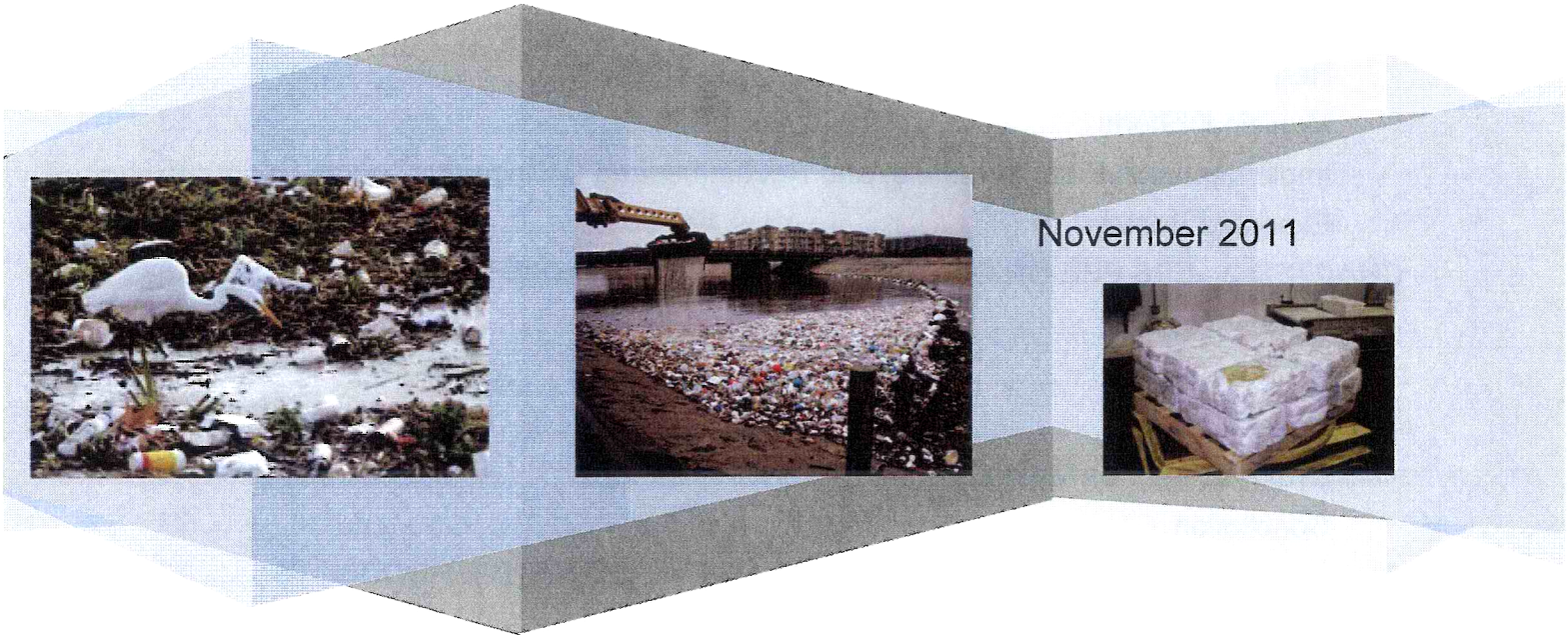
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

Expanded Polystyrene Food Containers in Los Angeles County

PART TWO: Feasibility of Implementing a Restriction of Expanded Polystyrene Food Containers at County unincorporated area retailers

A STAFF REPORT TO THE COUNTY OF LOS ANGELES BOARD OF SUPERVISORS



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"To Enrich Lives Through Effective and Caring Service"

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EXECUTIVE SUMMARY
EPS REPORT TO THE BOARD OF SUPERVISORS

On September 21, 2010, the County of Los Angeles Board of Supervisors adopted a prohibition on the purchase and use of expanded polystyrene (EPS) food containers at all County operations The Board of Supervisors also directed the Department of Public Works (DPW) and County Counsel to report back on the feasibility of implementing a restriction on the use of EPS food containers at food service establishments and retail stores in the unincorporated County areas (UCAs) The Board further directed Public Works to specifically look at appropriate infrastructures to handle alternative materials as part of its feasibility study, and provide quarterly updates to the Board This report summarizes Public Works' findings, policy options, and recommendations in response to the Board's direction.

