale. Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>4</sup> National Oceanic and Atmospheric Administration Fisheries Office of Protected Resources. Updated 8 September 2011. *Recovery Plans for Endangered and Threatened Species*. Available at: <http://www.nmfs.noaa.gov/pr/recovery/plans.htm#turtles>

<sup>5</sup> U.S. Fish and Wildlife Service. Accessed on 15 August 2011. *Natural Community Conservation Planning (NCCP): NCCP Plan Summary – Palos Verdes Peninsula*. Available at: <http://www.dfg.ca.gov/habcon/nccp/status/PalosVerdes/>

<sup>6</sup> California Department of Fish and Game. April 2011. *Summary of Natural Community Conservation Plans (NCCPs) April, 2011*. Available at: <http://www.dfg.ca.gov/habcon/nccp/>

<sup>7</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>8</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to biological resources.<sup>9</sup> The open space in the City is characterized by a series of drainages sustaining trees within a chaparral environment that support the life of five plant communities: chaparral, southern oak woodland, southern oak riparian woodland, coastal sage, and alluvial scrub communities.<sup>10</sup> There are several species of flora and fauna that are rare or endangered species that could be present within the City limits (Table 3.4-1, *Rare and Endangered Species Potentially Present within City Limits*).<sup>11</sup>

**TABLE 3.4-1  
RARE AND ENDANGERED SPECIES POTENTIALLY PRESENT WITHIN CITY LIMITS**

Flora	Fauna
Greata's aster ( <i>Aster greatai</i> )	California gnatcatcher ( <i>Polioptila californica</i> )
Nevin's barberry ( <i>Mahonia nevinii</i> )	Least Bell's vireo ( <i>Vireo bellii pusillus</i> )
Nevin's bricklebrush ( <i>Brickellia nevinii</i> )	Golden eagle ( <i>Aquila chrysaetos</i> )
Braunton's rattleweed ( <i>Astragalus brautonii</i> )	Cooper's hawk ( <i>Accipiter cooperi</i> )
San Gabriel Mountains dudleya ( <i>Dudleya densiflora</i> )	Southwestern pond turtle ( <i>Clemmys marmota pallida</i> )
Slender horned centrostegia ( <i>Centrostegia leptoceras</i> )	San Diego horned lizard ( <i>Phrynosoma coronatum blainvelli</i> )
San Fernando Valley spineflower ( <i>Chorizanthe parryi fernandina</i> )	

However, while these species have the potential to be present, they have not been observed within City boundaries. In addition, the City is considered a mature city that is essentially built to capacity.<sup>12</sup> Furthermore, the proposed ordinance would not modify any land uses or have any effect upon physical landforms, and does not include any elements that would adversely affect existing habitats suitable for candidate, sensitive, or special-status species. Floatable trash has been noted to inhibit the growth of aquatic vegetation, consequently decreasing spawning areas and habitats for fish and other living organisms.<sup>13</sup> The proposed ordinance intends to beneficially impact State-designated sensitive habitats by reducing the amount of plastic bag litter in these areas.

Of all the marine species that occur off the coast of Los Angeles County, 22 are listed as endangered or threatened under the Endangered Species Act,<sup>14</sup> 6 are listed as species of concern by the National Marine Fisheries Service, and 11 are listed as species of special concern by the

<sup>9</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>10</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>11</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>12</sup> City of Glendale, Community Development Department. May 2007. *City of Glendale General Plan: Noise Element*. Glendale, CA.

<sup>13</sup> Regional Water Quality Control Board, Los Angeles Region. Revised 27 July 2007. "Trash Total Maximum Daily Loads for the Los Angeles River Watershed." Los Angeles, CA.

<sup>14</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-12, 3.1-14, and 3.2-19. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

CDFG.<sup>15</sup> According to the Regional Water Quality Control Board (RWQCB) for the Los Angeles Region, trash can be harmful to wildlife and plastic bags are one of the most common items of trash observed by RWQCB staff.<sup>16</sup> Seabirds, sea turtles, and marine mammals that feed on or near the ocean surface are especially prone to ingesting trash, particularly floating plastic debris.<sup>17,18,19</sup> Potential impacts to sea life include death from ingestion, starvation, suffocation, infection, drowning, and entanglement.<sup>20,21</sup> The recovery plan for the endangered leatherback turtle (*Dermochelys coriacea*) lists ingestion of marine debris, including plastic bags, as a threat to this species. The recovery plan states that leatherback turtles eat floating plastic because they appear to mistake the floating plastic for jellyfish.<sup>22</sup> The recovery plans for the threatened green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*), olive ridley turtle (*Lepidochelys olivacea*), and the federally endangered short-tailed albatross (*Phoebastria albatrus*) also note plastic bag ingestion as a threat to these species.<sup>23,24,25,26</sup> Based on these data, it is reasonable to conclude that preventing trash from entering water bodies has the potential to improve aquatic habitats and protect wildlife.<sup>27</sup>

The proposed ordinance would aim to reduce the amount of trash entering water bodies in the City that drain to the Pacific Ocean, thereby improving habitats and aquatic life. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

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<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-13, 3.1-15, and 3.2-20. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> Regional Water Quality Control Board, Los Angeles Region. Revised 27 July 2007. "Trash Total Maximum Daily Loads for the Los Angeles River Watershed." Los Angeles, CA.

<sup>17</sup> California Ocean Protection Council. 20 November 2008. *An Implementation Strategy for the California Ocean Protection Council Resolution to Reduce and Prevent Ocean Litter*. Available at: [http://www.opc.ca.gov/webmaster/ftp/pdf/opc\\_ocean\\_litter\\_final\\_strategy.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/opc_ocean_litter_final_strategy.pdf)

<sup>18</sup> National Research Council. 2008. "Tackling Marine Debris in the 21st Century." Committee on the Effectiveness of National and International Measures to Prevent and Reduce Marine Debris and Its Impacts.

<sup>19</sup> U.S. Environmental Protection Agency. August 2002. *Assessing and Monitoring Floatable Debris*. Washington, DC.

<sup>20</sup> California Ocean Protection Council. 20 November 2008. *An Implementation Strategy for the California Ocean Protection Council Resolution to Reduce and Prevent Ocean Litter*. Available at: [http://www.opc.ca.gov/webmaster/ftp/pdf/opc\\_ocean\\_litter\\_final\\_strategy.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/opc_ocean_litter_final_strategy.pdf)

<sup>21</sup> Gregory, Murray R. 2009. "Environmental Implications of Plastic debris in Marine Settings –Entanglement, Ingestion, Smothering, Hangers-on, Hitch-hiking and Alien Invasions." In *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364: 2013–2025.

<sup>22</sup> National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1998. *Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle*. Available at: [http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle\\_leatherback\\_pacific.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_leatherback_pacific.pdf)

<sup>23</sup> U.S. Fish and Wildlife Service. September 2008. *Short-tailed Albatross Recovery Plan*. Available at: [http://alaska.fws.gov/fisheries/endangered/pdf/stal\\_recovery\\_plan.pdf](http://alaska.fws.gov/fisheries/endangered/pdf/stal_recovery_plan.pdf)

<sup>24</sup> National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1998. *Recovery Plan for U.S. Pacific Populations of the East Pacific Green Turtle*. Available at: [http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle\\_green\\_eastpacific.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_green_eastpacific.pdf)

<sup>25</sup> National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1998. *Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle*. Available at: [http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle\\_loggerhead\\_pacific.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_loggerhead_pacific.pdf)

<sup>26</sup> National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1998. *Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle*. Available at: [http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle\\_oliveridley.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_oliveridley.pdf)

<sup>27</sup> Regional Water Quality Control Board, Los Angeles Region. Revised 27 July 2007. "Trash Total Maximum Daily Loads for the Los Angeles River Watershed." Los Angeles, CA.

- (b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to biological resources.<sup>28</sup> The City is considered a mature city and is essentially built to capacity.<sup>29</sup> However, the City is also located in the region containing two sensitive plant communities: Riversidian Alluvial Fan Sage Scrub and Southern Oak Riparian Forest / Southern Sycamore Alder Riparian Woodland. Additionally, a portion of the Significant Ecological Area 40, Verdugo Mountains, is within the City's limits.<sup>30</sup> The proposed ordinance, which aims to significantly reduce the amount of litter that can be attributed to plastic carryout bags, would potentially lead to an improvement in the natural open space areas of the City. As with the approved ordinances, the proposed ordinance would not modify any land uses or have any direct effect upon physical landforms. Also as with the approved ordinances, the proposed ordinance would be anticipated to result in potential beneficial impacts to biological resources by reducing the potential for plastic carryout bag litter to end up in riparian habitats, such as the Southern Oak Riparian Forest / Southern Sycamore Alder Riparian Woodland that is located in the region, or other sensitive natural communities. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.

- (c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to biological resources.<sup>31</sup> The urban environment in the City does not support any wetlands.<sup>32</sup> The proposed ordinance would be anticipated to reduce the amount of plastic carryout bag litter entering water bodies in the County, such as the Los Angeles River, thereby potentially improving habitats and aquatic life.<sup>33</sup> Therefore, as with the approved ordinances, the proposed ordinance would be anticipated to improve surface water quality by reducing the occurrence of plastic carryout bag litter in these waters. In addition, the proposed ordinance would not include any elements that would involve direct removal, filling, or hydrological interruption of federally protected wetlands. Therefore, as compared with the approved ordinances, the proposed ordinance would not be expected to result in new or

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<sup>28</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>29</sup> City of Glendale, Community Development Department. May 2007. *City of Glendale General Plan: Noise Element*. Glendale, CA.

<sup>30</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>31</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>32</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>33</sup> Regional Water Quality Control Board, Los Angeles Region. Revised 27 July 2007. "Trash Total Maximum Daily Loads for the Los Angeles River Watershed." Los Angeles, CA.

substantially more adverse significant impacts related to federally protected wetlands as defined by Section 404 of the Clean Water Act.

- (d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to biological resources.<sup>34</sup> Preventing trash from entering water bodies, such as the Los Angeles River, has the potential to improve habitats and aquatic life.<sup>35</sup> Plastic litter has been known to block sea turtle hatchling migration.<sup>36</sup> Although the urban environment of the City does not support migration corridors, the proposed ordinance would be anticipated to reduce the amount of plastic carryout bag litter entering water bodies in the City that drain to the Pacific Ocean.<sup>37</sup> Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to migratory routes or nursery sites.

- (e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to biological resources.<sup>38</sup> Section 12.40.070 of the Glendale Municipal Code requires a permit from the director of public works prior to planting, removing, relocating, destroying, cutting, pruning, applying pesticides, disturbing, defacing, or in any manner injuring any tree on City streets.<sup>39</sup> Section 12.44.050 prohibits persons from damaging or destroying a protected indigenous tree or its trunk, bark, foliage, limbs, branches or roots.<sup>40</sup> The proposed ordinance would not remove or otherwise adversely impact local biological resources and would be consistent with the goals of the City of Glendale General Plan, Municipal Code, and Greener Glendale Plan. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to conflicts with any local policies or ordinances protecting biological resources.

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<sup>34</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>35</sup> Regional Water Quality Control Board, Los Angeles Region. Revised 27 July 2007. "Trash Total Maximum Daily Loads for the Los Angeles River Watershed." Los Angeles, CA.

<sup>36</sup> California Ocean Protection Council. 20 November 2008. *An Implementation Strategy for the California Ocean Protection Council Resolution to Reduce and Prevent Ocean Litter*. Available at: [http://www.opc.ca.gov/webmaster/ftp/pdf/opc\\_ocean\\_litter\\_final\\_strategy.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/opc_ocean_litter_final_strategy.pdf)

<sup>37</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>38</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>39</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/12.40.asp>

<sup>40</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/12.44.asp>

- (f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would not be expected to result in adverse impacts to biological resources.<sup>41</sup> According to the CDFG's National Community Conservation Planning (NCCP) program, the only NCCP region within the County is the Palos Verdes Peninsula located approximately 29 miles south of the City. The NCCP addresses the conservation of most of the coastal sage scrub habitat and other habitats on the Palos Verdes Peninsula.<sup>42,43</sup> There are no adopted NCCPs or Habitat Conservation Plans (HCPs) that would apply to the City of Glendale. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to conflicts with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

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<sup>41</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.2-24. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>42</sup> California Department of Fish and Game. April 2011. *Summary of Natural Community Conservation Plans (NCCPs) April, 2011*. Available at: <http://www.dfg.ca.gov/habcon/nccp/>

<sup>43</sup> U.S. Fish and Wildlife Service. Accessed on: 15 August 2011. *Natural Community Conservation Planning (NCCP): NCCP Plan Summary – Palos Verdes Peninsula*. Available at: <http://www.dfg.ca.gov/habcon/nccp/status/PalosVerdes/>

### 3.5 CULTURAL RESOURCES

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to cultural resources than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to cultural resources was evaluated in relation to four questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>2,3</sup>

Would the proposed ordinance:

- (a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to cultural resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>4</sup> The City has many historical resources and landmarks. Since the 1930s, the City has had a strong commitment to historic preservation.<sup>5</sup> In 1977, the City adopted its first Historic Preservation Element, which outlined the preservation of 34 historical resources. Today, 28 of the 34 original historical resources remain standing among many new additions. Today, many buildings in the City that are considered historical resources are scattered throughout the City's districts, the downtown area in particular.<sup>6</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City and would not include any activities that would adversely impact historical resources. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to cultural resources related to a substantial adverse change in the significance of an historical resource.

- (b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to cultural

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>3</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc.

<sup>4</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>5</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

<sup>6</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>7</sup> The City is largely urbanized. While the area has undergone extensive development in the 20th century, the City possesses a high potential to contain buried cultural (archaeological) resources, due to the history of Native American presence in the greater Los Angeles basin, including Glendale.<sup>8</sup> The City possesses one known prehistoric archaeological site, described as a seasonal campsite with an associated Native American cemetery, and one known historic archaeological site, the possible remains of a historic orphanage, both of which have been identified as a result of past archaeological investigations in the City.<sup>9</sup> Several other prehistoric Native American sites and villages have been identified just outside of the City's borders, indicating that Glendale may have additional prehistoric archaeological resources that have yet to be discovered.<sup>10</sup> However, the proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City and would not include any ground-disturbing activities that would adversely impact archaeological resources. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to cultural resources related to a substantial adverse change in the significance of an archaeological resource.

- (c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to cultural resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>11</sup> The City possesses several known cultural resources, including a seasonal campsite with an associated cemetery and possible remains of an historic orphanage. While the area has undergone extensive development in the 20th century, the City has a high potential to contain buried cultural resources.<sup>12</sup> However, the proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City and would not include any excavation or other activities that would demolish, destroy, relocate, or alter paleontological resources or geologic features. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to cultural resources related directly or indirectly to the destruction of a unique paleontological resource, site, or geologic feature.

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<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

<sup>9</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

<sup>10</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>12</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

(d) Disturb any human remains, including those interred outside of formal cemeteries?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to cultural resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> Although a seasonal campsite with an associated cemetery is known within the City and the City has a high potential to contain buried cultural resources,<sup>14</sup> the proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not include any ground-disturbing activities that would disturb human remains, including remains interred outside of formal cemeteries. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to human remains.

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<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>14</sup> City of Glendale, Community Development Department. September 1997. *City of Glendale General Plan: Historic Preservation Element*. Glendale, CA.

### 3.6 GEOLOGY AND SOILS

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to geology and soils than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Impacts to geology and soils from the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (City) were evaluated with regard to the Glendale General Plan<sup>2</sup> and the most recent Alquist-Priolo Earthquake Fault Zoning maps.<sup>3</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to geology and soils was evaluated in relation to eight questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>4,5</sup>

Would the proposed ordinance:

- (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.

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>6</sup> The City is located at the mutual boundary of two of Southern California's geomorphic provinces in an area that is being compressed by geological forces associated with movement on the Pacific and North American tectonic plates.<sup>7</sup> In the Glendale area, the main faults include the Sierra Madre Fault, Verdugo Fault, and the Raymond Fault. A worst-case scenario earthquake (maximum magnitude) for Glendale would involve rupture of the Verdugo Fault given that it lies directly below extensively developed portions of the City. Both the Sierra Made Fault and Raymond Fault can also cause earthquakes that could severely impact the City. Although active earthquake faults

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>3</sup> California Geological Survey. [2007 Interim Revision] Supplements 1 and 2 added 1999. *Fault-Rupture Hazard Zones in California*. Special Publication 42. Contact: 655 S. Hope Street, #700, Los Angeles, CA 90017. Available at: <ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf>

<sup>4</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>5</sup> City of Glendale. N.d. Initial Study Template. Provided on 31 January 2012. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>6</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

exist throughout the City, the proposed ordinance would not entail the development of structures or physical project elements that would expose or place people within vicinity of a known earthquake fault. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exposing people or structures to potential substantial adverse effects involving the rupture of a known earthquake fault than those disclosed in the certified EIR.

ii) Strong seismic ground shaking?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>8</sup> Properties near the Sierra Madre Fault, Raymond Fault, and Verdugo Fault line are prone to strong seismic ground shaking.<sup>9</sup> However, the proposed ordinance would not entail the development of structures or physical project elements that would expose or place people near or in areas susceptible to strong seismic ground shaking. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exposing people or structures to potential substantial adverse effects involving strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>10</sup> The proposed ordinance would not entail the development of structures or physical project elements that would expose or place people in or near an area susceptible to seismic-related ground failure, including liquefaction. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exposing people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

iv) Landslides?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>11</sup> The City has several hillsides that are vulnerable to slope instability due primarily to the fractured,

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<sup>8</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>9</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>10</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

crushed, and weathered condition of the bedrock and steep terrains.<sup>12</sup> However, the proposed ordinance would not require the development of structures or physical project elements that would expose people to potential adverse impacts related to landslides. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exposing people or structures to potential substantial adverse effects involving landslides.