Findings Regarding the Feasibility of Extending the Prohibition

- Legal Barriers. No legal barriers to adopting an EPS prohibition were identified, and many jurisdictions have adopted prohibitions through local ordinances without legal challenges The County would need to determine what level of review is necessary for compliance with the California Environmental Quality Act (CEQA), if any, which may or may not require the development of an environmental document.

- Case Studies. We reviewed case studies of at least 53 jurisdictions in California that have restricted EPS in some form, including Los Angeles County's restriction at County operations Of these, 43 have prohibited retailers from utilizing EPS Also, it is important to note the following

    - Enforcement efforts are typically limited
    - There is little information regarding the potential financial impact on businesses or consumer preference
    - Some ordinances incorporate hardship provisions that would allow a business to apply for an extension or waiver We did not find a record of any businesses requesting such an extension

- Alternative Products. Alternatives to EPS (paper and other compostable products, aluminum, plastics including recyclable plastics, etc.) are readily available, although generally they are more expensive The environmental benefit of these alternatives is maximized if they are recycled or composted

- Economic Impact: An EPS prohibition may result in additional costs to businesses of up to $3,000 to $5,000 per year An economic analysis would be required to validate this estimate

- Development, Implementation, and Enforcement. Cost to fully comply with CEQA, complete an economic study, develop a draft ordinance, and implement an educational campaign is estimated at up to $1,000,000 Enforcement costs

are unknown, but are expected to entail development of a public-driven reporting system, minor inclusion of food establishment inspection for the EPS policy by County Public Health inspectors, and monitoring and processing of violations and fines.

Other Key Findings

- EPS prohibitions in other jurisdictions within California have significantly decreased the amount of EPS litter in the litter stream, although some studies show that alternative products have replaced the prohibited EPS in the litter stream Moreover, the Board of Supervisors can only enforce an Ordinance in the UCAs, which constitute approximately 10 percent of the Countywide population.

- An EPS prohibition would impact the UCAs Adoption of similar prohibitions by a majority of the cities within the County would be necessary in order to substantially reduce the prevalence of EPS litter in Los Angeles County A Statewide EPS prohibition would be most effective and provide for a more consistent implementation of the prohibition.

- Some residential and commercial areas of the County have access to composting for food scraps and compostable food containers Public Works is working to expand this access, and also encourages residential backyard composting through our Countywide Smart Gardening Program.

- Curbside recycling of recyclable food containers is widely available to most residents and businesses in the County Thirty-two cities allow EPS food containers to be deposited in the recycling bin at curbside However, most material recovery facilities (MRFs) do not process EPS and instead landfill the material

Background

The EPS Staff Report Part I and subsequent report developed by the Responsible Purchasing Network on behalf of the County (see Appendix A) studied in depth the negative environmental impacts of EPS food containers, and provided the basis for the Board of Supervisors decision to adopt the restriction of EPS food containers in County operations

The Los Angeles County Expanded Polystyrene Stakeholders Working Group (Working Group), consisting of representatives of EPS food container manufacturers, manufacturers of alternative food containers, restaurants and retailers, public agencies, environmental organizations, and the general public, has been meeting for over a year to discuss the negative impacts of EPS food container litter and how to mitigate those impacts.

At the request of the Working Group, this EPS Staff Report Part II examines a number of potential "elements" identified by the Working Group through regular meetings and

discussion These "elements" are actions that may be considered as part of a comprehensive effort to reduce EPS litter The Working Group has researched these elements (in addition to a ban) to assess their effectiveness in reducing the negative impact of EPS litter as well as other forms of litter, in order to develop a more comprehensive recommendation to the Board Each of these elements is summarized below, and described in more detail in the report:

EPS Prohibition

The adoption of a restriction (ban) on EPS at food service establishments in the UCAs would greatly reduce EPS litter and directly affect behavior of food container purchasers. Depending on how it is implemented, vendors may be inclined to purchase more sustainable biodegradable and/or recyclable products and the number of vendors doing so would influence the extent of the positive environmental impacts of such a ban Although a restriction on EPS would significantly reduce the amount of EPS in the litter stream, it is likely to result in an increase of alternative products in the litter stream However, such alternatives would be less prone to becoming litter than EPS, and may not be as damaging to the environment and wildlife as EPS

In order to implement a restriction on retailers, environmental documents in compliance with CEQA, if any, may be needed to assist with efficient policy implementation An ordinance would need to be developed and adopted A public education and outreach campaign is recommended to inform residents and affected retailers regarding the prohibition Outreach would also reduce the costs for ongoing enforcement If an EIR is determined not to be required, costs would be substantially reduced

The EPS restriction adopted by the Board of Supervisors could only be enforced in the UCAs Since restaurants within cities would still be able to purchase EPS food containers, this may disproportionally impact restaurants in the UCAs, while hampering the effectiveness of a County Ordinance since EPS litter could easily blow out of incorporated cities into unincorporated communities and stormwater infrastructure maintained by the County Therefore, adoption of similar restrictions by a majority of the cities within the County would substantially enhance the effectiveness of the EPS litter reduction efforts A Statewide EPS prohibition would be even more effective and more consistent for retailers implementing the prohibition

Disposable Container Fee

A fee on all disposable food containers, or specifically on EPS, would aim to curb the littering of such containers in much the same way that fees on single-use bags and bottles discourage their littering Manufacturers and retailers purchase disposable products upfront but are not responsible for the litter costs associated with the products, which are currently shouldered by taxpayers Although a fee structure on disposable food container products has not been implemented, "bottle bills" passed in the 1970s and the recent plastic bag fees in Ireland and Washington D C were reviewed These cases indicate that placing fees on disposable items can significantly influence consumer purchasing and littering behavior The benefits and effectiveness of a deposit-based fee structure could spark interest in proper disposal of these products

and could reduce their amount in the litter stream However, the passage of Proposition 26 in November 2010, placed additional restrictions and requirements on the adoption of such fees

Diversion of Alternative Products at End of Life

Two common methods of landfill diversion are recycling and composting Recycling of alternative products is common at material recovery facilities (MRFs) and recyclers, but depending on the material, the recycled products lose some of their value due to contamination issues Materials placed into recycling carts are very susceptible to contamination. Different materials and products as well as different collection, separation, and recycling methods can play a role in the level of contamination After the materials are processed through the facilities, recyclers need to find ways to manage the material in the most cost-effective manner The aim is to have most of the processed materials sold for use in the manufacture of new recycled-content products However if materials are too contaminated, they may be sold to markets overseas as mixed plastics or sold to local waste to energy facilities for energy recovery

There is also a growing effort to expand local capacity for composting organic materials, including compostable food containers Residents have strong concerns regarding odor from nearby composting facilities. In response, the composting industry has conducted studies and are developing methods of odor reduction to divert more organic material away from landfills. Municipalities within the State have instituted residential and commercial composting systems and policies with overall good results, and even better results in restaurants

Composting and recycling of alternative products further enhance their life-cycle environmental benefits. However, only materials that have been properly collected can be recycled or composted Therefore, these diversion methods would have limited or no effect on litter

EPS Recycling

Recycling of EPS products has increased in recent years, mainly due to industry partnering with schools for tray recycling and encouraging some cities to accept EPS in their curbside recycling programs However, the overall recycling rate of EPS, and particularly EPS food containers, is still very low, at approximately one percent of all EPS sold in the marketplace This is due to the relatively low market value of collected EPS, the challenges associated with separating EPS materials from the waste stream (especially EPS food containers which are likely to have higher contamination from food) and the higher cost associated with collecting, sorting, and transporting EPS, which often requires potentially expensive densifying machines to minimize the volume of collected EPS materials As a result, most MRFs are not separating EPS food containers, instead shipping them to landfills for disposal along with other unrecyclable residual waste

EPS recycling at large venues and institutional facilities, such as schools, has been far more effective, since such facilities can separately collect large volumes of EPS

materials, making densifiers cost effective and providing a mechanism to minimize contamination It is important to note that, as with recycling and composting of alternative products, EPS recycling will improve the life-cycle impact of EPS products, but will not significantly impact the volume of EPS ending up as litter, since EPS placed in a recycling bin has approximately the same chance of becoming litter as EPS placed in a trash bin.