(b) Result in substantial soil erosion or the loss of topsoil?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> The City of Glendale General Plan acknowledges the possibility of soil erosion within several areas in the City that primarily due to manmade modifications to the land. Typically, grading and construction operations are necessary to address unstable soils, soil erosion, landsliding, and flooding (debris and/or mudflows) in hillside areas. However, the proposed ordinance would not contain physical project elements that would require grading or development that would change the existing soil conditions or create a loss of topsoil within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to substantial soil erosion or the loss of topsoil.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed ordinance, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>14</sup> Several areas in the City are prone to soil erosion. Grading and construction operations are necessary to correct unstable soils, soil erosion, landsliding, and flooding (debris and/or mudflows) in hillside areas. As previously stated, the proposed ordinance would not require construction-related activities or development of structures or physical project elements that would impact soils or geologic units that are unstable or that would become unstable. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to a geologic unit or soil that is unstable or would become unstable as a result of the proposed ordinance, potentially resulting in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

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<sup>12</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>14</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

- (d) 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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>15</sup> Some of the geologic units in the Glendale area have fine-grained components that are moderately to highly expansive. These units are present in the southern San Rafael Hills and in the southern part of the City, where fine-grained sequences within the alluvial fans are more likely to be present.<sup>16</sup> However, the proposed ordinance would not entail the development of structures or features, including any that would be located on expansive soils. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to location on expansive soil.

- (e) 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 wastewater?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to geology and soils; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>17</sup> The proposed ordinance would not entail any components requiring the use of septic tanks or alternative waste water disposal systems. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

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<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

### 3.7 GREENHOUSE GAS EMISSIONS

The analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to greenhouse gas (GHG) emissions than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> GHG emissions in the City of Glendale (City) were evaluated with regard to Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines<sup>2</sup> and a review of life-cycle assessments that evaluate plastic and paper carryout bags.<sup>3,4</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to GHG emissions was evaluated in relation to two questions recommended for consideration by the State CEQA Guidelines and the City of Glendale Environmental Checklist.<sup>5,6</sup>

Would the proposed ordinance:

- (a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As a result of the analysis undertaken in certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to GHG emissions.<sup>7</sup> However, because there are no federal, state, regional, or local regulations establishing cumulative significance thresholds and because the County of Los Angeles (County) evaluated the impacts of the approved ordinances from a conservative worst-case scenario, it was determined that the indirect impacts of the approved ordinances may have the potential to be cumulatively significant if all 88 cities adopt similar ordinances.<sup>8</sup> However, the County has recognized and acknowledged that each city has the authority to render an independent decision regarding implementation of its own ordinance. Each city's determination is contingent on the exact parameters of the city's proposed ordinance, the percentage increase in conversion to paper carryout bags, the number of stores affected, the actual bag usage per day, the size of the fee or charge, the adopted significance thresholds, and the city's projected Assembly Bill (AB) 32 GHG emissions target.<sup>9</sup>

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-48. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-52. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>9</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-52. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

Currently, the City has no adopted quantitative significance thresholds for evaluating GHG emissions under CEQA. No federal or state agency (such as the U.S. Environmental Protection Agency, California Air Resources Board, or South Coast Air Quality Management District) responsible for managing air quality emissions in the City has adopted a GHG emission significance threshold that may be used in reviewing newly proposed projects.

The Bay Area Air Quality Management District (BAAQMD) is the only regional agency to have adopted operational GHG emission thresholds under CEQA, although application to the proposed ordinance is not mandatory. On June 2, 2010, CEQA projects within the BAAQMD area must consider the following significance thresholds:

Stationary sources:

- 10,000 metric tons carbon dioxide equivalents (CO<sub>2e</sub>)/year

Projects other than stationary sources:

- Compliance with Qualified Greenhouse Gas Reduction Strategy; or
- 1,100 metric tons of CO<sub>2e</sub>/year; or
- 4.6 metric tons CO<sub>2e</sub> per year per capita service population (residents plus employees)

Plan-level emissions:

- Compliance with Qualified Greenhouse Gas Reduction Strategy; or
- 6.6 metric tons CO<sub>2e</sub> per year per capita service population (residents plus employees)

The proposed ordinance is a plan-level project, based on the plan-level emission significance threshold of 6.6 metric tons CO<sub>2e</sub> per year per capita service population threshold (the “service population” is the total number of people who live or work in the City). That is, GHG emissions associated with the proposed ordinance are considered below the level of significance if they account for no more than 6.6 metric tons of CO<sub>2e</sub> every year for each of the 283,855 persons who live or work in the City.<sup>10,11</sup> In addition, this threshold was derived from AB 32’s statewide rules, so it can be applied to projects outside of the BAAQMD. It should be noted that the City is not recommending adoption of this threshold at this time for any purpose other than evaluating the potential impacts from this particular proposed ordinance. Potential impacts from the proposed ordinance were also evaluated against the thresholds used in the certified EIR, which are listed below. Any violation of these criteria would be considered a significant adverse impact.

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<sup>10</sup> U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

<sup>11</sup> City of Glendale’s 2010 service population of 283,855 includes 191,719 residents and 92,136 employees.

- Inconsistency with laws and regulations in managing GHG emissions
- Inconsistency with the goal to reduce GHG emissions to 1990 levels (approximately 427 million metric tons or 9.6 metric tons of CO<sub>2e</sub> per capita) by 2020 as required by AB 32

Studies show the production of paper carryout bags produces more GHG emissions than the production of plastic carryout bags.<sup>12,13</sup> Although certain representatives of the plastic bag industry have stated that similar ordinances can potentially increase the demand for paper carryout bags,<sup>14</sup> the proposed ordinance would also include a 10-cent charge on the issuance of paper carryout bags to encourage the use of reusable bags. Nevertheless, the potential GHG emissions from the manufacture of paper carryout bags and reusable bags were evaluated consistent with the analysis in the certified EIR.<sup>15</sup>

The potential GHG emissions from the proposed ordinance were calculated based on a conservative scenario where 50 percent of all consumers using plastic carryout bags in the City would switch to paper carryout bags and 50 percent would switch to reusable bags (Alternative 5 in the certified EIR). The scenario also assumed that all grocery stores and pharmacies greater than 10,000 square feet in size each use 10,000 plastic carryout bags per day and all grocery stores and pharmacies less than 10,000 square feet in size each use 5,000 carryout bags per day.

As stated in the certified EIR, using data from the Ecobilan study, a countywide ban and fee on the issuance of plastic and paper carryout bags, respectively, would be expected to reduce GHG emissions.<sup>16</sup> By extension, the City's proposed ordinance also would be expected to reduce GHG emissions (Appendix A and Table 3.7-1, *GHG Emissions Due to Plastic and Paper Carryout Bags Based on Ecobilan Data*). However, using data from the Boustead study, the same countywide ordinance would be expected to increase CO<sub>2e</sub> emissions by 8,284 metric tons of per year if all 88 incorporated cities adopted similar ordinances.<sup>17</sup> The City's proposed ordinance would be responsible for approximately 274 metric tons, or approximately 3.3 percent, of the countywide increase in CO<sub>2e</sub> per year, which is equivalent to approximately 0.001 metric ton per capita and well below the BAAQMD significance threshold of 6.6 metric tons per capita (Appendix A and Table 3.7-2, *GHG Emissions Due to Plastic and Paper Carryout Bags Based on Boustead Data*). In addition, the proposed ordinance's GHG contribution would be below the level of significance relative to the State's and County's emission reduction targets of 427 million metric tons and 108 million metric tons per year, respectively. Based on Boustead data, an ordinance with a fee on the

<sup>12</sup> 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.

<sup>13</sup> Boustead Consulting and Associates Ltd. 2007. *Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper*. Prepared for the Progressive Bag Affiliates.

<sup>14</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.3-15 to 3.3-38 and 12-47 to 12-55. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-48. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix C: Calculation Data. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

issuance of paper carryout bags would produce 0.001 metric ton of CO<sub>2e</sub> per year per capita for the entire County, inclusive of the City of Glendale, which would not conflict with the goals of AB 32 to reduce emissions to approximately 9.6 metric tons per capita by the year 2020.

**TABLE 3.7-1  
GHG EMISSIONS DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON ECOBILAN DATA**

Emission Source	GHG Emissions			
	Plastic Carryout Bags (Existing Conditions)	50-percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)		
	Metric Tons CO <sub>2e</sub> Per Day	Metric Tons CO <sub>2e</sub> Per Day <sup>1</sup>	Metric Tons CO <sub>2e</sub> Per Year <sup>1</sup>	Metric Tons CO <sub>2e</sub> Per Year Per Capita <sup>1,3</sup>
City ordinance – 164 stores within Glendale <sup>2</sup>	18.81	-1.09	-398	-0.001
County ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	568.08	-32.92	-12,015	-0.001

**KEY:**

CO<sub>2e</sub> = carbon dioxide equivalent

GHG = greenhouse gas

**NOTES:**

1. Negative numbers indicate a reduction in GHG emissions.
2. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 446110, and 445120. Database accessed on 31 January 2012 (see Appendix A).
3. Per-capita emissions were calculated using the City's 2010 service population of 283,855, which includes 191,719 residents and 92,136 employees.

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-48. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.
3. U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

**TABLE 3.7-2  
GHG EMISSIONS DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON BOUSTEAD DATA**

Emission Source	GHG Emissions			
	Plastic Carryout Bags (Existing Conditions)	50-percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)		
		Metric Tons CO <sub>2e</sub> Per Day	Metric Tons CO <sub>2e</sub> Per Day	Metric Tons CO <sub>2e</sub> Per Year
City Ordinance – 164 stores within Glendale <sup>1</sup>	29.60	+0.75	+ 274	+0.001
County Ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	893.87	+22.70	+8,284	+0.001

**KEY:**

CO<sub>2e</sub> = carbon dioxide equivalent

GHG = greenhouse gas

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix C, Calculation Data. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.
3. U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

**NOTE:**

1. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110,446110, and 445120. Database accessed on 31 January 2012 (see Appendix A).
2. Per-capita emissions were calculated using the City's 2010 service population of 283,855, which includes 191,719 residents and 92,136 employees.

As discussed in the certified EIR, the proposed ordinance would be expected to significantly increase the use of reusable bags among consumers in the City. When considered on a per-use basis, the production of reusable bags would generate less GHG emissions than the production of both paper carryout bags and plastic carryout bags.<sup>18</sup>

Delivery trucks that transport carryout bags to stores throughout the City generate GHG emissions. Demand for paper bags would increase if 50 percent of consumers in the City switched to paper bags from plastic bags as a result of the proposed ordinance. However, it would take fewer than 4 additional truck trips per day to transport the additional paper bags to the 164 affected stores (Appendix A and Table 3.7-3, *Estimated Daily Operational Emissions Due to Increased Vehicle Trips from 50-Percent Conversion from Plastic to Paper Carryout Bags*).<sup>19,20</sup> Together, the 4 additional truck

<sup>18</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 12-52 to 12-53. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>19</sup> (106 stores x 5,000 plastic carryout bags per day / 2,304,000 plastic carryout bags per truck) + (58 stores x 10,000 plastic carryout bags per day / 2,304,000 plastic carryout bags per truck) x 13 x 0.5 ≈ 3.1 daily truck trips

trips would emit much less than the BAAQMD’s significance threshold of 6.6 metric tons CO<sub>2e</sub> per year per capita (Table 3.7-3). Considering the State’s and County’s GHG emissions targets for the year 2020, the GHG emission impacts from the additional vehicle trips would be below the level of significance. The LCA results for the entire County, including the City of Glendale, would be equivalent to 0.00002 metric ton of CO<sub>2e</sub> per year per capita, which would not conflict with the goals of AB 32 to reduce emissions by the year 2020 to approximately 9.6 metric tons per capita.

**TABLE 3.7-3  
ESTIMATED DAILY OPERATIONAL EMISSIONS DUE TO INCREASED VEHICLE TRIPS  
FROM 50-PERCENT CONVERSION FROM PLASTIC TO PAPER CARRYOUT BAGS**

<b>Emission Sources</b>	<b>CO<sub>2</sub> Emissions (Pounds/Day)</b>	<b>CO<sub>2</sub> Emissions (Metric Tons/Year)</b>	<b>CO<sub>2</sub> Emissions per Capita (Metric Tons/Year)<sup>1</sup></b>
4 delivery truck trips in the City of Glendale	65.52	10.85	0.00004
96 delivery truck trips in the entire County	1,572.35	260.32	0.00002

**KEY:** CO<sub>2</sub> = carbon dioxide

**NOTE:**

1. Per-capita emissions were calculated using the City’s 2010 service population of 283,855, which includes 191,719 residents and 92,136 employees.

**SOURCES:**

1. URBEMIS 2007 v9.2.4 (see Appendix A)
2. U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix C, Calculation Data, p. 12-55. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

Carryout bags that are not recycled go to a landfill to decompose and degrade at various rates, depending on the composition of the bag, and produce the GHG methane (CH<sub>4</sub>). Based on the Ecobilan LCA, the approved ordinances would generate approximately 70,250 metric tons of CO<sub>2e</sub> per year, or approximately 0.0066 metric ton CO<sub>2e</sub> per year per capita, if all of the County’s 88 incorporated cities, inclusive of the City of Glendale, adopted similar ordinances.<sup>21</sup> The proposed ordinance’s portion would be approximately 2,326 metric tons of CO<sub>2e</sub> per year, approximately 0.0082 metric ton CO<sub>2e</sub> per year per capita, or approximately 3.3 percent of the countywide emissions (Appendix A and Table 3.7-4, *Estimated GHG Emissions Increases Due to End of Life Based on Ecobilan Data*).

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<sup>20</sup> The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110 and 446110. Database accessed on 31 January 2012 (see Appendix A). According to infoUSA, approximately 65 percent of Glendale stores are <10,000 square feet and 35 percent are ≥ 10,000 square feet.

<sup>21</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-50. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

**TABLE 3.7-4  
ESTIMATED INCREASE IN GHG EMISSIONS DUE TO END OF LIFE BASED ON  
ECOBILAN DATA**

Emission Sources	GHG Emissions	
	50-percent Conversion from Plastic to Paper Carryout Bags <sup>1,2</sup>	
	Metric Tons CO <sub>2e</sub> Per Year <sup>3</sup>	Metric Tons CO <sub>2e</sub> Per Year Per Capita
City ordinance – 164 stores within Glendale <sup>4</sup>	+ 2,326	+ 0.0082
County ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	+ 70,250	+ 0.0066

**KEY:**

CO<sub>2e</sub> = carbon dioxide equivalent

GHG = greenhouse gas

**NOTES:**

1. Assuming 36.8 percent of paper carryout bags are diverted from landfills and 11.9 percent of plastic carryout bags are diverted from landfills, based on the 2007 USEPA recycling rates.
2. Per-capita emissions were calculated using the City's 2010 service population of 283,855, which includes 191,719 residents and 92,136 employees.
3. Positive numbers indicate the extent of the increase in GHG emissions that would be expected if 50 percent of consumers in Glendale switched to using paper carryout bags instead of plastic carryout bags.
4. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 446110, and 445120. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-50. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.
3. U.S. Environmental Protection Agency. November 2008. *Municipal Solid Waste in the United States: 2007 Facts and Figures*. Washington, DC. Available at: <http://www.epa.gov/waste/nonhaz/municipal/pubs/msw07-rpt.pdf>
4. U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

Using the Boustead data, an ordinance with a fee on the issuance of paper carryout bags would be expected to result in an increase of 184,621 metric tons of CO<sub>2e</sub> per year throughout the County if all the 88 incorporated cities of the County adopted similar plastic bag ordinances.<sup>22</sup> Of that amount, the proposed ordinance would be responsible for approximately 6,114 metric tons per year, or approximately 3.3 percent (Appendix A and Table 3.7-5, *Estimated Increase in GHG Emissions Due to End of Life Based on Boustead Data*). The Boustead results are likely overestimates, as emissions from active landfills in the County are strictly controlled by SCAQMD Rule 1150.1, Control of Gaseous Emissions from Municipal Solid Waste Landfills; Antelope Valley Air Quality Management District Rule 1150.1, Control of Gaseous Emissions from Active Landfills; and the new state regulations for CH<sub>4</sub> emissions from landfills in accordance with AB 32. Nevertheless, the per-capita emissions from the decomposition of bags in landfills would be significantly below the selected emission significance threshold of 6.6 metric tons CO<sub>2e</sub> per year per capita service population (Tables 3.7-4 and 3.7-5). The end-of-life GHG emission impacts would be expected to be below the level of significance when considering the State's and County's GHG emissions targets for the year 2020. The LCA results for the entire County, inclusive of the City of Glendale, would be 0.0066 metric ton of CO<sub>2e</sub> per year per capita, which would not

<sup>22</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-52. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

conflict with the goals of AB 32 to reduce emissions to approximately 9.6 metric tons per capita by the year 2020.

**TABLE 3.7-5  
ESTIMATED INCREASE IN GHG EMISSIONS DUE TO END OF LIFE BASED ON  
BOUSTEAD DATA**

Emission Sources	GHG Emissions	
	50-percent Conversion from Plastic to Paper Carryout Bags <sup>2</sup>	
	Metric Tons CO <sub>2e</sub> Per Year <sup>3</sup>	Metric Tons CO <sub>2e</sub> Per Year Per Capita <sup>3</sup>
City ordinance – 164 stores within Glendale <sup>1</sup>	+ 6,114	+ 0.0215
County ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	+ 184,621	+ 0.0174

**KEY:**

CO<sub>2e</sub> = carbon dioxide equivalent

GHG = greenhouse gas

**NOTES:**

1. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 446110, and 445120. Database accessed on 31 January 2012 (see Appendix A).

2. Per-capita emissions were calculated using the City's 2010 service population of 283,855, which includes 191,719 residents and 92,136 employees.

3. Positive numbers indicate the extent of the increase in GHG emissions that would be expected if 50 percent of consumers in Glendale switched to using paper carryout bags from plastic carryout bags.

**SOURCES:**

1. 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.