Education

Public Works manages and implements litter prevention and waste reduction programs throughout the County Free consultations are offered to businesses in the UCAs, and staff participate at large events such as the County Fair to interact with and educate the public. Mass media methods are also used to educate the public, which includes the internet, radio, television, and newspaper Industry has also helped to educate the public.

The California Restaurant Association has teamed up with DART Container Company and started a recycling education campaign, reaching out to approximately 700 restaurants in the cities of Pasadena and Los Angeles to encourage customers to place their EPS food containers in their curbside recycling cart

Personal outreach has shown to be far more effective than distributing literature alone However, public education alone is not sufficient to significantly reduce the prevalence of EPS food container litter

Litter Collection and Management

The County spends millions of dollars every year on litter reduction measures and litter prevention programs. Public Works continues to install screens in catch basins throughout the UCAs as well as installing and instituting measures to meet Federal clean water regulations Other equipment and signage continues to be developed to prevent litter and debris from finding its way into the ocean Litter prevention, maintenance, and mitigation is an ongoing effort, where costs have increased from $18 million in 2005-2006 to $24 million in 2009-2010 to maintain public road rights-of-way and flood control infrastructure

Currently the County has plans to increase the reach of the catch basin insert, street level screens, and cleanout frequency Upstream solutions are needed to couple the end-of-pipe infrastructure already in place EPS litter places a significant strain on these litter maintenance efforts, due to the use of EPS products by retailers, its propensity to become litter, durability and persistence of EPS once littered, its very high buoyancy, and the difficulty in capturing EPS material once littered

Waste Conversion Technologies

The use of conversion technologies or waste-to-energy facilities for the management of EPS has some potential, since these technologies are very flexible and therefore can accept a variety of feedstock, including contaminated EPS, unrecyclable plastics, and

other residual waste streams These technologies are capable of recovering energy and other beneficial products from materials that might otherwise be discarded, and in general do not need materials to be separated prior to processing

However, as is the case for EPS recycling, EPS materials can be converted only if they are properly placed in the appropriate containers, which is not the case with litter Therefore, as a result, it is not anticipated that conversion technologies and/or waste-to-energy facilities would play a significant role in mitigating the negative environmental impacts of EPS food container litter

Policy Options Considered by the Working Group

After careful consideration of these elements, the following four broad Policy Options were developed for further consideration

- Statewide Prohibition – Actively pursue passage of a Statewide prohibition on the use of EPS at food service establishments This option would be most effective since it would be uniformly applied and enforcement costs would not be borne by the County

- County Prohibition (Unincorporated Areas) – Partially or fully prohibit EPS food containers at certain food service establishments in the UCAs Would need to develop a draft ordinance, determine whether compliance with CEQA is required and whether an EIR is needed, conduct an economic study, conduct an educational campaign, and develop an enforcement plan May cost up to $1 million (not including enforcement cost)

- Voluntary Efforts – Would potentially cost hundreds of thousands or millions of dollars, depending on scale of implementation and level of support from industry Effectiveness of voluntary efforts would depend heavily on how comprehensive they are and how many resources are devoted by the industry and other partners

- Status Quo – Under this option, no additional funds would be required This is not a "do nothing" option, but rather a commitment to continue efforts currently being implemented, including

    - Litter prevention
    - Public education
    - Litter collection and infrastructure
    - Recycling, composting, and other waste diversion strategies, including EPS recycling

Recommendation for Consideration

Although there was broad agreement among the members of the Working Group regarding a number of issues as well as support for many of the elements discussed above, consensus could not be reached by the Working Group on a comprehensive

recommendation In general, industry representatives remained strongly opposed to a prohibition, while environmental organization representatives strongly favored a prohibition

There was recognition by the Working Group that EPS food containers contribute disproportionately to the litter problem and that reducing the prevalence of these containers should be a priority There was also recognition that no single element discussed by the Working Group is expected to be as effective as a prohibition in significantly reducing the volume of EPS food containers that become litter However, DPW believes that some of these elements can be incorporated into a more comprehensive effort that may achieve comparable results to a prohibition in addition to contributing to an overall reduction in litter Also, an Ordinance prohibiting EPS may have a negative economic impact on businesses in the UCAs if a Statewide prohibition or prohibitions in other jurisdictions are not widely adopted

Therefore, based on our research and evaluation of case studies and upon consideration of the feedback from the Working Group, DPW recommends pursuit of the following combined strategy·

1) *Pursue the passage of a prohibition of EPS food containers at a Statewide level*

   A Statewide prohibition would be the most effective measure to reduce EPS food container litter in the County Senate Bill 568 (Lowenthal), already supported by the County, is currently pending in the State legislature after passage in the State Senate earlier this year

2) *Partner with the industry to establish a comprehensive program to reduce litter, including EPS food container litter, and otherwise enhance the environment in the region*

   This comprehensive program would combine efforts from municipalities, industry, and environmental organizations through the County's existing Working Group The focus of the efforts would be to reduce the prevalence of EPS food container litter, while also reducing other forms of litter The program would consist of an integrated strategy that incorporates public education, litter collection and management, EPS recycling, composting infrastructure, enhanced enforcement of anti-litter laws, extended producer responsibility, and conversion technologies/waste–to-energy This program is discussed in more detail in Chapter 7

3) *Consider a prohibition in the UCAs if measures 1 and 2 above are not found to be successful*

   If the State Legislature fails to adopt legislation addressing EPS litter, and the comprehensive program is not determined to be successful, your Board may consider additional measures, including a prohibition in the UCAs

CHAPTER 1

PROHIBITION ON RETAILERS IN UNINCORPORATED AREAS

On September 21, 2010, following comprehensive studies and stakeholder discussions, the County of Los Angeles Board of Supervisors adopted a prohibition on the purchase and use of expanded polystyrene (EPS) food containers at all County operations The Board of Supervisors also directed the Department of Public Works and County Counsel to report back, within twelve months of implementing the prohibition on the purchase and use of EPS food containers at County operations, on the feasibility of implementing a restriction on the use of EPS food containers at food service establishments and retail stores in the County unincorporated areas, including recommended changes to County code If determined to be feasible, an implementation plan and schedule would also be included in the report. The Board further directed Public Works to specifically look at appropriate infrastructures to handle alternative materials as part of its feasibility study, and provide quarterly updates to the Board

The EPS Staff Report Part I and subsequent report developed by the Responsible Purchasing Network on behalf of the County (see Appendix A) studied in depth the negative environmental impacts of EPS food containers and provided the basis for the Board of Supervisors decision to adopt the restriction of EPS food containers in County operations. Both of these reports were received and filed by the County Board on September 21, 2010 Since the County Board adopted the policy to restrict EPS food container usage in County operations, staff has conducted additional research in determining the feasibility of expanding this restriction to food service establishments and retail stores in the unincorporated areas Public Works has directly engaged key stakeholders in developing a recommendation to the Board

Findings Regarding the Feasibility of Extending the Prohibition

- Legal Barriers No legal barriers to adopting an EPS prohibition were identified, and many jurisdictions have adopted prohibitions through local ordinances without legal challenges The County would need to determine what level of review is necessary for compliance with the California Environmental Quality Act (CEQA), if any, which may or may not require the development of an environmental document.

- Case Studies. We reviewed case studies of at least 53 jurisdictions in California that have restricted EPS in some form, including Los Angeles County's restriction at County operations Of these, 43 have prohibited retailers from utilizing EPS Also, it is important to note the following

    - Enforcement efforts are typically limited

- There is little information regarding the potential financial impact on businesses or consumer preference
- Some ordinances incorporate hardship provisions that would allow a business to apply for an extension or waiver We did not find a record of any businesses requesting such an extension

- Alternative Products. Alternatives to EPS (paper and other compostable products, aluminum, plastics including recyclable plastics, etc.) are readily available, although generally they are more expensive The environmental benefit of these alternatives is maximized if they are recycled or composted

- Economic Impact: An EPS prohibition may result in additional costs to businesses of up to $3,000 to $5,000 per year An economic analysis would be required to validate this estimate

- Development, Implementation, and Enforcement: Cost to fully comply with CEQA, complete an economic study, develop a draft ordinance, and implement an educational campaign is estimated at up to $1,000,000 Enforcement costs are unknown, but are expected to entail development of a public-driven reporting system, minor inclusion of food establishment inspection for the EPS policy by County Public Health inspectors, and monitoring and processing of violations and fines