2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-52. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

3. U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

However, as with the approved ordinances, impacts to GHG emissions from the end-of-life of paper carryout bags may have the potential to be cumulatively considerable, depending on how many people actually switch to paper bags. As to whether the proposed ordinance would “generate greenhouse gas emissions, either directly or indirectly that may have a significant effect on the environment,” the conservative scenario of 50-percent conversion to paper carryout bags as set forth in Table 3.7-4 would be expected to yield potentially cumulatively considerable GHG emissions impacts due to the decomposition of paper carryout bags in landfills. However, if the 10-cent charge on paper carryout bags encourages 80 to 90 percent of paper bag users to choose reusable bags instead, indirect impacts to GHG emissions could be further reduced to below the level of significance when considered cumulatively. However, the City cannot *definitely* determine how many consumers would switch from plastic to paper carryout bags, how many paper carryout bags would end up in landfills, or how accurate LCA results are, so the City has assumed that indirect impacts resulting from the end of life of paper carryout bags would be potentially significant on a cumulative level, which is consistent with the certified EIR. Accordingly, the City proposes to adopt a Statement of Overriding Considerations, which will outline the City's views on the balancing of the benefits of approving the proposed ordinance despite its potential contribution to cumulative impacts. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to direct or indirect GHG emissions.

- (b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As a result of the analysis undertaken in certified EIR, it was determined that the approved ordinances would be expected to result in less than significant direct impacts to GHG emissions.<sup>23</sup> However, considering the lack of federal, state, regional, or local regulations that establish cumulative significance thresholds and the County's conservative evaluation of the approved ordinances, it was determined that the potential indirect impacts of the approved ordinances could be cumulatively significant.<sup>24</sup> Similarly, the City's proposed ordinance would also be expected to have cumulatively significant impacts due to the end of life of paper carryout bags [see response to (a) above]. The calculations presented in (a) above are based on a worst-case scenario where every store larger than 10,000 square feet currently uses 10,000 plastic carryout bags per day, but this scenario is intentionally overestimated. Statewide data indicate that stores of either size actually use far fewer plastic carryout bags per day.<sup>25</sup> However, assuming the proposed ordinance causes an increase in the disposal of paper carryout bags, GHG emissions from active landfills in the County are strictly controlled by SCAQMD Rule 1150.1 and the new state requirements that regulate CH<sub>4</sub> emissions from landfills pursuant to AB 32. However, the actual rate of conversion, rate of disposal in landfills, and the accuracy of LCA results are all highly variable factors; therefore, the City opted for a conservative approach to the evaluation, which indicates that landfill emissions from decomposing paper carryout bags would be a cumulatively considerable impact to the County's overall GHG emissions. This conclusion is documented in the certified EIR for the approved ordinances, which preemptively considered similar ordinances for each of the County's cities, including Glendale. Consequently, the City proposes to adopt a Statement of Overriding Considerations. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to GHG emissions related to conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

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<sup>23</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-48. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>24</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-52. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>25</sup> Dona Sturgess, California Department of Resources Recycling and Recovery, Sacramento, CA. 29 April 2010. E-mail to Luke Mitchell, County of Los Angeles, Department of Public Works, Alhambra, CA.

### 3.8 HAZARDS AND HAZARDOUS MATERIALS

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to hazards and hazardous materials than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Hazards and hazardous materials within the City of West Glendale (City) were evaluated based on a review of the City of Glendale General Plan<sup>2</sup> and the Greener Glendale Plan.<sup>3</sup>

Hazardous waste can pose a potential or substantial hazard to human health or the environment when improperly managed. Designated hazardous waste possesses at least one of four defined characteristics—ignitability, corrosivity, reactivity, or toxicity—or appears on special U.S. Environmental Protection Agency (USEPA) lists.<sup>4</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts related to hazards and hazardous materials was evaluated in relation to eight questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>5,6</sup>

Would the proposed ordinance:

- (a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>7</sup> Five large-quantity and more than 250 small-quantity generators of hazardous materials are located in the City.<sup>8</sup> In addition, a variety of hazardous materials (such as cleansers, paints, grease, and solvents) are used in commercial and production processes or by resident households in daily life within the City. However, the proposed ordinance would not involve the transport, use, or disposal of hazardous materials, as defined by the Hazardous Materials Transportation Uniform Safety Act.<sup>9</sup> The proposed ordinance would encourage the use of reusable bags at certain

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>3</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA

<sup>4</sup> *Code of Federal Regulations*, Title 40, Chapter 1, Part 261.

<sup>5</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>9</sup> *Code of Federal Regulations*, Title 40, Chapter 1, Parts 106–180.

stores, but the definition of a “reusable bag” within the proposed ordinance specifies that the bags must not contain lead, cadmium, or any other heavy metal in toxic amounts (see Section 2.2.2). Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to hazards and hazardous materials in relation to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- (b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>10</sup> The transport and disposal of hazardous materials occur routinely within the City.<sup>11</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores, which could potentially reduce the prevalence of plastic bags in the litter stream and could result in a reduction in the accidental release of plastic bags into the environment. The proposed ordinance would not involve any type of construction or activities that would require the use of hazardous materials or that would result in the accidental release of hazardous materials into the environment. Therefore, compared with the approved ordinance, the proposed ordinance would not be expected to result in new or substantially more adverse impacts to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- (c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>12</sup> Several schools exist within the City; however, the proposed ordinance would not include any physical elements, or otherwise, that would involve the emission or handling of hazardous or acutely hazardous materials within 0.25 mile of an existing or proposed school. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse impacts related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

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<sup>10</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>12</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

- (d) 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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> There are several hazardous materials sites within the City.<sup>14</sup> However, the proposed ordinance would not entail land development or any physical elements that would be located on a physical site or sites, including those containing hazardous materials. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse impacts related to being located on a hazardous waste site.

- (e) For a proposed 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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>15</sup> There are no airports or airstrips within 2 miles of the City, and no portions of the City are subject to land use restrictions based on the requirements of an airport land use compatibility plan.<sup>16</sup> The nearest airports to the City are the El Monte Airport located at approximately 13.4 miles southeast of the City at 4233 Santa Anita Avenue in El Monte, California, and the Bob Hope Airport located approximately 7 miles northwest of the City at 2627 North Hollywood Way in Burbank, California. The proposed ordinance would not include elements that would be located on any physical site or sites, including near a public airport or public use airport or within an airport land use plan. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse impacts related to being located within 2 miles of a public or public use airport.

- (f) For a proposed project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in

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<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>14</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

the EIR.<sup>17</sup> There are no private airports or airstrips within 2 miles of the City, and no portions of the City are subject to land use restrictions.<sup>18</sup> The nearest private airports to the City are the Century City Heliport and the Sherman Oaks Heliport located approximately 5 miles south from the City. The proposed ordinance would not include physical elements that would be located on a site or sites within the vicinity of a private airstrip that would be expected to result in impacts related to safety hazards for people residing or working in the vicinity of a private airstrip. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse impacts related to being located within the vicinity of a private airstrip.

- (g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>19</sup> The City has a comprehensive Emergency Plan in accordance with the Standardized Emergency Management System (SEMS). The SEMS is described by the Petris Bill (SB 1841) and is contained in Chapter 1 of Division 2 of Title 19 of the California Code of Regulations.<sup>20</sup> Hazardous materials, geologic and seismic emergencies, terrorism, fires, and other natural/anthropogenic disasters are discussed within the Safety Element of the City's General Plan.<sup>21</sup> However, the proposed ordinance would not entail the development of structures or any components that would interfere with emergency response plans or evacuation plans. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to hazards and hazardous materials related to an adopted emergency response plan or emergency evacuation plan.

- (h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to hazards and hazardous materials; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>22</sup> The portions of the San Rafael Hills and the Verdugo and San Gabriel Mountains within

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<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>18</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>19</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>20</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>21</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>22</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

City limits have high fire hazards due to the steep topography of the area, the presence of flammable vegetation, and limited access routes.<sup>23</sup> However, the proposed ordinance would ban the issuance of plastic carryout bags and would not contain any components that would expose people or structures to significant risks. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to 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.

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<sup>23</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

### 3.9 HYDROLOGY AND WATER QUALITY

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to hydrology and water quality than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Hydrology and water quality within the City of Glendale (City) were evaluated in relation to the City of Glendale General Plan,<sup>2,3,4</sup> the California Regional Water Quality Control Board Basin Plan for the Los Angeles Region,<sup>5</sup> and life cycle assessments that evaluate plastic and paper carryout bags.<sup>6,7</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts related to hydrology and water quality was evaluated in relation to 10 questions recommended for consideration by the State California Environmental Quality Act Guidelines and the City of Glendale Environmental Checklist.<sup>8,9</sup>

Would the proposed ordinance:

- (a) Violate any water quality standards or waste discharge requirements?

The proposed ordinance would not be expected to create new or substantially more adverse significant impacts to hydrology and water quality in relation to water quality standards or waste discharge requirements than those disclosed in the certified EIR. The proposed ordinance would be expected to assist the City in achieving water quality standards over time through a net reduction of plastic carryout bag litter. The proposed ordinance would be anticipated to reduce the amount of litter found in water sources, such as drain outlets and storm water runoff, that can be attributed to plastic carryout bags, which in turn would be expected to have a positive impact to water quality and waste discharge within the City.

The proposed ordinance would not entail elements that would directly violate the standards or requirements specified in the City of Glendale General Plan<sup>10,11,12</sup> or the Water Quality Control

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>3</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>4</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>5</sup> California Regional Water Quality Control Board, Los Angeles Region (4). 13 June 1994. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Los Angeles, CA.

<sup>6</sup> 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.

<sup>7</sup> 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.

<sup>8</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>9</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>10</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

Board Basin Plan for the Los Angeles Region.<sup>13</sup> Adoption of the proposed ordinance would not permit or sanction the violation of any established industry standards, management, or policies.

Although certain representatives of the plastic bag industry have stated that similar ordinances have the potential to increase the demand for paper carryout bags,<sup>14</sup> the proposed ordinance would include a 10-cent charge on the issuance of paper carryout bags to encourage the use of reusable bags. Nevertheless, the potential for eutrophication during the manufacturing of paper bags was evaluated consistent with the analysis in the certified EIR.<sup>15</sup> Eutrophication occurs when high levels of nutrients, such as fertilizers, enter a water body and cause excessive growth of plants, such as algae, resulting in a reduction in water quality.

Several life-cycle assessments (LCAs) have analyzed the impacts of bag manufacturing to eutrophication and concluded that paper carryout bag manufacturing releases more pollutants, such as nitrates and phosphates, into water than plastic carryout bag manufacturing.<sup>16,17</sup> As analyzed in the certified EIR based on the Ecobilan LCA, an ordinance with a fee on the issuance of paper carryout bags would be expected to increase eutrophication by approximately 50.87 additional kilograms of phosphate per day if all 88 incorporated cities of the County adopted similar ordinances.<sup>18</sup> Since Glendale is one of the 88 cities, the certified EIR accounts for impacts from eutrophication associated with the City's proposed ordinance. The increase in eutrophication just from the City's proposed ordinance would be approximately 1.68 kilograms of phosphate per day, which is approximately 3.3 percent of the 50.87 kilograms of phosphate for the entire County (Appendix A and Table 3.9-1, *Eutrophication Due to Plastic and Paper Carryout Bags Based on Ecobilan Data*).

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<sup>11</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>12</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>13</sup> California Regional Water Quality Control Board, Los Angeles Region (4). 13 June 1994. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Los Angeles, CA.

<sup>14</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.4-13 to 3.4-17 and 12-57 to 12-59. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> Franklin Associates, Ltd. 1990. *Resource and Environmental Profile Analysis of Polyethylene and Unbleached Paper Grocery Sacks*. Prairie Village, KS.

<sup>17</sup> 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.

<sup>18</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-58. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

**TABLE 3.9-1  
EUTROPHICATION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON ECOBILAN DATA**

Eutrophication Sources	Eutrophication (kilograms phosphate equivalent)	
	Plastic Carryout Bags (Existing Conditions)	50-percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)
City ordinance – 164 stores within Glendale <sup>1</sup>	0.34	+ 1.68
County ordinance – 5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	10.39	+ 50.87

**NOTE:**

1. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 446110, and 445120. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-58. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

Since there are no known facilities that manufacture and produce paper carryout bags for retail establishments in the County or in the City, there would be no expected impacts to water quality resulting from eutrophication within the City.<sup>19</sup> As stated in the certified EIR, since there are no significance thresholds related to eutrophication and no known paper bag manufacturing facilities located within the County (or in the City), determining the level of significance of eutrophication impacts from bag manufacturing in areas outside of the County would be inapplicable and speculative. In the case of *Save the Plastic Bag Coalition v. Manhattan Beach*, the Supreme Court stated, “the impacts of this project in areas outside Manhattan Beach itself are both indirect and difficult to predict,” and “the city could hardly be expected to trace the provenance of all paper bags that might be purchased by Manhattan Beach establishments, in order to evaluate the particular impacts resulting from their manufacture.”<sup>20</sup> Further, any indirect increase in pollutant discharge from manufacturing plants due to increased demand for paper carryout bags or reusable bags would be regulated and controlled by the federal, regional, and local laws applicable to each manufacturing plant. Within the United States, pollutant discharges from bag manufacturing facilities are required to comply with National Pollutant Discharge Elimination System requirements and permits.

Increased demand for reusable bags may also have the potential to indirectly increase eutrophication impacts from facilities that manufacture reusable bags. However, when considered on a per-use basis, impacts of reusable bag manufacturing to eutrophication are likely to be less significant than the impacts due to plastic and paper carryout bag manufacturing.<sup>21</sup> The proposed

<sup>19</sup> California Paper Bag Co. is located in the City of Glendale; however this company manufactures paper bags for restaurant establishments, which are not affected by the proposed ordinance, and not for retail or supermarket establishments that are affected by the proposed ordinance.

<sup>20</sup> *Save the Plastic Bag Coalition v. City of Manhattan Beach*, 52 Cal. 4th 155 (Cal. 2011).

<sup>21</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.4-15 and 12-58. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

ordinance requires that reusable bags be designed for a minimum of 125 uses. Therefore, eutrophication impacts due to the life cycle of a reusable bag would be expected to be significantly lower than the eutrophication impacts of a plastic or paper carryout bag when considered on a per-use basis, and any conversion from the use of plastic carryout bags to reusable bags would be reasonably expected to result in an environmental benefit. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to water quality standards or waste discharge requirements.

- (b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering 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)?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to groundwater supplies or groundwater recharge.

The City's main source of water is the Metropolitan Water District (MWD). For several decades, approximately 80 to 90 percent of the City's potable water needs have been met by the MWD.<sup>22</sup> The MWD imports water from the Colorado River and northern California via the State Water Project. The City's water consumption is about 30,000 acre feet per year (AFY). Potable water supplied to the City is obtained from the Joseph Jensen Filtration Plant in Granada Hills or Weymouth Filtration Plant in La Verne.<sup>23</sup>

The proposed ordinance does not require the construction of new structures and therefore would not result in the creation of impervious surfaces that would potentially reduce ground water recharge. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to groundwater levels.

- (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?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site. The hillside areas of the City are known to contain many drainage courses and tributary streams that normally flow during the winter and spring rainy seasons. Approximately 32 blue-line streams have been designated and are regulated by the Department of Fish and Game and the U.S. Army Corps of Engineers.<sup>24</sup> However, the proposed ordinance would not entail construction elements and would not involve any

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<sup>22</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>23</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>24</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

changes to existing physical property that would result in a change in drainage patterns. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation in the City.

- (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?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in flooding on-site or off-site. Approximately 32 blue-line streams have been designated within the City and are regulated by the Department of Fish and Game and the U.S. Army Corps of Engineers.<sup>25</sup> However, the proposed ordinance would not entail construction elements and would not involve any changes to existing physical property that would result in a change in drainage patterns. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to alteration of existing drainage patterns of the City or substantially increase the rate or amount of surface runoff in a manner that would result in flooding in the City.

- (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?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to creating or contributing runoff water that would exceed the capacity of existing or planned storm water drainage systems or providing substantial additional sources of polluted runoff. The proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City. Due to the thin film used to create plastic carryout bags (0.057 millimeter or less), their low density, and their light weight (which has been noted as anywhere between 6 to 10 times lighter than paper bags), plastic carryout bags have a very high propensity to become airborne and to pollute storm water drainage systems and runoff. In addition, several studies have shown that plastic film, particularly that of plastic carryout bags, composes a significant portion of the trash collected in storm drains. For example, a study assessing the litter content of storm drain catch basins during the Great Los Angeles River Clean Up estimated the weight and volume of plastic bag litter to be 25 percent and 19 percent, respectively.<sup>26</sup> A California Department of Transportation study of catch basins alongside freeways in Los Angeles indicated that plastic film composed 7 percent and 12 percent by mass and volume, respectively, of the total trash collected.<sup>27</sup> Plastic carryout bags that end up in storm drains can clog catch basins, storm drain inlet racks, and other devices, effectively reducing the capacity of the system to channel storm water runoff, which may result in flooding of adjacent areas. The proposed ordinance would have the potential to significantly reduce the amount of plastic carryout

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<sup>25</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>26</sup> City of Los Angeles. 18 June 2004. *Characterization of Urban Litter*. Prepared by: Ad Hoc Committee on Los Angeles River and Watershed Protection Division. Los Angeles, CA.

<sup>27</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. 2001. *Results of the Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation. Available at: <http://www.owp.csus.edu/research/papers/papers/PP020.pdf>

bag trash that may originate from the City and be transported from rivers to oceans. In a study performed for Washington, District of Columbia, plastic bag trash accounted for 45 percent of the amount of trash collected in tributary streams and 20 percent of the amount of trash collected in rivers.<sup>28</sup> However, in the same study, paper products were not found in the streams except in localized areas and were not present downstream.<sup>29</sup> Paper carryout bags degrade when in contact with water, so they are less likely to accumulate in the storm drain system. Similarly, reusable bags pose less of an issue for the storm drain system as they are disposed of less frequently because they are designed to be used multiple times and are not littered as often as plastic carryout bags. Therefore, the proposed ordinance would have the potential to improve the existing drainage capacity by removing a significant source of trash that can clog features of the system and reduce its capacity.<sup>30</sup>

The proposed ordinance would be expected to significantly reduce the use of plastic carryout bags and significantly increase the use of reusable bags within the City. The proposed ordinance would not entail construction elements and would not involve any changes to existing physical property. Consequently, there would be no potential for impacts to hydrology and water quality in relation to creating or contributing runoff water that would exceed the capacity of existing or planned storm water drainage systems or providing substantial additional sources of polluted runoff. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exceeding the capacity of existing or planned storm water drainage systems or providing substantial additional sources of polluted runoff.

(f) Otherwise substantially degrade water quality?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to otherwise substantially degrading water quality. Water quality and use within California is regulated by the State Water Resources Control Board. The proposed ordinance would not entail construction elements and would not involve any changes to existing physical property that would adversely affect water quality. Further, although manufacturing facilities for paper and plastic carryout bags could potentially release pollutants that may affect water quality, the discharge of pollutants locally and nationally is regulated by the U.S. Environmental Protection Agency and the Regional Water Quality Control Boards under the federal Clean Water Act (CWA). Pollutant discharges from manufacturing facilities would be required to comply with the CWA. Further, as noted in the response to (a) above, since there are no manufacturers and producers of paper carryout bags for retail establishments in the County or in the City, no impacts to water quality due to a potential increase in demand associated with conversion from plastic carryout bags to paper carryout bags would be expected.<sup>31</sup> The reduction of plastic bag litter in the litter stream resulting from implementation of the proposed ordinance would be expected to benefit the City. Therefore, compared with the approved ordinances, the

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<sup>28</sup> Anacostia Watershed Society. December 2008. *Anacostia Watershed Trash Reduction Plan*. Prepared for: District of Columbia Department of the Environment. Bladensburg, MD.

<sup>29</sup> Anacostia Watershed Society. December 2008. *Anacostia Watershed Trash Reduction Plan*. Prepared for: District of Columbia Department of the Environment. Bladensburg, MD.

<sup>30</sup> Green Cities California. March 2010. *Master Environmental Assessment on Single-Use and Reusable Bags*. Prepared by: ICF International. San Francisco, CA.

<sup>31</sup> California Paper Bag Co. is located in the City of Glendale; however this company manufactures paper bags for restaurant establishments, which are not affected by the proposed ordinance, and not for retail or supermarket establishments that are affected by the proposed ordinance.

proposed ordinances would not be expected to result in new or substantially more adverse significant impacts related to substantial degradation of water quality.

- (g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or dam inundation area as shown in the City of Glendale, adopted Safety Element of the General Plan or other flood hazard delineation map?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality related to the placement of housing within a 100-year flood hazard area. The City is unlikely to experience direct inundation from rising sea levels. In 1979, the Federal Emergency Management Agency (FEMA) determined that no part of the community would be inundated by a base flood and therefore that the entire area would be classified as Zone C (area of minimal flood hazards where the purchase of flood insurance is not mandatory).<sup>32</sup> In 1984, FEMA again informed the City that no Special Flood Hazard Areas were present within the corporate limits of the City at that time, and thus that the City was placed in Zone D, which has no mandatory flood insurance purchase requirements.<sup>33</sup> Therefore there are no flood insurance rate maps for the City and it is not listed in FEMA's Community Rating System.<sup>34</sup> The proposed ordinance would not entail the construction of housing units. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to placement of housing within a 100-year flood hazard area.

- (h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality in relation to the placement of structures within a 100-year flood hazard area. No portions of the City are within a 100-year floodplain identified by FEMA.<sup>35</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not entail the construction or placement of structures. Therefore, compared with the approved ordinances, the proposed ordinances would not be expected to result in new or substantially more adverse significant impacts related to placement of structures (other than housing) within a 100-year flood hazard area.

- (i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality related to the failure of a levee or dam. There are seven dams in the Glendale area that are large enough that the State requires that inundation maps be

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<sup>32</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>33</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>34</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>35</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

available for these facilities.<sup>36</sup> However, the proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not include any changes to landforms or any physical elements, and would not result in flooding or expose people to areas that are susceptible to flooding. Therefore, compared with the approved ordinances, the proposed ordinances would not be expected to result in new or substantially more adverse significant impacts related to failure of a levee or dam.

(j) Inundation by seiche, tsunami, or mudflow?

As with the approved ordinances, the proposed ordinance would not be expected to result in impacts to hydrology and water quality related to inundation by seiche, tsunami, or mudflow. Due to the distance from the City of Glendale to the Pacific Ocean (approximately 17 miles to the west), and the numerous structures between the City and the ocean, there is no risk or hazard due to tsunamis. There are also no large enclosed water bodies in the City that could create a risk of inundation due to a seiche.<sup>37</sup> Specific hazards of concern to the City include earthquakes, landslides, and mudflows, dam or reservoir failure, wildland and structural fire, and storm flooding.<sup>38</sup> Although there are areas within the City where seiches, tsunamis, or mudflows are potential threats, the proposed ordinance would not entail components that would result in or be subject to a potential threat by such occurrences. The proposed ordinance would not include any changes to landforms or any physical elements, and therefore would not be expected to impact lakes and/or flood control basins or areas adjacent to any steep-sided slopes covered with soils and/or vegetation. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to inundation by seiche, tsunami, or mudflow.

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<sup>36</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>37</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>38</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

### 3.10 LAND USE AND PLANNING

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to land use and planning than those disclosed in the certified 2010 Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Land use and planning within the City of Glendale (City) were evaluated in light of the adopted plans, including the City of General Plan,<sup>2</sup> the City of Glendale Municipal Code,<sup>3</sup> and the Greener Glendale Plan.<sup>4</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts related to land use and planning was evaluated in relation to three questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>5,6</sup>

Would the proposed ordinance:

- (a) Physically divide an existing community?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to land use and planning; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>7</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City. The proposed ordinance would not involve construction or renovation of a site that would physically divide an established community. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to physical division of an established community.

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. October 1986. *City of Glendale General Plan: Land Use Element*. Glendale, CA.

<sup>3</sup> City of Glendale, Community Development Department. City of Glendale Municipal Code. Available at: <http://www.ci.glendale.ca.us/gmc/index.asp>. Glendale, CA.

<sup>5</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>5</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

- (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, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to land use and planning; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>8</sup>

The Open Space and Conservation element of the City of Glendale General Plan outlines a policy for the protection of natural resources, including open spaces, biological habitats, and native plant communities,<sup>9</sup> as contributors to the quality of life, environment, and visual character of the City.<sup>10</sup> In banning the issuance of plastic carryout bags, which contribute to litter in the City, the proposed ordinance would adhere to the City's General Plan's sustainability and environmental stewardship policy. The proposed ordinances would also conform to the Greener Glendale Plan's Objective WS1, which calls for the implementation of a plan to explore a citywide ban on stores' distribution of free single-use plastic shopping bags in an effort to divert waste from landfills.<sup>11</sup> This plan, known as the Zero Waste Plan, is currently under review by the City Council.<sup>12</sup> Implementation of the proposed ordinance would achieve Objective WS1 of the Greener Glendale Plan, thereby conforming to City plans and policy. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to a conflict with adopted or proposed land use plans, policies, or regulations and would support City adopted plans and policies for the purpose of avoiding or mitigating an environmental effect.

- (c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to land use and planning; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> According to the California Department of Fish and Game, the only Natural Community Conservation Planning (NCCP) region within the County of Los Angeles is the Palos Verdes Peninsula, located approximately 38 miles south of the City. The NCCP addresses the conservation

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<sup>8</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>9</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>10</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

of most of the coastal sage scrub habitat and other habitats on the Palos Verdes Peninsula.<sup>14,15</sup> There are no adopted NCCPs or Habitat Conservation Plans (HCPs) that would apply to the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to a conflict with any adopted HCP or NCCP.

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<sup>14</sup> California Department of Fish and Game. April 2011. *Summary of Natural Community Conservation Plans (NCCPs) April, 2011*. Available at: <http://www.dfg.ca.gov/habcon/nccp/>

<sup>15</sup> U.S. Fish and Wildlife Service. Accessed on: 15 August 2011. *Natural Community Conservation Planning (NCCP): NCCP Plan Summary – Palos Verdes Peninsula*. Available at: <http://www.dfg.ca.gov/habcon/nccp/status/PalosVerdes/>

### 3.11 MINERAL RESOURCES

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to mineral resources than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Mineral resources within the City of Glendale (City) were evaluated with regard to the California Geological Survey publication,<sup>2</sup> County of Los Angeles (County) General Plan,<sup>3</sup> and the City of Glendale General Plan.<sup>4</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to mineral resources was evaluated in relation to two questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>5,6</sup>

Would the proposed ordinance:

- (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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to mineral resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>7</sup> Based on a review of California Geological Survey publications, there are no known mineral resources of statewide or regional importance located within the City.<sup>8</sup>

According to *Mines and Minerals Producers Active in California (1997–1998)*, there are 25 active mines located within the County.<sup>9</sup> The County contains active sand and gravel, dimension stone, clay, decorative rock, and tungsten producers. However, there are no mining districts located in or around the City. The proposed ordinance would ban plastic carryout bags issued at certain stores and would not modify any landforms or otherwise block or reduce accessibility to mineral

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> California Department of Conservation, California Geological Survey. [1966] Reprint released 13 March 2008. *Bulletin 189: Minerals of California*. Centennial Volume (1866–1966). Los Angeles, CA.

<sup>3</sup> County of Los Angeles Department of Regional Planning. November 1980. *County of Los Angeles General Plan, Conservation/Open Space Element*. Los Angeles, CA.

<sup>4</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>5</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> California Department of Conservation, California Geological Survey. [1966] Reprint released 13 March 2008. *Bulletin 189: Minerals of California*. Centennial Volume (1866–1966). Los Angeles, CA.

<sup>9</sup> California Department of Conservation, California Geological Survey. Revised 1999. *Mines and Mineral Producers Active in California (1997–1998)*. Special Publication 103. Los Angeles, CA.

resources; the proposed ordinance would not affect the extraction of mineral resources. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the loss of availability of a known mineral resource.

- (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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to mineral resources; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>10</sup> Based on a review of California Division of Mines and Geology publications and the Conservation elements of the County General Plan and the City of Glendale General Plan, there are no known mineral resources of statewide, regional, or local importance located within the City.<sup>11,12,13</sup> Furthermore, the proposed ordinance would ban plastic carryout bags issued at certain stores and would not modify any landforms or otherwise block or reduce accessibility to mineral resources; therefore, the proposed ordinance would not be expected to alter the availability of locally important mineral resources. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the loss of availability of a known locally important mineral resource recovery site.

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<sup>10</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> California Department of Conservation, California Geological Survey. [1966] Reprint released 13 March 2008. *Bulletin 189: Minerals of California*. Centennial Volume (1866–1966). Los Angeles, CA.

<sup>12</sup> City of Glendale, Community Development Department. March 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>13</sup> County of Los Angeles Department of Regional Planning. November 1980. *County of Los Angeles General Plan, Conservation/Open Space Element*. Los Angeles, CA.

### 3.12 NOISE

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts to noise than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Noise within the City of Glendale (City) was evaluated with regard to the Noise Control Ordinance of the County of Los Angeles (County),<sup>2</sup> the Noise Control Ordinance of the City,<sup>3</sup> and the City of Glendale General Plan.<sup>4</sup> The potential for the proposed ordinance to result in new or substantially more adverse significant impacts related to noise was evaluated in relation to six questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>5,6</sup>

Would the proposed ordinance result in:

- (a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>7</sup> The City is considered a mature city that is essentially built out, and the noise analysis in the City takes place in an urban context.<sup>8</sup> The method commonly used to quantify environmental noise involves evaluation of all frequencies of sound adjusted for the constraints of human hearing. Since the human ear is less sensitive to low and high frequencies than to midrange frequencies, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting." A measured noise level is called the A-weighted sound level measured in A-weighted decibels, written as dBA. The City has set guidelines for the maximum desirable noise to encourage noise levels typical of a quiet residential area.<sup>9</sup>

The proposed ordinance aims to significantly reduce the amount of litter in the City that can be attributed to plastic carryout bags, which would potentially lead to a reduction in the amount of

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> County of Los Angeles. 1978. "Noise Control Ordinance of the County of Los Angeles." Ord. 11778, Section 2 (Art.1, Section 101), and Ord. 11773, Section 2 (Art. 1, Section 101). Available at: <http://ordlink.com/codes/lacounty/index.htm>

<sup>3</sup> City of Glendale. N.d. City of Glendale Municipal Code, Noise Control, Title 8, Chapter 8.36. Available at: <http://www.ci.glendale.ca.us/gmc/8.36.asp>

<sup>4</sup> City of Glendale, Community Development Department. May 2007. *City of Glendale General Plan: Noise Element*. Glendale, CA.

<sup>5</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>6</sup> City of Glendale. N.d. Provided on 31 January 2011. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinance to Ban Plastic Carryout Bags in the Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>8</sup> City of Glendale, Community Development Department. May 2007. *City of Glendale General Plan: Noise Element*. Glendale, CA.

<sup>9</sup> City of Glendale, Community Development Department. May 2007. *City of Glendale General Plan: Noise Element*. Glendale, CA.

waste transported throughout the City. Although certain representatives of the plastic bag industry have stated that similar ordinances have the potential to increase the use, disposal, and transport of paper carryout bags, the proposed ordinance would encourage the use of reusable bags over plastic or paper bags to reduce the total number of carryout bags used, disposed of, and transported throughout the City.<sup>10</sup> A doubling of traffic volumes on a roadway would be expected to result in a 3-dBA increase in noise generated by traffic, the human threshold for perceiving a change in the ambient noise level. Although the number of vehicles on the roads does affect ambient noise levels, the potential changes in the number of vehicles transporting carryout bags of any type would not double traffic to result in a change in the ambient noise levels around roadways in areas in and around the City.

One manufacturer of paper bags is located in the City: California Paper Bag Co. is located at 1829 Dana Street within areas zoned for industrial uses where higher noise levels are permitted and would not generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.<sup>11</sup> However, the California Paper Bag Co. does not manufacture paper bags for retail, supermarket, and small market establishments that would be affected by the proposed ordinance. The California Paper Bag Co. makes paper bags for fast food establishments, such as McDonalds and Burger King.<sup>12</sup> The proposed ordinance would not apply to paper bag use at restaurant establishments. Nevertheless, the California Paper Bag Co. would still be required to comply with the local or County noise ordinances. There are no additional facilities proposed as part of this ordinance. Further, any such facilities would be required to comply with the local or County noise ordinances. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to exposure or generation of noise levels in excess of established standards.

(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> The City has specific guidelines for groundborne vibration or groundborne noise levels. The City's Noise Control Ordinance does not allow operation of any device that creates vibration above vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way. The City Noise Control Ordinance considers the perception threshold to be a motion velocity of 0.01 inch per second over the range of 1 to 100 Hertz.<sup>14</sup>

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<sup>10</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>11</sup> Manta. Accessed on 9 February 2012. "California Paper Bag CO." Available at: <http://www.manta.com/c/mms2jj2/california-paper-bag-co>

<sup>12</sup> Representative of California Paper Bag Co., Glendale, California. 9 February 2012. Telephone conversation with Roland Ok, Sapphos Environmental, Inc., Pasadena, California.

<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>14</sup> City of Glendale. N.d. City of Glendale Municipal Code, Noise Control, Title 8, Chapter 8.36. Available at: <http://www.ci.glendale.ca.us/gmc/8.36.asp>

The proposed ordinance aims to significantly reduce the amount of litter in the City that can be attributed to the use of plastic carryout bags, which would potentially lead to a reduction in the amount of waste transported throughout the City. Although certain representatives of the plastic bag industry have stated that similar ordinances have the potential to increase the use, disposal, and transport of paper carryout bags,<sup>15</sup> the proposed ordinance would include a charge of 10 cents on the issuance of paper carryout bags to encourage more use of reusable bags, which would reduce the total number of carryout bags used, disposed of, and transported throughout the City compared to existing conditions. A PPV of 0.3 inch per second is the level at which buildings susceptible to vibration damage can begin to experience structural damage. Although the number of vehicles on the roads does affect vibration levels in the roadway vicinity, no change in the number of vehicles transporting plastic bags, paper bags, or reusable bags would likely be below a PPV of 0.3 inches per second groundborne vibration or groundborne noise levels at sensitive receptors near roadways in the City.

One manufacturer of paper bags for restaurant industries is located in the City. The California Paper Bag Co. is located at 1829 Dana Street within areas zoned for industrial uses where higher noise levels are permitted and would not impact noise-sensitive receptors.<sup>16</sup> However, as previously mentioned, the California Paper Bag Co. does not manufacture paper bags for retail, supermarket, and small market establishments and would not be affected by the proposed ordinance.<sup>17</sup> The EIR and addendum do not account for paper bag use at fast food or restaurant establishments. Nevertheless, the California Paper Bag Co. would also be required to comply with the local or County noise ordinances. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to generation of excessive groundborne vibration or groundborne noise.

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>18</sup> The County and City noise control ordinances do not define the level considered "substantial." In general, one way of estimating a person's subjective reaction to a new noise is to compare the new noise with the existing noise environment to which the person has become adapted; for example, the increase over the so-called "ambient" noise level. An increase of 1 dBA over the ambient noise level cannot be perceived unless it occurs in carefully controlled laboratory experiments; a 3-dBA increase is considered as a just-perceivable difference; an increase of at least 5 dBA is a noticeable change, thereby causing community response and is often considered a significant impact; and a 10-dBA increase is subjectively heard as an approximate doubling in loudness, most often causing an

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<sup>15</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>16</sup> Manta. California Paper Bag CO. Accessed on 9 February 2012. Available at: <http://www.manta.com/c/mms2jj2/california-paper-bag-co>

<sup>17</sup> Representative of California Paper Bag Co., Glendale, California. 9 February 2012. Telephone conversation with Roland Ok, Sapphos Environmental, Inc., Pasadena, California.

<sup>18</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

adverse community response. According to Chapter 8.36, Noise Control, of the City's Municipal Code, a 5-dBA increase is often considered a significant increase. Moreover, the Noise Control Ordinance states, "where the actual ambient is equal to or more than the presumed ambient, the actual ambient shall control and any noise may not exceed the actual ambient by more than five dbA; however in no event may the actual ambient exceed the presumed noise standards by five dbA."<sup>19</sup>

A doubling of traffic volumes on a roadway would be expected to result in a 3-dBA increase in noise generated by traffic, which is the human threshold for perceiving a change in the ambient noise level. Implementation of the proposed ordinance would not be expected to generate a substantial number of vehicle trips and would not have the potential to double traffic volumes on the roadways in and around the City. Although the proposed ordinance would be expected to alter the current demand for plastic and paper carryout bags and reusable bags, existing and new manufacturing facilities are located in areas zoned for industrial uses, where noise-sensitive receptors would not be impacted and where higher noise levels are permitted. Consequently, any increase in ambient noise levels would not be considered a significant impact. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to permanent increases in ambient noise levels.