Methodology Used

Litter studies, municipal ordinances, results at County operations, and reports were reviewed and analyzed to assess the feasibility of implementing a prohibition of EPS food containers at food service establishments and retail stores in the unincorporated areas of the County of Los Angeles Municipal staff were contacted to assess results of food container ordinances Retail food vendors were also contacted to assess current food container policies Meetings were held with impacted stakeholders, such as food container industries, restaurants and retail food providers, consumer advocacy groups, environmental organizations, waste management agencies, local government, and the public, to provide a forum to discuss plans and methods to eliminate or reduce EPS food container litter

The EPS Staff Report Part I (see Appendix A) included a discussion of various jurisdictions that have adopted EPS restrictions as case studies for the prohibition of EPS in County operations In addition to jurisdictions initially identified, three more jurisdictions in the County of Los Angeles (six total) as well as five new jurisdictions in the rest of Southern California and 32 more jurisdictions in Northern California (37 total) have been identified Overall, at least 53 municipalities in California have adopted policies relating to EPS food containers Of these, 43 have ordinances that apply to retail food vendors in their jurisdictions Besides these jurisdictions, restaurants, stadiums, and universities have voluntarily reduced or eliminated EPS food container purchase and use A more detailed description of these efforts is included in the Case Studies section of this report (Appendix B)

Litter Studies

The EPS Staff Report Part I (see Appendix A) included a discussion of various litter studies that provided background regarding the disproportionate impact of EPS food containers Additional litter studies on EPS litter have been found since the initial report. Following are key findings from these additional studies

- *San Francisco Litter Audit*

  On June 1, 2007, San Francisco adopted an ordinance prohibiting disposable food service ware made of foam polystyrene from being used at restaurants, retail food vendors, City facilities, departments and agencies, franchises, and events, and by contractors and vendors doing business with the City/County The ordinance also required affected food providers to use biodegradable or compostable disposable food service ware instead

  Between 2007 and 2008, the amount of EPS cups in litter fell from 1.13 percent to 0 78 percent by quantity, while the amount of paper cups increased from 1 82 percent to 2.41 percent[1]

- *Clean Water Action / Clean Water Fund Study*[2]

  To identify opportunities for reducing San Francisco Bay trash at the source, Clean Water Action and Clean Water Fund initiated the "Taking Out the Trash" project, which provided a snapshot of litter in the area. From October 2010 through April 2011 with the help of the cities, local schools, and community groups, data on street litter was collected in the following four cities Oakland, Richmond, San Jose, and South San Francisco From the data gathered, the overall results were reported by quantity