- (d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>20</sup> The proposed ordinance would not include components that would be sources of temporary or periodic noise. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to a substantial temporary or periodic increase in ambient noise levels within the City.

- (e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>21</sup> The City does not have a public use airport. The nearest airports to the City are the El Monte Airport and the Bob Hope Airport located approximately 13.4 miles southeast and approximately 7 miles northwest of the City boundary, respectively. The proposed ordinance would not expose people residing or working near any public airport to excessive noise levels. Therefore, compared with the approved

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<sup>19</sup> City of Glendale. N.d. City of Glendale Municipal Code, Noise Control, Title 8, Chapter 8.36. Available at: <http://www.ci.glendale.ca.us/gmc/8.36.asp>

<sup>20</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>21</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to public airports.

- (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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to noise; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>22</sup> The proposed ordinance would not require people to be located or to work near any private airstrips. There are no private airports or airstrips within 2 miles of the City, and no portions of the City are subject to land use restrictions.<sup>23</sup> The nearest private airports to the City are the Century City Heliport and the Sherman Oaks Heliport located approximately 5 miles south outside of City boundaries. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to private airstrips.

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<sup>22</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>23</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

### 3.13 POPULATION AND HOUSING

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to population and housing than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Population and housing within the City of Glendale (City) were evaluated with regard to regional data and forecasts for population and housing.<sup>2,3</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to population and housing was evaluated in relation to three questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>4,5</sup>

Would the proposed ordinance:

- (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)?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to population and housing; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>6</sup> Pursuant to State CEQA Guidelines Section 15064.7, typical established local thresholds of significance for housing and population growth include effects that would induce substantial growth or concentration of a population beyond General Plan projections; alter the location, distribution, density, or growth rate of the population beyond that projected in the General Plan; result in a substantial increase in demand for additional housing; or create a development that significantly reduces the ability of the City to meet housing objectives set forth in the General Plan.<sup>7</sup>

A steady increase in housing prices since the mid-1990s ending with a five-year “bubble,” a downturn of the housing market beginning in 2007, historical oil prices, continued population growth, increased ethnic diversity, loss of easily developable land, increasing urban sprawl, and increasing scarcity of affordable housing all have impacts on the quality of life for Glendale

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale Community Development Department. January 2009. *City of Glendale: Housing Element of the General Plan*. Glendale, CA.

<sup>3</sup> U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

<sup>4</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>5</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On File at Sapphos Environmental, Inc., Pasadena, CA.

<sup>6</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> City of Glendale, Community Development Department. January 2009. *City of Glendale: Housing Element of the General Plan*. Glendale, CA.

residents.<sup>8</sup> According to the most recent U.S. Census data, the City's population was 191,719 in 2010,<sup>9</sup> which is a 1.7 percent decrease from a population of 194,973 in 2000. The City is considered a mature city and is essentially built to capacity.

The proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City. As such, the proposed ordinance would not be anticipated to increase the demand for new housing or require expansion of existing roadways or the construction of new homes. Population growth within the City would remain consistent with the existing population growth projection because the proposed ordinance would not entail development or other features that would be expected to shift or influence the growth or migration rates within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to inducing substantial direct or indirect population growth.

- (b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to population and housing; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>10</sup> The proposed ordinance would aim to reduce the amount of litter that can be attributed to plastic carryout bags within the City and would not entail any components that would result in the removal or displacement of existing housing. The areas that would be affected by the proposed ordinance provide residences and employment for approximately 283,855 people (service population) in the City.<sup>11</sup> The proposed ordinance would have no effect on the City's projected population and housing growth and would not necessitate construction of replacement housing. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the displacement of substantial amounts of existing housing.

- (c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to population and housing; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>12</sup> The proposed ordinance would aim to reduce the amount of litter that can be attributed to plastic carryout bags within the City and would not contain any components that would result in the displacement of substantial numbers of people. Implementation of the proposed ordinance would

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<sup>8</sup> City of Glendale, Community Development Department. January 2009. *City of Glendale: Housing Element of the General Plan*. Glendale, CA.

<sup>9</sup> U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

<sup>10</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> U.S. Census Bureau. 2010. American Community Survey 2010. American Fact Finder. Available at: [www.census.gov](http://www.census.gov)

<sup>12</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

not be expected to lead to an increase in population but would be consistent with the City's projected population growth. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the displacement of substantial numbers of people.

### 3.14 PUBLIC SERVICES

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to public services than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Public services within the City of Glendale (City) were evaluated based on a review of the City of Glendale General Plan.<sup>2,3</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to public services was evaluated in relation to one question recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>4,5</sup>

- (a) Would the proposed ordinance 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:
- i) Fire protection?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to public services; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>6</sup> Fire services are provided by the City of Glendale Fire Department, which has nine fire stations in the City.<sup>7</sup> The nine fire stations are strategically located throughout the City to provide the level of service that has gained the Fire Department an Insurance Services Office (ISO) rating of 1, the highest possible (at this time, only fourteen communities in the United States have been awarded an ISO rating of 1).<sup>8</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores in the City and would not entail any development or feature that would be expected to affect population growth in the City in such a way that would lead to an increase in the demand for fire protection services or related facilities. In addition, the proposed ordinance would not include the provision of new or physically altered fire protection services. Therefore, compared

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

<sup>3</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>4</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>5</sup> City of Glendale. N.d. Provided 31 January 2012. Initial Study Template. On file at Sapphos Environmental, Inc., Pasadena, CA.

<sup>6</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> City of Glendale Fire Department. N.d. Fire Stations. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/police/default.asp>

<sup>8</sup> City of Glendale, Community Development Department. August 2003. *City of Glendale General Plan: Safety Element*. Glendale, CA.

with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to fire protection.

ii) Police protection?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to public services; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>9</sup> The City receives its police protection through the Glendale Police Department.<sup>10</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores in the City and would not entail any development or features that would be expected to affect population growth in the City in such a way that would lead to an increase in the demand for police protection. In addition, the proposed ordinance would not include or require the provision of new or physically altered facilities for police protection services. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to police protection.

iii) Schools?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to public services; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>11</sup> The Glendale Unified School District (GUSD) provides public school services to the City.<sup>12</sup> The City has a total of 30 schools; this includes 20 elementary schools, 4 middle schools, and 6 high schools.<sup>13</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores in the City and would not entail any development or features that would be expected to affect population growth in the City in such a way that would lead to an increase in the demand for and use of schools or related facilities. In addition, the proposed ordinance would not include or require the provision of new or physically altered governmental facilities related to schools. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to schools.

iv) Parks?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to public services;

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<sup>9</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D: Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>10</sup> City of Glendale Police Department. N.d. Glendale Police Department Headquarters. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/police/default.asp>

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>12</sup> Glendale Unified School District. N.d. GUSD Schools & Sites Directory. Glendale, CA. Available at: <http://www.gusd.net/15791061219222377/site/default.asp>

<sup>13</sup> Glendale Unified School District. N.d. GUSD Schools & Sites Directory. Glendale, CA. Available at: <http://www.gusd.net/15791061219222377/site/default.asp>

therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>14</sup> The City owns and/or controls approximately 246 acres of developed park land and 5,114 acres of undeveloped park land.<sup>15</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores in the City and would not entail any development or features that would be expected to affect population growth in the City in such a way that would lead to an increase in the demand for and use of park facilities. Furthermore, the proposed ordinance, which would aim to significantly reduce the amount of litter that can be attributed to plastic carryout bags, would potentially lead to an improvement in the aesthetic appearance of existing recreational facilities and open spaces in the City. As found in the County of Los Angeles staff report on plastic bags, due to their expansive and lightweight characteristics, plastic bags are easily carried by wind to become entangled in brush, tossed along freeways, and caught on fences, thereby becoming eyesores.<sup>16</sup> Furthermore, the distinct white or bright colors of plastic bags and the difficulty of collecting the bags result in a greater potential for visual impacts than other types of litter. The proposed ordinance would not physically alter any existing parks in the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to parks.

v) Other public facilities?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to public services; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>17</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores in the City and would not entail any development or features that would be expected to affect population growth in the City in such a way that it would lead to an increase in the demand for and use of other public facilities. Furthermore, the proposed ordinance would not include elements that would directly or indirectly require residential development or the construction of public facilities. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to other public facilities.

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<sup>14</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>15</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>16</sup> County of Los Angeles Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

### 3.15 RECREATION

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to recreation from those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Recreation in the City of Glendale (City) was evaluated with regard to information contained in the City of Glendale General Plan<sup>2</sup> and the potential for growth-inducing impacts as evaluated in Section 3.13, *Population and Housing*.

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to recreation was evaluated in relation to two questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>3,4</sup>

- (a) Would the proposed ordinance 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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to recreation; therefore, this environmental issue was not carried forward for the analysis in the EIR.<sup>5</sup> The City owns and/or controls approximately 246 acres of developed park land and 5,114 acres of undeveloped park land, including Verdugo Park, Brand Park, Glendale Sports Complex, Montrose Community Park, Fremont Park, Emerald Isle Park, and Glorietta Park.<sup>6</sup> Due to the City's urbanized and mature city nature, natural resources are generally public parks and areas landscaped by private property owners. However, the City benefits from having a major natural resource in its hillside areas. The Verdugo Mountains, the San Rafael Hills, a small portion of the San Gabriel Mountains, and the undeveloped ridgelines and canyons of these mountain ranges are recreational resources for the City's residents.<sup>7</sup>

The proposed ordinance would not contain any components that would increase or impact the demand for the existing recreational facilities. As discussed in Section 3.14 of this Addendum to the EIR, the proposed ordinance would not be expected to cause an increase in residents or visitors because the proposed ordinance would not entail development or other features that would be

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

<sup>3</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>4</sup> City of Glendale. N.d. Provided 31 January 2011. Initial Study Template. On file at Sapphos Environmental, Inc., Pasadena, CA.

<sup>5</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>6</sup> City of Glendale, Community Development Department. October 2005. *City of Glendale General Plan: Open Space and Conservation Element Amendment*. Glendale, CA.

<sup>7</sup> City of Glendale, Community Development Department. January 1993. *City of Glendale General Plan: Open Space and Conservation Element*. Glendale, CA.

expected to shift or influence the growth within the City. Furthermore, the proposed ordinance, which would aim to significantly reduce the amount of litter that can be attributed to the use of plastic carryout bags, would potentially lead to an improvement in the aesthetic appearance of existing recreational facilities and open spaces in the City. As found in the County of Los Angeles staff report on plastic bags, due to their expansive and lightweight characteristics, plastic bags are easily carried by wind to become entangled in brush, tossed along freeways, and caught on fences, thereby becoming eyesores.<sup>8</sup> Furthermore, the distinct white or bright colors of plastic bags and the difficulty of collecting the bags result in a greater potential for visual impacts than other types of litter. These visual impacts are especially apparent in large parks in the City such as Verdugo Park which is approximately 38, acres and Brand Park, which is approximately 30 acres. The proposed ordinance would not be expected to result in a significant increase in the number of people, residents, or visitors who use existing park facilities. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to increased use of existing neighborhood and regional parks or other recreational facilities that would contribute to or accelerate the physical deterioration of existing facilities.

- (b) Does the proposed ordinance include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to recreation; therefore, this environmental issue was not carried forward for analysis in the EIR.<sup>9</sup> The proposed ordinance would not increase or impact the demand for the existing recreational facilities in the City and would not involve construction or expansion of recreational facilities. The proposed ordinance would have the potential to improve the appearance of recreational facilities by reducing the amount of plastic bag litter in the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the construction or expansion of recreation facilities.

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<sup>8</sup> County of Los Angeles Department of Public Works, Environmental Programs Division. August 2007. *An Overview of Carryout Bags in Los Angeles County: A Staff Report to the Los Angeles County Board of Supervisors*. Alhambra, CA. Available at: [http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport\\_08-2007.pdf](http://dpw.lacounty.gov/epd/PlasticBags/PDF/PlasticBagReport_08-2007.pdf)

<sup>9</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

### 3.16 TRANSPORTATION AND TRAFFIC

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to transportation and traffic from those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Transportation and traffic within the City of Glendale (City) were evaluated in light of the City of Glendale General Plan<sup>2</sup> and the Congestion Management Plan for the County of Los Angeles (County).<sup>3</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts related to transportation and traffic was evaluated in relation to six questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Checklist.<sup>4,5</sup>

Would the proposed ordinance:

- (a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>6</sup> The proposed ordinance aims to significantly reduce the amount of litter in the City that can be attributed to the use of plastic carryout bags, which would potentially lead to a reduction in the amount of waste transported throughout the City. Although certain representatives of the plastic bag industry have maintained that similar ordinances have the potential to increase the use, disposal, and transport of paper carryout bags,<sup>7</sup> the proposed ordinance would include a 10-cent charge on paper carryout bags to encourage the use of reusable bags, thereby resulting in a reduction in the total number of carryout bags used, disposed of, and transported throughout the City compared to existing conditions. Goal 2 of the Circulation Element of the General Plan states that the City should minimize the congestion, air pollution, and noise associated with motor

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale Circulation Element of the General Plan*. Glendale, CA.

<sup>3</sup> County of Los Angeles Metropolitan Transportation Authority. 2004. *2004 Congestion Management Program for Los Angeles County*. Los Angeles, CA.

<sup>4</sup> *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>5</sup> City of Glendale. N.d. Provided 31 January 2012. Initial Study Template. On file at Sapphos Environmental, Inc., Pasadena, CA.

<sup>6</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>7</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

vehicles.<sup>8</sup> A decrease in the number of plastic and paper carryout bags used, delivered, and disposed of within the City would not conflict with this policy. The proposed ordinance would not be expected to generate a substantial number of vehicle trips that would contribute to the existing traffic within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

- (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?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>9</sup> The City participates in the Congestion Management Program (CMP). The CMP is required of every county in California with a population of 50,000 or more (including all of the Southern California Association of Governments six-county area) to qualify for certain state and federal funds. The CMP requires annual development reporting and biennial data collection at designated intersections and roadway segments. The CMP sets performance standards for roads and public transit, and requires the City to meet these standards.<sup>10</sup> The proposed ordinance aims to significantly reduce the amount of litter that can be attributed to the use of plastic carryout bags, which would have the potential to lead to a reduction in the amount of waste transported throughout the County. Although certain representatives of the plastic bag industry have argued that similar ordinances have the potential to result in an increase in the use, disposal, and transportation of paper carryout bags,<sup>11</sup> the proposed ordinance would include a 10-cent charge on the issuance of paper carryout bags to encourage the use of reusable bags, thereby resulting in a reduction in the total number of carryout bags used, disposed of, and transported throughout the City compared to existing conditions. The County Congestion Management Program set the threshold for arterial roadways to achieve a level of service E or better.<sup>12</sup> The proposed ordinance would not directly generate new or additional trips and would not include any new development in the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to transportation and traffic related to 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.

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<sup>8</sup> City of Glendale Community Development Department. August 1998. *City of Glendale Circulation Element of the General Plan*. Glendale, CA.

<sup>9</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>10</sup> County of Los Angeles Metropolitan Transportation Authority. 2004. *2004 Congestion Management Program for Los Angeles County*. Los Angeles, CA.

<sup>11</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>12</sup> County of Los Angeles Metropolitan Transportation Authority. 2004. *2004 Congestion Management Program for Los Angeles County*. Los Angeles, CA.

- (c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>13</sup> The City does not have a public use airport. The nearest airports to the City are the El Monte Airport, located at 4233 Santa Anita Avenue #1 in El Monte, California, approximately 13.4 miles southeast from the City; and the Bob Hope Airport located at 2627 North Hollywood Way in Burbank, California, approximately 7 miles northwest of the City. The proposed ordinance would not include any direct physical development, and as such it would not entail elements that would be located near a private or public airport. The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not result in any direct or indirect effects upon air traffic patterns. Therefore, as with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to transportation and traffic related to a change in air traffic patterns that would result in substantial safety risks.

- (d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>14</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not entail elements that require construction or would have the potential to result in any direct or indirect effects upon increasing traffic hazards due to a design feature. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to transportation and traffic related to substantially increasing hazards due to a design feature.

- (e) Result in inadequate emergency access?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>15</sup> The Circulation Element of the General Plan requires that the City minimize impacts on emergency vehicle response time due to implementation of neighborhood traffic control measures.<sup>16</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not include elements that would require or alter the availability of or access to any emergency

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<sup>13</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>14</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>15</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>16</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale Circulation Element of the General Plan*. Glendale, CA.

route within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to transportation and traffic related to inadequate emergency access.

- (f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

As a result of the analysis undertaken in the Initial Study for the certified EIR, it was determined that the approved ordinances would not be expected to result in significant impacts to transportation and traffic; therefore, this environmental issue area was not carried forward for analysis in the EIR.<sup>17</sup> Goal 3 of the Circulation Element of the General Plan states that the City should provide reasonable access to services and goods in Glendale by a variety of transportation modes, in the form of public transportation.<sup>18</sup> The proposed ordinance would ban the issuance of plastic carryout bags by certain stores and would not include any components that would be expected to result in any direct or indirect effects upon alternative transportation within the City. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to a conflict with adopted policies, plans, or programs supporting alternative transportation.

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<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. Appendix D, Initial Study. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>18</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale Circulation Element of the General Plan*. Glendale, CA.

### 3.17 UTILITIES AND SERVICE SYSTEMS

This analysis is undertaken to determine if the proposed Ordinance to Ban Plastic Carryout Bags in the City of Glendale (proposed ordinance) would result in new or substantially more adverse significant impacts in relation to utilities and service systems than those disclosed in the certified Environmental Impact Report (EIR) for the Ordinances to Ban Plastic Carryout Bags in Los Angeles County (approved ordinances).<sup>1</sup> Utilities and service systems within the City of Glendale (City) were evaluated with regard to the City of Glendale General Plan,<sup>2</sup> the Greener Glendale Plan,<sup>3</sup> the California Regional Water Quality Control Board (RWQCB) Basin Plan for the Los Angeles Region,<sup>4</sup> the City of Glendale Water Conservation Municipal Code,<sup>5</sup> the City of Glendale Solid Waste Disposal Municipal Code,<sup>6</sup> and a review of life cycle assessments that evaluate plastic and paper carryout bags.<sup>7,8</sup>

The potential for the proposed ordinance to result in new or substantially more adverse significant impacts to utilities and service systems was evaluated in relation to seven questions recommended for consideration by the State California Environmental Quality Act (CEQA) Guidelines and the City of Glendale Environmental Checklist.<sup>9,10</sup>

Would the proposed ordinance:

- (a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

As a result of the analysis undertaken in certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>11</sup> The City of Glendale has a system of sanitary sewers consisting of over 400 miles of sewer line in the street rights of way. Part of the wastewater generated in Glendale is treated at the

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<sup>1</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>2</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>3</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>4</sup> California Regional Water Quality Control Board, Los Angeles Region (4). February 1995. *Water Quality Control Plan: Los Angeles Region*. Monterey Park, CA.

<sup>5</sup> City of Glendale. N.d. City of Glendale Municipal Code, Water Conservation, Chapter 13.36. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/13.36.asp>

<sup>6</sup> City of Glendale. N.d. City of Glendale Municipal Code, Solid Waste Disposal, Chapter 8.56. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/8.56.asp>

<sup>7</sup> 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.

<sup>8</sup> 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. Ardmore, PA.

<sup>9</sup> *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

<sup>10</sup> City of Glendale. N.d. Provided on 31 January 2012. Initial Study Template. On file at Sapphos Environmental, Inc., Pasadena, CA.

<sup>11</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

Glendale–Los Angeles Water Reclamation Plant.<sup>12</sup> Of the 20 million gallons of wastewater treated daily at the plant, half are from Glendale and half from Los Angeles. The Glendale–Los Angeles Water Reclamation Plant is a tertiary treatment facility that extracts recycled water from wastewater.<sup>13</sup> The remaining sludge from the reclaimed water process is combined with Glendale wastewater in the North Outfall Sewer for treatment at the Hyperion Wastewater Treatment Plant. The City of Glendale owns approximately 29 million gallons per day of the Hyperion system's capacity and currently treats approximately 17 million gallons per day.<sup>14</sup> The proposed ordinance would not be expected to cause an exceedance in the treatment requirements of the Glendale–Los Angeles Water Reclamation Plant or the Hyperion Wastewater Treatment Plant.

The manufacturing processes of plastic carryout bags, paper carryout bags, and reusable bags generate wastewater, but to different extents. Although certain representatives of the plastic bag industry have argued that similar ordinances have the potential to increase the demand for paper carryout bags,<sup>15</sup> the proposed ordinance would include a charge of 10 cents on the issuance of paper carryout bags to encourage the use of reusable bags. Nevertheless, the potential for wastewater generation during the manufacture of paper bags was evaluated consistent with the analysis in the certified EIR.<sup>16</sup>

As analyzed in the certified EIR based on the Ecobilan Life Cycle Analysis (LCA), an ordinance with a fee on the issuance of paper carryout bags would be expected to generate approximately 0.21 millions of gallons per day (MGD) of wastewater if all the 88 incorporated cities of the County adopted similar plastic bag ordinances.<sup>17</sup> Since Glendale is one of the 88 incorporated cities in the County, the certified EIR accounts for impacts from wastewater generation associated with the proposed ordinance. When considered separately, the proposed ordinance would generate a negligible amount of wastewater (Appendix A and Table 3.17-1, *Wastewater Generation Due to Plastic and Paper Carryout Bags Based on Ecobilan Data*). The Sanitation Districts of Los Angeles County currently treat approximately 510 MGD.<sup>18</sup> Therefore, an additional 0.21 MGD due to paper carryout bag use throughout the County, including approximately 0.007 MGD in Glendale, or approximately 0.04 percent of the current amount of wastewater treated in the County per day, would not be a significant increase in wastewater and would not necessitate construction of new wastewater treatment facilities or expansion of existing facilities. It is also important to note that there are no known manufacturing facilities for paper carryout bags located within the County (or the City). In the case of *Save the Plastic Bag Coalition v. Manhattan Beach*, the California Supreme

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<sup>12</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>13</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>14</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>15</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>16</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinance to Ban Plastic Carryout Bags in the Los Angeles County Environmental Impact Report*, pp. 3.5-7 to 3.5-11 and 12-60. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>17</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-60. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>18</sup> Sanitation Districts of Los Angeles County. Accessed on: 8 March 2010. "Wastewater Facilities." Available at: [http://www.lacsd.org/contact/facility\\_locations/wastewater\\_facilities.asp](http://www.lacsd.org/contact/facility_locations/wastewater_facilities.asp)

Court stated that “the impacts of this project in areas outside Manhattan Beach itself are both indirect and difficult to predict”; and “the city could hardly be expected to trace the provenance of all paper bags that might be purchased by Manhattan Beach establishments, in order to evaluate the particular impacts resulting from their manufacture.”<sup>19</sup>

Although the manufacture of reusable bags also will also produce wastewater, it is expected that the amount of wastewater generated will be lower than the amount of wastewater generated by the manufacture of plastic carryout bags when considered on a per use basis, due to the fact that reusable bags are designed to be reused multiple times.<sup>20</sup> As banning the issuance of plastic bags is expected to increase the use of reusable bags, the wastewater impacts are anticipated to be reduced. The proposed ordinance requires that reusable bags must be designed for a minimum of 125 uses. Therefore, a conversion from plastic carryout bags to reusable bags would be anticipated to have reduced impacts upon wastewater generation.

Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to utilities and service systems related to exceedance of wastewater treatment requirements.

**TABLE 3.17-1  
WASTEWATER GENERATION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON ECOBILAN DATA**

Wastewater Sources	Wastewater Generation (MGD)	
	Plastic Carryout Bags (Existing Conditions)	50 Percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)
City ordinance—164 stores within Glendale <sup>1</sup>	0.02	+ 0.007
County ordinance—5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	0.69	+ 0.21

**KEY:**

MGD = millions of gallons of water per day

**NOTE:**

<sup>1</sup> The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-60. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>19</sup> *Save the Plastic Bag Coalition v. City of Manhattan Beach*, 52 Cal. 4th 155 (Cal. 2011).

<sup>20</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-10. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

- (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?

As a result of the analysis undertaken in certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>21</sup> The proposed ordinance would be expected to result in a significant reduction in the consumption of plastic carryout bags and an increase the use of reusable bags within the City. Although certain representatives of the plastic bag industry have stated that similar ordinances have the potential to increase the demand for paper carryout bags,<sup>22</sup> the proposed ordinance would include a charge of 10 cents on the issuance of paper carryout bags to encourage the use of reusable bags. A potential increase in the production of paper bags and reusable bags would not be expected to increase the requirement for water or wastewater treatment facilities and would not affect the Glendale–Los Angeles Water Reclamation Plant or the Hyperion Wastewater Treatment Plant. As described in the response to (a), above, a 50 percent conversion from the use of plastic carryout bags to the use paper carryout bags in the City would be expected to cause a negligible increase in wastewater generated by paper bag manufacturing facilities. Due to the fact that manufacturing facilities for paper carryout bags are not known to be located within the County (or the City), any increase in wastewater generation due to paper carryout bag manufacturing would not impact wastewater treatment facilities in the County (or the City). Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to utilities and service systems related to expansion or construction of new water or wastewater treatment facilities.

- (c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>23</sup> The City's flood control channels were constructed during the 1930s and can adequately handle most rainstorms. In general, the developed portions of the City are not significantly threatened by widespread hazards resulting from flash floods. The Los Angeles County Flood Control District maintains several channels, numerous debris basins, and dams within the City.<sup>24</sup> Approximately 379.9 acres of flood control channels are located within the City.<sup>25</sup> These flood control channels direct runoff from the San Gabriel Mountains, Verdugo Mountains, San Rafael

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<sup>21</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>22</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>23</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>24</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>25</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

Hills; across the flatter areas of Glendale to the Los Angeles River; and eventually to the Pacific Ocean.<sup>26</sup>

The proposed ordinance would ban the issuance of plastic carryout bags by certain stores within the City, which would not be expected to result in an increase in storm water runoff in the City. The anticipated reduction in plastic carryout bag use that would result from implementation of the proposed ordinance would reduce the amount of disposal and potential littering of plastic carryout bags, which would in turn reduce the contribution of plastic carryout bags to runoff and accumulation in storm drains. As such, the proposed ordinance would be expected to indirectly reduce operational impacts associated with maintenance of the storm drain system (e.g., cleaning plastic carryout bag litter out of catch basin racks) and would not increase the potential need for storm drain system improvements.

A study performed for Washington, D.C., showed that plastic bag trash accounted for 45 percent of the amount of trash collected in tributary streams and 20 percent of the amount of trash collected in rivers.<sup>27</sup> However, the same study found that paper products were not found in the streams except in localized areas and were not present downstream.<sup>28</sup> Paper carryout bags degrade when in contact with water and are less likely to accumulate in the storm drain system. Similarly, reusable bags pose less of an issue for the storm drain system because they are not disposed of as frequently as plastic carryout bags, since they are designed to be used multiple times and are not littered the way plastic carryout bags are. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to create new or substantially more adverse significant impacts to utilities and service systems related to construction of new storm water drainage facilities or expansion of existing facilities.

(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>29</sup>

The City's main source of water is purchased from the Metropolitan Water District (MWD) supplemented by local groundwater and recycled water. Glendale's water consumption is about 30,000 acre-feet per year.<sup>30</sup> In recent years, the City has undertaken vigorous water conservation efforts to reduce consumption in Glendale. Methods include the pursuit of reclaimed water and enactment of the City of Glendale Water Conservation Municipal Code.<sup>31</sup> The City's Water

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<sup>26</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>27</sup> Anacostia Watershed Society. December 2008. *Anacostia Watershed Trash Reduction Plan*. Prepared for: District of Columbia Department of the Environment. Bladensburg, MD.

<sup>28</sup> Anacostia Watershed Society. December 2008. *Anacostia Watershed Trash Reduction Plan*. Prepared for: District of Columbia Department of the Environment. Bladensburg, MD.

<sup>29</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>30</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>31</sup> City of Glendale, Community Development Department. N.d. City of Glendale Municipal Code, Water Conservation, Chapter 13.36. Glendale, CA. Available at: <http://www.ci.glendale.ca.us/gmc/13.36.asp>

Conservation Municipal Code sets standards to conserve water by eliminating wasteful consumption and restrictions to uses such as hose washing, runoffs, overspray, and irrigation.<sup>32</sup>

The manufacturing processes of plastic carryout bags, paper carryout bags, and reusable bags consume water, but to different extents. Although certain representatives of the plastic bag industry have argued that similar ordinances have the potential to increase the demand for paper carryout bags,<sup>33</sup> the proposed ordinance would include a charge of 10 cents on the issuance of paper carryout bags to encourage the use of reusable bags. Nevertheless, the potential for water consumption during the manufacture of paper bags was evaluated consistent with the analysis in the certified EIR.<sup>34</sup>

As analyzed in the certified EIR using the Ecobilan LCA, a plastic carryout bag ordinance with a fee on the issuance of paper carryout bags would be expected to require approximately 0.47 MGD of water if all the 88 incorporated cities of the County adopted similar ordinances.<sup>35</sup> Since Glendale is one of the 88 incorporated cities in the County, the certified EIR accounts for water consumption associated with the City's proposed ordinance. When considered separately, the City's proposed ordinance would cause approximately 0.02 MGD to be consumed by paper manufacturing facilities, which is negligible compared with the water consumption for the County (Appendix A and Table 3.17-2, *Water Consumption Due to Plastic and Paper Carryout Bags Based on Ecobilan Data*). Using the Boustead LCA, the certified EIR determined that a plastic carryout bag ordinance with a fee on the issuance of paper carryout bags would be expected to require approximately 10.21 MGD of water if all the 88 incorporated cities of the County adopted similar ordinances.<sup>36</sup> Out of that number, the proposed ordinance would result in the consumption of 0.34 MGD of water (Appendix A and Table 3.17-3, *Water Consumption Due to Plastic and Paper Carryout Bags Based on Boustead Data*). The water districts within the County supplied approximately 1,563 MGD of water in fiscal year 2007–2008.<sup>37</sup> The daily increase of water use throughout the County based on the Ecobilan data would represent approximately 0.03 percent of the total water supplied by water districts in the County. Within Glendale, the daily increase of water consumption based on the Ecobilan data would represent less than 0.0013 percent of the total water supplied by the water districts. The increase of water consumption countywide based on the Boustead data would represent 0.65 percent of the total water supplied, and the City's increase of water as a result of the proposed ordinance would only represent 0.02 percent of the total water supplied by the water districts. These increases in water consumption would not be considered significant. In addition, it is important to note that manufacturing facilities for paper carryout bags are not to be located

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<sup>32</sup> City of Glendale, Community Development Department. N.d. City of Glendale Municipal Code, Water Conservation, Chapter 13.36.

<sup>33</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>34</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 3.5-12 to 3.5-16 and 12.61 to 12.63. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>35</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-61. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>36</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-62. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>37</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

within the County (or the City). Therefore, any increase in water consumption due to paper carryout bag manufacturing would not impact wastewater treatment providers in the County or the City.

**TABLE 3.17-2  
WATER CONSUMPTION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON ECOBILAN DATA**

Water Consumption Sources	Water Consumption (MGD)	
	Plastic Carryout Bags (Existing Conditions)	50 Percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)
City—164 stores within Glendale <sup>1</sup>	0.02	+ 0.02
County ordinance—5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	0.72	+ 0.47

**KEY:**

MGD = millions of gallons of water per day

**NOTE:**

<sup>1</sup> The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on: 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-61. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

As discussed in the certified EIR, the proposed ordinance would be expected to significantly increase consumers' use of reusable bags, the production of which would consume less water than the production of both paper carryout bags and plastic carryout bags when considered on a per use basis, because reusable bags are designed to be used multiple times.<sup>38</sup> Therefore, the additional water supply that may be required by reusable bag manufacturing facilities as an indirect result of the proposed ordinance would not necessitate new or expanded entitlements for water and would not constitute a significant impact under CEQA. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to sufficient water supplies.

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<sup>38</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 12-62 to 12-63. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

**TABLE 3.17-3  
WATER CONSUMPTION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON BOUSTEAD DATA**

Water Consumption Sources	Water Consumption (MGD)	
	Plastic Carryout Bags (Existing Conditions)	50 Percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)
City ordinance—164 stores within Glendale <sup>1</sup>	0.04	+ 0.34
County ordinance—5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	1.30	+ 10.21

**KEY:**

MGD = millions of gallons of water per day

**NOTE:**

<sup>1</sup> The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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. Ardmore, PA.

2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-62. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

- (e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>39</sup> As previously mentioned, the City has a system of sanitary sewers. Part of the wastewater generated in the City is treated at the Glendale–Los Angeles Water Reclamation Plant. The remaining sludge from the reclaimed water process is combined with Glendale wastewater in the North Outfall Sewer for treatment at the Hyperion Wastewater Treatment Plant. The existing sewer system capacity is adequate to handle current and future sewage quantities.<sup>40</sup> As described in the response to (a), above, the proposed ordinance would be expected to cause a negligible increase in wastewater generated by paper bag manufacturing facilities. Due to the fact that there are no known manufacturing facilities for paper carryout bags within the County (or the City), any increase in wastewater generation due to paper carryout bag manufacturing would not impact wastewater treatment providers. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts related to the wastewater treatment provider’s capacity to serve the project within existing commitments.

<sup>39</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>40</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

- (f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>41</sup>

The City operates the inactive part of the Scholl Canyon Landfill. The active portion is operated by the Los Angeles County Sanitation Districts. The Scholl Canyon Landfill is located within the City, north of the 134 freeway.<sup>42</sup> Chapter 8.56 of the Glendale Municipal Code limits disposal at the landfill to solid wastes generated within the City and neighboring incorporated and unincorporated cities.<sup>43</sup> Currently, the Scholl Canyon facility experiences an annual disposal rate of 213,000 tons per year. In addition, the City operates three other waste facilities: the Integrated Waste Management Facility (IWM), Glendale Recycling Center (GRC), and a refuse bin enclosure serving a small number of businesses.<sup>44</sup> The IWM and GRC service the population of Glendale as well as residents from other cities.

Several studies have shown that the production, use, and subsequent disposal of paper carryout bags would generate more solid waste than that of plastic carryout bags;<sup>45,46,47</sup> however, the proposed ordinance would include a charge of 10 cents on the issuance of paper carryout bags to encourage the use of reusable bags.

As noted in the certified EIR, based on Ecobilan data, it was concluded that an ordinance with a fee on the issuance of paper carryout bags would result in a reduction in the amount of solid waste sent to landfills.<sup>48</sup> However, using the Boustead data, the certified EIR determined that the approved ordinances would result in an increase of approximately 255 tons of solid waste per day.<sup>49</sup> As stated in the certified EIR, the permitted daily maximum capacity of all the County landfills is approximately 43,749 tons per day, and currently the landfills combined accept an

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<sup>41</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>42</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>43</sup> City of Glendale, Community Development Department. N.d. City of Glendale Municipal Code, Water Conservation, Chapter 13.36. Available at: <http://www.ci.glendale.ca.us/gmc/8.56.asp>

<sup>44</sup> City of Glendale, Community Development Department. August 1998. *City of Glendale General Plan: Circulation Element*. Glendale, CA.

<sup>45</sup> 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.

<sup>46</sup> Boustead Consulting and Associates Ltd. 2007. *Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper*. Prepared for the Progressive Bag Affiliates. Ardmore, PA.

<sup>47</sup> The ULS Report. 1 June 2007. *Review of Life Cycle Data Relating to Disposable Compostable Biodegradable, and Reusable Grocery Bags*. Rochester, MI.