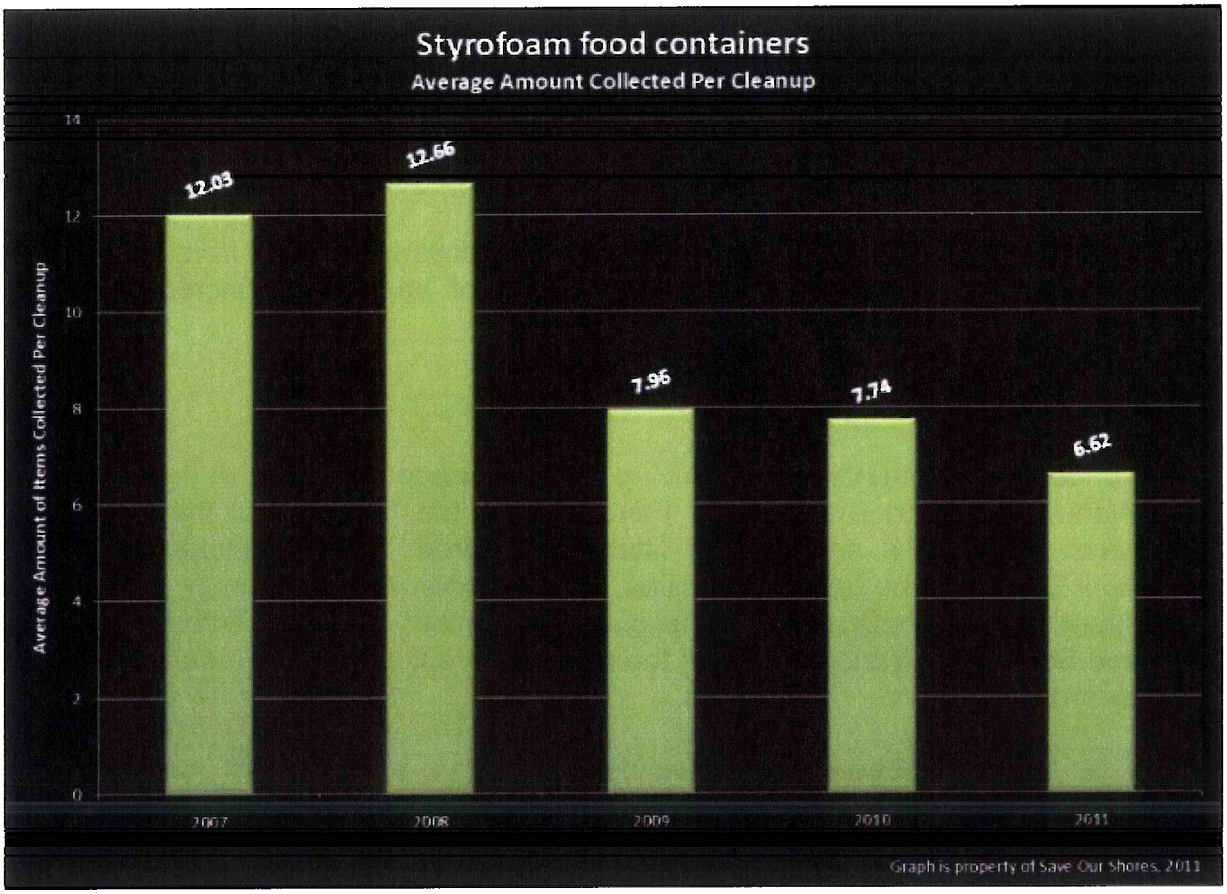
  - 48 percent was food packaging
  - 19 percent was beverage packaging
  - 9 percent was tobacco packaging
  - 9 percent was other packaging
  - 15 percent was non-packaging

[1] The City of San Francisco Streets Litter Re-Audit 2008, July 4, 2008
http://sfenvironment.org/downloads/library/2008_litter_audit.pdf
[2] Clean Water Action/Clean Water Fund "Taking Out the Trash" Project and PowerPoint Presentation.
http://www.cleanwateraction.org/programinitiative/taking-out-trash-california-0

- *Save Our Shores*

As shown on Figure 1, the average amount of EPS food containers collected from beach and river cleanups in Santa Cruz, Monterey, and San Mateo Counties increased slightly from 2007 to 2008 However, starting 2009, after several product prohibitions were passed, the amount collected dropped considerably and has been gradually decreasing since

Figure 1



- *Heal The Bay*

  Heal the Bay conducted regular debris cleanups at Tower 27 at Santa Monica Beach. The most recent cleanup during calendar year 2010 found EPS as the third most common type of litter, amounting to 1,061 pieces picked up, and found general plastic items as the most littered item, amounting to 4,115 pieces.

- *Surfrider Foundation Waste Characterization Studies*[3]

  The South Bay Chapter of the Surfrider Foundation, in partnership with the Algalita Marine Research Foundation and local high schools, conducted waste characterization studies of the accumulated plastic trash found on beaches in the Redondo Beach vicinity near storm drain outlets throughout the school years 2009-2011

  Of all the plastic trash collected in the studies, it was found that by quantity:

  - 55 percent was food-related plastic
  - 40 percent was foam
  - 20 percent was food-related foam

  The Surfrider Foundation will continue its annual review of the waste characterization study data along with study protocols in an effort to make future waste collection studies more useful in educating students and the public.

Industry Concerns

Representatives from the restaurant industry have raised concerns regarding the impact of a prohibition due to the difficult economic climate. A report published by the Cascade Policy Institute[4] noted a significant increase in the use of alternative products as a result of the EPS prohibition in Portland, Oregon. The report did not cite the overall cost impact to the operation and maintenance costs to run the businesses. Any additional costs from the purchase of alternative food containers would have to be absorbed by the restaurant, or more likely passed on to consumers. Although the cost per unit increase would be a few cents per item, restaurant industry representatives state this would nevertheless impose a significant burden on restaurants due to the small profit margins of small "mom and pop" restaurants and their customers' sensitivity to price increases.