<sup>48</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, pp. 12-63 to 12-64. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

<sup>49</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-65. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

average of 21,051 tons per day.<sup>50</sup> Thus, the potential increase of 255 tons of solid waste per day would represent approximately 1.1 percent of the remaining total daily maximum capacity of 22,698 tons per day. Since Glendale is one of the 88 incorporated cities in the County, the certified EIR accounts for solid waste generation associated with the City’s proposed ordinance. Considered separately using the Ecobilan data, the proposed ordinance would result in a reduction in the amount of solid waste sent to landfill (Appendix A and Table 3.17-4, *Solid Waste Generation Due to Plastic and Paper Carryout Bags Based on Ecobilan Data*). Based on Boustead data, the proposed ordinance would generate up 8.44 tons of solid waste per day (Appendix A and Table 3.17-5, *Solid Waste Generation Due to Plastic and Paper Carryout Bags Based on Boustead Data*). This potential increase in solid waste would not significantly add on to the annual disposal rate of 213,000 tons per year at the Scholl Canyon Landfill.

**TABLE 3.17-4  
SOLID WASTE GENERATION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON ECOBILAN DATA**

Solid Waste Sources	Solid Waste Generation (tons)	
	Plastic Carryout Bags (Existing Conditions) <sup>2</sup>	50 Percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance) <sup>1,2</sup>
City ordinance—164 stores within Glendale <sup>3</sup>	7.98	-0.68
County ordinance—5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	241.03	-20.54

**NOTES:**

<sup>1</sup> Positive numbers indicate increase and negative numbers indicate the extent of the decrease in solid waste generation that would be expected from a conversion from the current use of plastic carryout bags, to a 50 percent use of paper carryout bags.

<sup>2</sup> Assuming 36.8 percent of paper carryout bags are diverted from landfills and 11.9 percent of plastic carryout bags are diverted from landfills, based on the 2007 U.S. EPA recycling rates.

<sup>3</sup> The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p.-64. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.
3. www.infousa.com (see Appendix A).

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<sup>50</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 12-65. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

**TABLE 3.17-5  
SOLID WASTE GENERATION DUE TO PLASTIC AND PAPER CARRYOUT BAGS  
BASED ON BOUSTEAD DATA**

Solid Waste Sources	Solid Waste Generation (tons)	
	Plastic Carryout Bags (Existing Conditions)	50 Percent Conversion from Plastic to Paper Carryout Bag Use (with Implementation of Ordinance)
City ordinance—164 stores within Glendale <sup>1</sup>	5.74	+ 8.44
County ordinance—5,084 stores in incorporated areas plus 1,091 stores in unincorporated areas	173.29	+ 254.84

**NOTE:**

1. The total number of stores in Glendale was determined from the infoUSA database for businesses with North American Industry Classification System codes 445110, 445120, and 446110. Database accessed on 31 January 2012 (see Appendix A).

**SOURCES:**

1. 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. Ardmore, PA.
2. County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p.12-65. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

The proposed ordinance would also be expected to increase the use and eventual disposal of reusable bags, which, by the definition established by the proposed ordinance, must be designed to have a minimum lifespan of 125 uses. The Hyder Study analyzed life cycle impacts of several different types of bags and concluded that a polypropylene reusable bag that is used 104 times results in environmental impacts that are significantly less than the impacts resulting from paper and plastic carryout bags.<sup>51</sup> Therefore, environmental impacts due to the life cycle of a reusable bag would be expected to be significantly less than the environmental impacts of a plastic or paper carryout bag when considered on a per use basis, and any conversion from the use of plastic carryout bags to reusable bags would be reasonably expected to result in an environmental benefit.

Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to utilities and service systems related to a landfill with sufficient space to accommodate the refined project's waste disposal needs.

- (g) Comply with federal, state, and local statutes and regulations related to solid waste?

As a result of the analysis undertaken in the certified EIR, it was determined that the approved ordinances would be expected to result in less than significant impacts to utilities and services systems.<sup>52</sup> The California Integrated Waste Management Act of 1989 (AB 939) requires the County to attain specific waste diversion goals. These goals can be met through the implementation of waste reduction policies, which could include the proposed ordinance once adopted. Although

<sup>51</sup> Hyder Consulting. 18 April 2007. *Comparison of Existing Life Cycle Analyses of Plastic Bag Alternatives*. Prepared for: Sustainability Victoria, Victoria, Australia.

<sup>52</sup> County of Los Angeles Department of Public Works. November 2010. *Ordinances to Ban Plastic Carryout Bags in Los Angeles County Environmental Impact Report*, p. 3.5-25. SCH No. 2009111104. Contact: Sapphos Environmental, Inc., Pasadena, CA.

certain representatives of the plastic bag industry have argued that similar ordinances have the potential to result in an increase in the number of paper carryout bags that are disposed of in landfills,<sup>53</sup> it is anticipated that the proposed ordinance would also promote an increase in the use of reusable bags, thereby resulting in a reduction in the total number of carryout bags disposed of in the City compared to existing conditions. In addition, paper bags are more likely to be recycled than plastic bags, as supported by the higher recycling rate of paper as compared to that of plastic.<sup>54</sup> Therefore, the proposed ordinance would not conflict with the California Integrated Waste Management Act of 1989.

Objective WS1 of the Greener Glendale Plan sets the goal of achieving a Zero Waste Plan to work towards achieving a 90 percent landfill diversion rate by 2030.<sup>55</sup> Objective WS2 sets a goal to continue efforts to reduce waste and use of energy-intensive products. The Greener Glendale Plan explores strategies such as Mandatory Commercial Recycling, Recovering Energy and Compost from Organic Discards, an Extended Producer Responsibility Resolution and assistance to businesses, a Commercial Waste Reduction Initiative, and a citywide ban on stores distributing free single-use plastic shopping bags.<sup>56</sup> Thus, the proposed ordinance would directly comply with Objectives WS1 and WS2 in the Greener Glendale Plan.

The Los Angeles RWQCB adopted a Basin Plan Amendment on March 4, 2004, requiring the total maximum daily load (TMDL) of trash in the Ballona Watershed to be incrementally reduced to zero within 10 years.<sup>57</sup> In addition, the Los Angeles RWQCB adopted a Basin Plan Amendment on August 9, 2007, requiring the TMDL of trash in the Los Angeles River Watershed to be incrementally reduced to zero within 9 years.<sup>58</sup> The Los Angeles RWQCB acknowledges that the majority of the trash in these watersheds comes primarily from trash in storm water runoff, and it has been documented that a significant percentage of trash in storm water runoff in the County is composed of plastic film, such as plastic carryout bags.<sup>59</sup> The proposed ordinance, which would aim to significantly reduce the amount of litter attributable to plastic carryout bags, would comply with the TMDL requirements of the Los Angeles RWQCB. Therefore, compared with the approved ordinances, the proposed ordinance would not be expected to result in new or substantially more adverse significant impacts to utilities and service systems related to compliance with federal, state, and local statutes.

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<sup>53</sup> Save the Plastic Bag. 2008. *The ULS Report: A Qualitative Study of Grocery Bag Use in San Francisco*. Available at: <http://www.savetheplasticbag.com/ReadContent700.aspx> or <http://www.use-less-stuff.com/Field-Report-on-San-Francisco-Plastic-Bag-Ban.pdf>

<sup>54</sup> U.S. Environmental Protection Agency. November 2008. *Municipal Solid Waste in the United States: 2007 Facts and Figures*. Washington, DC. Available at: <http://www.epa.gov/waste/nonhaz/municipal/pubs/msw07-rpt.pdf>

<sup>55</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA

<sup>56</sup> City of Glendale, Community Development Department. November 2011. *Greener Glendale Plan, Municipal Operations*. Glendale, CA.

<sup>57</sup> Los Angeles Regional Water Quality Control Board. 4 March 2004. *Amendments to the Water Quality Control Plan – Los Angeles Region for the Ballona Creek Trash TMDL*. Available at: [http://63.199.216.6/larwqcb\\_new/bpa/docs/2004-023/2004-023\\_RB\\_BPA.pdf](http://63.199.216.6/larwqcb_new/bpa/docs/2004-023/2004-023_RB_BPA.pdf)

<sup>58</sup> Los Angeles Regional Water Quality Control Board. 9 August 2007. *Amendments to the Water Quality Control Plan – Los Angeles Region to Incorporate the TMDL for Trash in the Los Angeles River Watershed*. Available at: [http://63.199.216.6/larwqcb\\_new/bpa/docs/2007-012/2007-012\\_RB\\_BPA.pdf](http://63.199.216.6/larwqcb_new/bpa/docs/2007-012/2007-012_RB_BPA.pdf)

<sup>59</sup> Combs, Suzanne, John Johnston, Gary Lippner, David Marx, and Kimberly Walter. *Results of the Caltrans Litter Management Pilot Study*. Sacramento, CA: California Department of Transportation. Available at: <http://www.owp.csus.edu/research/papers/papers/PP020.pdf>

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**SECTION 5.0**  
**REPORT PREPARATION PERSONNEL**

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***APPENDIX A***  
***AFFECTED STORE DATA AND URBEMIS CALCULATIONS***

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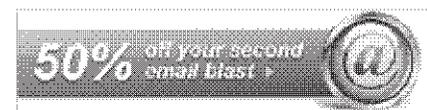
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# URBEMIS MODELING RESULTS FOR UTILITIES / SERVICE SYSTEMS AND HYDROLOGY / WATER QUALITY

Stores in city > 10,000 sq ft	58		
Stores in whole county > 10,000 sq ft	529	Reusable Bag Size (liters)	37
Stores in city < 10,000 sq ft	106	Ratio of Reusable to Plastic Bags	2.6
Stores in whole county < 10,000 sq ft	5646		
Plastic bag size (liters)	14		
Paper bag size (liters)	20.48		
Plastic bags / day / store > 10,000 sq ft	10000		
Paper bags / day / store > 10,000 sq ft *	3418	*based on 50% conversion from plastic to paper	
Plastic bags / day / store < 10,000 sq ft	5000		
Paper bags / day / store < 10,000 sq ft *	1709	*based on 50% conversion from plastic to paper	

Eutrophication - Ecobilan Data			
	Plastic LCA	Paper LCA*	Difference*
grams phosphate per 9000 liters groceries	0.20	2.35	2.15
grams phosphate per 1 liter groceries	0.00002	0.00026	0.00024
grams phosphate per bag	0.00031	0.00535	0.00504
kg phosphate per day in city	0.34	2.03	1.68
kg phosphate per day in whole county	10.39	61.25	50.87

\*based on 50% conversion from plastic to paper

Eutrophication - Ecobilan Data					
	Plastic LCA	Reusable LCA*	Difference*	Reusable LCA**	Difference**
grams phosphate per 9000 liters groceries	0.20	0.18	-0.02	0.03	-0.17
grams phosphate per 1 liter groceries	0.00002	0.00002	0.00000	0.00000	-0.00002
grams phosphate per bag	0.00031	0.00075	0.00044	0.00011	-0.00020
kg phosphate per day in city	0.34	0.32	-0.03	0.05	-0.30
kg phosphate per day in whole county	10.39	9.54	-0.85	1.43	-8.96

\*based on 3 uses  
\*\*based on 20 uses

Ecobilan Data - Utilities	Plastic Bags	Paper Bags	Reusable Bags
Water Used (total) (liters)	52.6	173	137
Water Generated (unspecified) (liters)	4.1	1.3	-0.186
Water Generated (chemically polluted) (liters)	34.3	107	105
Water Generated (thermally polluted) (liters)	11.6	22.4	31.8
Total Wastewater Generated (liters)	50	130.7	136.614
Waste Generated (total) (kg)	2.59	4.73	6.99
Non-renewable energy consumption (MJ)	286	295	805
Total solid waste due to disposal (kg)*	4.76	12.14	13.11

\*Assuming all bags are sent to landfill

Water Consumption - Ecobilan Data			
	Plastic LCA	Paper LCA*	Difference*
Liters H2O per 9000 liters groceries	52.60	173.00	33.90
Liters H2O per 1 liter groceries	0.01	0.02	0.00377
Liters H2O per bag	0.08182	0.39367	0.31185
Gallons H2O per bag	0.02162	0.10400	0.08238
MGD per day in city	0.02	0.04	0.02
MGD per day in whole county	0.72	1.19	0.47

\*based on 50% conversion from plastic to paper

Water Consumption - Ecobilan Data					
	Plastic LCA	Reusable LCA*	Difference*	Reusable LCA**	Difference**
Liters H2O per 9000 liters groceries	52.60	45.67	-6.93	6.85	-45.75
Liters H2O per 1 liter groceries	0.01	0.01	0.00	0.00	-0.01
Liters H2O per bag	0.08182	0.18774	0.10592	0.02816	-0.05366
Gallons H2O per bag	0.02162	0.04960	0.02798	0.00744	-0.01418
MGD per day in city	0.02	0.02	0.00	0.00	-0.02
MGD per day in whole county	0.72	0.63	-0.10	0.09	-0.63

\*based on 3 uses  
\*\*based on 20 uses

# URBEMIS MODELING RESULTS FOR UTILITIES / SERVICE SYSTEMS AND HYDROLOGY / WATER QUALITY

Water Consumption - Boustead Data			
	Plastic LCA	Paper LCA*	Difference*
Gallons H2O 1000 paper bags (1500 plastic)	58.00	1004.00	946.00
Gallons H2O per bag	0.04	1.00	0.97
MGD per day in city	0.04	0.38	0.34
MGD per day in whole county	1.30	11.50	10.21

\*based on 50% conversion from plastic to paper

Wastewater Generation - Ecobilan Data					
	Plastic LCA	Reusable LCA*	Difference*	Reusable LCA**	Difference**
Liters H2O per 9000 liters groceries	50.00	45.54	-4.46	6.83	-43.17
Liters H2O per 1 liter groceries	0.01	0.01	0.00	0.00	0.00
Liters H2O per bag	0.07778	0.18721	0.10943	0.02808	-0.04970
Gallons H2O per bag	0.02055	0.04946	0.02891	0.00742	-0.01313
MGD per day in city	0.02	0.02	0.00	0.00	-0.02
MGD per day in whole county	0.69	0.63	-0.06	0.09	-0.59

\*based on 3 uses  
\*\*based on 20 uses

Wastewater Generation - Ecobilan Data			
	Plastic LCA	Paper LCA*	Difference*
Liters H2O per 9000 liters groceries	50.00	130.70	80.70
Liters H2O per 1 liter groceries	0.01	0.01	0.01
Liters H2O per bag	0.07778	0.30	0.22
Gallons H2O per bag	0.02055	0.07857	0.05802
MGD per day in city	0.02	0.03	0.007
MGD per day in whole county	0.69	0.90	0.21

\*based on 50% conversion from plastic to paper

Solid Waste - Boustead Data			
	Plastic LCA	Paper LCA*	Difference*
kg waste per 1000 paper bags (1500 plastic)	7.04	33.90	26.87
kg waste per bag	0.00469	0.03390	0.02921
tons waste per bag	0.00001	0.00004	0.00003
tons waste per day in city	5.74	14.18	8.44
tons waste per day in whole county	173.29	428.13	254.84

\*based on 50% conversion from plastic to paper

Solid Waste - Ecobilan Data					
	Plastic LCA	Reusable LCA*	Difference*	Reusable LCA**	Difference**
kg waste per 9000 liters groceries	4.76	4.37	-0.39	0.66	-4.10
kg waste per 1 liter groceries	0.00	0.00	0.00	0.00	0.00
kg waste per bag	0.00740	0.01797	0.01056	0.00269	-0.00471
tons waste per bag	0.00	0.00	0.00001	0.00	-0.00001
tons waste per day in city	9.06	8.32	-0.74	1.25	-7.81
tons waste per day in whole county	273.59	251.17	-22.42	37.68	-235.91

\*based on 3 uses  
\*\*based on 20 uses

Solid Waste - Ecobilan Data			
	Plastic LCA	Paper LCA*	Difference*
kg waste per 9000 liters groceries	4.76	12.14	7.38
kg waste per 1 liter groceries	0.00	0.00	0.00
kg waste per bag	0.00740	0.02763	0.02022
tons waste per bag	0.00001	0.00003	0.00002
tons waste per day in city	9.06	11.55	2.49
tons waste per day in whole county	273.59	348.89	75.29

\*based on 50% conversion from plastic to paper

2007 recycle rate - plastic bags and sacks	11.9%
2007 recycle rate - paper bags and sacks	36.8%

Solid Waste - Ecobilan Data			
Adjusted for 2007 EPA Recycle Rates			
	Plastic LCA	Paper LCA*	Difference*
kg waste per 9000 liters groceries	4.19	7.67	3.48
kg waste per 1 liter groceries	0.00	0.00	0.00
kg waste per bag	0.00652	0.01746	0.01
tons waste per bag	0.00001	0.00002	0.00
tons waste per day in city	7.98	7.30	-0.68
tons waste per day in whole county	241.03	220.50	-20.54

\*based on 50% conversion from plastic to paper

URBEMIS MODELING RESULTS  
FOR UTILITIES / SERVICE SYSTEMS AND HYDROLOGY / WATER QUALITY

Energy Consumption - Ecobilan Data			
	Plastic LCA	Paper LCA*	Difference*
MJ per 9000 liters groceries	286.00	295.00	9.00
MJ per 1 liter groceries	0.03	0.03	0.00
MJ per bag	0.44489	0.67129	0.23
kWh per bag	0.12358	0.18647	0.06
Million kWh per day in city	0.14	0.07	-0.07
Million kWh per day in whole county	4.14	2.14	-2.01

\*based on 50% conversion from plastic to paper

Energy Consumption - Ecobilan Data					
	Plastic LCA	Reusable LCA*	Difference*	Reusable LCA**	Difference**
MJ per 9000 liters groceries	286.00	268.33	-17.67	40.25	-245.75
MJ per 1 liter groceries	0.03	0.03	0.00	0.00	-0.03
MJ per bag	0.44489	1.10315	0.66	0.16547	-0.28
kWh per bag	0.12358	0.30643	0.18	0.04596	-0.08
Million kWh per day in city	0.14	0.13	-0.01	0.02	-0.12
Million kWh per day in whole county	4.14	3.89	-0.26	0.58	-3.56

\*based on 3 uses  
\*\*based on 20 uses

Energy Consumption - Boustead Data			
	Plastic LCA	Paper LCA*	Difference*
MJ per 1000 bags	763.00	2622.00	1859.00
MJ per bag	0.51	2.62	2.11
kWh per bag	0.14130	0.72833	0.59
Million kWh per day in city	0.16	0.28	0.12
Million kWh per day in whole county	4.74	8.34	3.61

\*based on 50% conversion from plastic to paper

Conversion Factors	
liters to gallons	0.26417205
kg to short tons	0.00110231
MJ to kWh	0.27777778

# URBEMIS MODELING RESULTS FOR AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Stores in city > 10,000 sq ft	58	
Stores in whole county > 10,000 sq ft	529	
Stores in city < 10,000 sq ft	106	
Stores in whole county < 10,000 sq ft	5646	
Plastic bag size (liters)	14	Reusable Bag
Paper bag size (liters)	20.48	Size (liters)
Plastic bags / day / store > 10,000 sq ft	10000	
Plastic bags / day / store < 10,000 sq ft	5000	Ratio of Reusable
Ratio of Paper Bags to Plastic Bags	1.5	to Plastic Bags
Population in the City	283,855	
Population in the County	10,615,700	

Ecobilan Data - VOCs	Plastic Bags	Paper Bags	Reusable Bag (1 Use)
	g output	g output	g output
(a) Hydrocarbons (unspecified)	4.01E-01	6.16E+00	1.40E+00
(a) VOC (Volatil Organic Compounds)	5.38E-01	0.00E+00	0.00E+00
(a) VOC (Volatile Organic Compounds)	2.25E+01	2.65E-01	1.58E+01
(a) Acetaldehyde	-2.80E-04	1.08E-01	-1.61E-03
(a) Acetylene	2.30E-03	-1.15E-02	-2.26E-03
(a) Alcohol	7.02E-02	7.21E-01	0.00E+00
(a) Aldehyde	2.06E-03	4.61E-04	5.96E-03
(a) Alkane	1.35E-02	1.19E+00	-3.39E-02
(a) Aromatic Hydrocarbons	3.04E-01	7.55E-01	3.47E-01
(a) Benzaldehyde	5.65E-11	2.51E-09	-6.48E-11
(a) Benzene	5.06E-03	1.50E-02	-4.65E-03
(a) Butane	4.23E-03	2.03E-01	-2.13E-02
(a) Butene	4.23E-03	2.23E-03	1.72E-04
(a) Ethanol	-5.69E-04	3.11E-03	-3.21E-03
(a) Ethyl Benzene	1.70E-04	1.16E-02	1.96E-04
(a) Ethylene	7.89E-02	2.75E+00	-8.47E-02
(a) Formaldehyde	-2.63E-04	7.39E-03	-5.72E-03
(a) Heptane	1.59E-03	2.20E-02	1.72E-03
(a) Hexane	3.17E-03	4.32E-02	3.42E-03
(a) Hydrocarbons (except methane)	1.40E+01	1.58E+01	3.03E+01
(a) Methanol	-9.67E-04	5.28E-03	-5.45E-03
(a) Propane	-1.97E-03	2.29E-01	-7.41E-02
(a) Propionaldehyde	1.55E-10	6.92E-09	-1.78E-10
(a) Propylene	2.69E-03	-6.70E-03	-2.14E-03
(a) Tetrachloroethylene	2.40E-06	1.18E-02	6.61E-06
(a) Toluene	2.42E-03	9.00E-02	-7.63E-04
<b>Total VOCs</b>	<b>37.9294734</b>	<b>28.37487101</b>	<b>47.61867161</b>

Ecobilan Plastic Bag LCA					
Emissions Sources	VOCs	NOx	CO	SOx	Particulates
Emissions (grams) per 9,000 liters groceries	37.9294734	27.1	48.2	23.4	19.2
Emissions (grams) per 1 liter groceries	0.004214386	0.003011111	0.005355556	0.0026	0.002133333
Emissions per bag (grams)	0.06	0.04	0.07	0.04	0.03
Emissions per bag (pounds)	0.00	0.00	0.00	0.00	0.00
Emissions in the city (pounds)	144	103	183	89	73
Emissions in the whole county (pounds)	4,360	3,115	5,541	2,690	2,207

Ecobilan Paper Bag LCA					
Emissions Sources	VOCs	NOx	CO	SOx	Particulates
Emissions per 9,000 liters of groceries (in grams)	28.37487101	72.6	9.34	26.1	4.72
Emissions (grams) per 1 liter groceries	0.003152763	0.008066667	0.001037778	0.0029	0.000524444
Emissions per bag (grams)	0.06	0.17	0.02	0.06	0.01
Emissions per bag (pounds)	0.00	0.00	0.00	0.00	0.00
Emissions in the city (pounds)	108	276	36	99	18
Emissions in the whole county (pounds)	3,262	8,346	1,074	3,000	543

Ecobilan Emission differences caused by a 50% conversion from plastic to paper					
Emissions Sources	VOCs	NOx	CO	SOx	Particulates
Emissions in the city (pounds)	-90	35	-166	-39	-64
Emissions in the whole county (pounds)	-2,729	1,058	-5,004	-1,190	-1,936

**URBEMIS MODELING RESULTS  
FOR AIR QUALITY AND GREENHOUSE GAS EMISSIONS**

<b>Ecobilan Plastic Bag LCA End-of-life - All bags disposed</b>		<b>Adjusted for 2007 Recycle Rates</b>
<b>Emissions Sources</b>	<b>NOx</b>	<b>NOx</b>
Emissions (grams) per 9,000 liters groceries	<b>0.97</b>	
Emissions (grams) per 1 liter groceries	0.000107778	
Emissions per bag (grams)	0.00	
Emissions per bag (pounds)	0.00	
Emissions in the city (pounds)	<b>4</b>	<b>3</b>
Emissions in the whole county (pounds)	<b>112</b>	<b>98</b>

<b>Ecobilan Paper Bag LCA End-of-life - All bags disposed</b>		<b>Adjusted for 2007 Recycle Rates</b>
<b>Emissions Sources</b>	<b>NOx</b>	<b>NOx</b>
Emissions per 9,000 liters of groceries (in grams)	<b>5.74</b>	
Emissions (grams) per 1 liter groceries	0.000637778	
Emissions per bag (grams)	0.01	
Emissions per bag (pounds)	0.00	
Emissions in the city (pounds)	<b>22</b>	<b>14</b>
Emissions in the whole county (pounds)	<b>660</b>	<b>417</b>

<b>Ecobilan NOx Emissions End of Life</b>	<b>50% conversion from plastic to paper</b>	<b>Adjusted for 2007 Recycle Rates</b>
Emissions in the city (pounds)	<b>7</b>	<b>4</b>
Emissions in the whole county (pounds)	<b>218</b>	<b>110</b>

<b>Ecobilan Reusable Bag LCA -- 4 Uses</b>					
<b>Emissions Sources</b>	<b>VOCs</b>	<b>NOx</b>	<b>CO</b>	<b>SOx</b>	<b>Particulates</b>
Emissions per 9,000 liters of groceries (in grams)	<b>11.9046679</b>	<b>19.125</b>	<b>7</b>	<b>17.475</b>	<b>13.35</b>
Emissions (grams) per 1 liter groceries	0.001322741	0.002125	0.000777778	0.001941667	0.001483333
Emissions per bag (grams)	0.05	0.08	0.03	0.07	0.05
Emissions per bag (pounds)	0.00	0.00	0.00	0.00	0.00
Emissions in the city (pounds)	<b>45</b>	<b>73</b>	<b>27</b>	<b>67</b>	<b>51</b>
Emissions in the whole county (pounds)	<b>1,368</b>	<b>2,198</b>	<b>805</b>	<b>2,009</b>	<b>1,535</b>

<b>Boustead Plastic Bag LCA</b>					
<b>Emissions Sources</b>	<b>VOCs</b>	<b>NOx</b>	<b>CO</b>	<b>SOx</b>	<b>Particulates</b>
Emissions (miligrams) per 1,000 bags	<b>994</b>	<b>45,400</b>	<b>67,400</b>	<b>50,500</b>	<b>14,300</b>
Emissions (grams) per 1,000 bags	0.994	45.4	67.4	50.5	14.3
Emissions per bag (grams)	0.00	0.05	0.07	0.05	0.01
Emissions per bag (pounds)	0.00	0.00	0.00	0.00	0.00
Emissions in the city (pounds)	<b>2</b>	<b>111</b>	<b>165</b>	<b>124</b>	<b>35</b>
Emissions in the whole county (pounds)	<b>73</b>	<b>3,355</b>	<b>4,981</b>	<b>3,732</b>	<b>1,057</b>

<b>Boustead Paper Bag LCA</b>					
<b>Emissions Sources</b>	<b>VOCs</b>	<b>NOx</b>	<b>CO</b>	<b>SOx</b>	<b>Particulates</b>
Emissions per 9,000 liters of groceries (in grams)	<b>2</b>	<b>264,000</b>	<b>121,000</b>	<b>579,000</b>	<b>128,000</b>
Emissions (grams) per 1,000 bags	0.002	264	121	579	128
Emissions per bag (grams)	0.00	0.26	0.12	0.58	0.13
Emissions per bag (pounds)	0.00	0.00	0.00	0.00	0.00
Emissions in the city (pounds)	<b>0</b>	<b>442</b>	<b>202</b>	<b>969</b>	<b>214</b>
Emissions in the whole county (pounds)	<b>0</b>	<b>13,336</b>	<b>6,113</b>	<b>29,249</b>	<b>6,466</b>

<b>Boustead Emission differences caused by a 50% conversion from plastic to paper</b>					
<b>Emissions Sources</b>	<b>VOCs</b>	<b>NOx</b>	<b>CO</b>	<b>SOx</b>	<b>Particulates</b>
Emissions in the city (pounds)	<b>-2</b>	<b>110</b>	<b>-64</b>	<b>361</b>	<b>72</b>
Emissions in the whole county (pounds)	<b>-73</b>	<b>3,313</b>	<b>-1,925</b>	<b>10,893</b>	<b>2,176</b>

<b>Ecobilan Data - Greenhouse Gas Emissions</b>	<b>Reusable Bag (1 Use)</b>	
	<b>GWP (IPCC)</b>	<b>g output g CO2e</b>
(a) Carbon Dioxide (CO2, fossil)	1	2.65E+04
(a) Methane	23	8.76E+01
(a) Nitrous Oxide	296	7.10E-02
(a) Carbon Tetrafluoride	5700	-5.21E-08
(a) Halon 1301	6900	1.95E-05
<b>Total</b>		<b>2.85E+04</b>

\* GWP = Global Warming Potential

# URBEMIS MODELING RESULTS FOR AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Ecobilan Data - Greenhouse Gas Emissions	Plastic Bags		Paper Bags		
	GWP (IPCC)	g output	g CO2e	g output	g CO2e
(a) Carbon Dioxide (CO2, fossil)	1	1.01E+04	1.01E+04	1.67E+04	1.67E+04
(a) Methane	23	3.37E+01	7.75E+02	1.58E+02	3.63E+03
(a) Nitrous Oxide	296	6.63E-02	1.96E+01	6.46E-01	1.91E+02
(a) Carbon Tetrafluoride	5700	4.54E-08	2.59E-04	2.02E-06	1.15E-02
(a) Halon 1301	6900	1.83E-05	1.26E-01	2.71E-04	1.87E+00
<b>Total</b>			<b>1.09E+04</b>		<b>2.05E+04</b>

\* GWP = Global Warming Potential

Ecobilan GHG emissions	CO <sub>2e</sub> Emissions from Plastic Bags	CO <sub>2e</sub> Emissions from Paper Bags	CO <sub>2e</sub> Emission Increase Caused by 50 Percent Conversion from Plastic to Paper	per year	per year per capita
Emissions (grams) per 9,000 liters groceries	10894.8513	20527.0974	9632.2461	3515769.820	0.331
Emissions (metric tons) per 9,000 liter groceries	0.0109	0.0205	0.0096	3.516	0.000
Emissions (metric tons) per 1 liter groceries	0.0000	0.0000	0.0000	0.000	0.000
Emissions (metric tons) per bag	0.0000	0.0000	0.0000	0.011	0.000
Emissions in the city (metric tons)	18.81	17.72	-1.09	-398	-0.001
Emissions in the whole county (metric tons)	568.08	535.16	-32.92	-12,015	-0.001

Ecobilan GHG emissions	CO <sub>2e</sub> Emissions from Plastic Bags	CO <sub>2e</sub> Emissions from Reusable Bags Used Three Times	CO <sub>2e</sub> Emission Increase From 100 % Conversion from Plastic to Reusable	per year	per year per capita
Emissions (grams) per 9,000 liters groceries	10894.8513	9511.9834	-1382.8679	-504746.788	-0.048
Emissions (metric tons) per 9,000 liter groceries	0.0109	0.0095	-0.0014	-0.505	0.000
Emissions (metric tons) per 1 liter groceries	0.0000	0.0000	0.0000	0.000	0.000
Emissions (metric tons) per bag	0.0000	0.0000	0.0000	0.008	0.000
Emissions in the city (metric tons)	18.81	16.42	-2.39	-872	-0.003
Emissions in the whole county (metric tons)	568.08	495.98	-72.11	-26,319	-0.002

Boustead GHG emissions	CO <sub>2e</sub> Emissions from Plastic Bags	CO <sub>2e</sub> Emissions from Paper Bags	CO <sub>2e</sub> Emission Increase with 50 Percent Conversion from Plastic to Paper	per year	per year per capita
metric tons for 1,000 paper or 1,500 plastic bags	0.0400	0.0800	0.04	14.600	0.000
Emissions (metric tons) per bag	0.0000	0.0001	0.00	0.019	0.000
Emissions in the city (metric tons)	29.60	30.35	0.75	274	0.001
Emissions in the whole county (metric tons)	893.87	916.56	22.70	8,284	0.001

ExcelPlas GHG emissions	CO <sub>2e</sub> Emissions from Plastic Bags	CO <sub>2e</sub> Emissions from Paper Bags	CO <sub>2e</sub> Emission Increase with 50 Percent Conversion from Plastic to Paper	per year	per year per capita
kilograms for 520 bags	6.0800	30.5000	24.42	8913.300	0.001
Emissions (metric tons) per bag	0.0000	0.0001	0.0000	0.017	0.000
Emissions in the city (metric tons)	12.98	32.55	19.57	7,145	0.025
Emissions in the whole county (metric tons)	391.93	983.04	591.11	215,756	0.020

Greenhouse Gas Emissions due to Mobile Sources			
	CO <sub>2</sub> Emissions (Pounds/Day)*	CO <sub>2</sub> Emissions (Metric Tons/Year)	CO <sub>2</sub> Emissions per Capita (metric)
4 Delivery Truck Trips in the City of Glendale	65.52	10.85	0.00004
96 Delivery Truck Trips in the whole county of Los Angeles	1,572.35	260.32	0.00002

# URBEMIS MODELING RESULTS FOR AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Conversion Factors	
grams to pounds	0.002204623
pounds to metric tons	0.000453592

2007 recycle rate - plastic bags and sacks	11.9%
2007 recycle rate - paper bags and sacks	36.8%

Ecobilan Data - Greenhouse Gas Emissions		Plastic Bags		Paper Bags	
Just End of Life	GWP (IPCC)	g output	g CO2e	g output	g CO2e
(a) Carbon Dioxide (CO2, fossil)	1	8.70E+01	8.70E+01	5.15E+02	5.15E+02
(a) Methane	23	2.60E-01	5.98E+00	4.96E+02	1.14E+04
(a) Nitrous Oxide	296	1.00E-02	2.96E+00	7.00E-02	2.07E+01
(a) Carbon Tetrafluoride	5700	0.00E+00	0.00E+00	0.00E+00	0.00E+00
(a) Halon 1301	6900	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Total</b>			<b>9.59E+01</b>		<b>1.19E+04</b>

\* GWP = Global Warming Potential

Ecobilan Plastic Bag LCA - Just end-of-life		Adjusted for 2007 Recycle Rates		
Emissions Sources	CO2e	CO2e	Annual CO2e	Per Capita
Emissions (grams) per 9,000 liters groceries	9.59E+01			
Emissions (grams) per 1 liter groceries	0.01066			
Emissions per bag (grams)	0.15			
Emissions per bag (metric tons)	0.00			
Emissions in the city (metric tons)	0	0	53	0.0002
Emissions in the whole county (metric tons)	5	4	1609	0.0002

Ecobilan Paper Bag LCA - Just end-of-life		Adjusted for 2007 Recycle Rates		
Emissions Sources	CO2e	CO2e	Annual CO2e	Per Capita
Emissions per 9,000 liters of groceries (in grams)	1.19E+04			
Emissions (grams) per 1 liter groceries	1.327591111			
Emissions per bag (grams)	27.19			
Emissions per bag (metric tons)	0.00			
Emissions per store (metric tons)	0.09	0.06		
Emissions in the city (metric tons)	21	13	4759	0.0168
Emissions in the whole county (metric tons)	623	394	143716	0.0135

Ecobilan Emission differences caused by an 50% conversion from plastic to paper		Adjusted for 2007 Recycle Rates	
Emissions Sources		Annual CO2e	Per Capita
Emissions in the city (metric tons)		2,326	0.00820
Emissions in the whole county (metric tons)		70,250	0.00662

Boustead GHG emissions - Just end of life	CO2e Emissions from Plastic Bags	CO2e Emissions from Paper Bags	CO2e Emission Increase with 50 Percent Conversion from Plastic to Paper	per year	per year per capita
metric tons for 1,000 paper or 1,500 plastic bags	0.0030	0.0500	0.05	17.155	0.000
Emissions (metric tons) per bag	0.0000	0.0001	0.00	0.018	0.000
Emissions (metric tons) per store	0.0100	0.0854	0.08	27.539	0.000
Emissions in the city (metric tons)	2.22	18.97	16.75	6,114	0.02154
Emissions in the whole county (metric tons)	67.04	572.85	505.81	184,621	0.01739

Emission Sources	Air Pollutants (Pounds/Day)*					
	VOCs	NOx	CO	SOx	PM2.5	PM10
4 Delivery Truck Trips in the City	0.04	0.08	0.47	0	0.02	0.09
96 Delivery Truck Trips in the whole County	0.8	1.9	12.02	0.01	0.46	2.24
SCAQMD Threshold	55	55	550	150	55	150
AVAQMD Threshold	137	137	548	137	-	82
Exceedance of Significance?	No	No	No	No	No	No

\*Numbers from URBEMIS 2007