An EPS prohibition may result in additional costs to businesses of up to $3,000 to $5,000 per year. This is a rough estimate, assuming a business that is utilizing only EPS food containers, at a rate of approximately 200-300 food containers per day, with a cost increase of approximately $0.05 for each food container. This impact would be less for businesses that utilize some non-EPS products or can find more cost-competitive alternative products. A more detailed economic analysis would be

[3] Surfrider Foundation PowerPoint Presentation to the LA County EPS Working Group, May 24, 2011.
[4] Cascade Policy Institute, "Foam and Failure: Why Portland's Obsolete Polystyrene Foam Ban Should Be Repealed" Hardy, M. October 2006.

required to determine the accuracy of this estimate and whether this increase would create a significant economic burden to businesses

Retailer Efforts

Many businesses have voluntarily transitioned away from EPS takeout food containers The reasons for this include customer preference, environmental stewardship, and company image Some businesses have reported that switching to alternative products has yielded unexpected benefits, such as extra storage space, positive press coverage and customer loyalty

Municipal Efforts

A study presented to the City Council of Santa Barbara[5] evaluating the merits of prohibiting EPS in the City's food service sector concluded, among others, that banning EPS is the right thing to do, but stressed the importance of having an organics collection system in place to properly manage compostable food containers

According to a report conducted for the City of Milpitas[6], although limited outcome information is available, high compliance rates in cities with prohibitions were found as well as increasing availability of alternative products. The report also suggests phasing implementation by product type to help businesses comply given limited availability of some products According to the report, although alternative containers do cost more than polystyrene, they are available for most applications where food service polystyrene is currently used Some product types are more available in alternative materials than others The report suggests that jurisdictions can help businesses reduce cost impacts by identifying local suppliers and establishing a purchasing co-op for small businesses.

The City of Santa Cruz ordinance was adopted by their City Council without developing an environmental document as a result of receiving no objection Although initial discussions with businesses met with some resistance, the California Restaurant Association (CRA) directly contacted the City about not opposing the ordinance[7] City staff continued to work with the CRA to educate local businesses about the ordinance and compliant alternative products They found that consumer education was most important in implementing their EPS food container prohibition Once customers started asking for the changes, the businesses started to make the transition Their ordinance contains a clause for retailers who are fined to be allowed to substitute payment of the fine with proof of purchase (receipt) of the legal food containers in the amount equal to the fine To date, the City has not written any warnings or given citations, and has received no complaints.

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[5] City of Santa Barbara Council Agenda Report. March 11, 2008 and PowerPoint Presentation to the Solid Waste Committee. October 1, 2007. http://santabarbara.granicus.com/MetaViewer.php?view_id=6&clip_id=869&meta_id=59116; http://www.santabarbaraca.gov/CAP/MG66007/AS66011/AS66026/AS66032/AI69305/DO70344/DO_70344.PDF; http://www.santabarbaraca.gov/CAP/MG67285/AS67289/AS67304/AS67310/AI75593/DO75604/DO_75604.PDF

[6] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

[7] City of Santa Cruz City Council Agenda Report for January 22, 2008 meeting, http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=9068

The County of Los Angeles Department of Public Works cafeteria vendor reported that purchasing alternative food containers impacts two percent of its overall expenses As reported, local vendors of alternative products may also be used to possibly lower cost impacts to affected retailers Public Works staff conducted an evaluation of the prohibition of EPS food containers at County operations. All affected departments were contacted, and those that completed the transition to alternative products reported they have not experienced a significant financial or operational impact A table of the status of the remaining Departments still in the process of transitioning away from EPS (due to long term contracts) is included in the Case Studies summary (Appendix B)

In general, jurisdictions that have passed EPS food container prohibitions affecting retail food vendors have offered and provided free consulting services and hosted meetings with supplier representatives to affected businesses to assist them to find alternative products in compliance with the ordinances that still meet their business needs Most of the jurisdictions were found to rely primarily on resident complaints for enforcement, rather than on inspection staff Some new affected businesses were caught unaware of the ordinance until they received warnings. Some business owners claimed that the language barrier prevented them from complying, while others ordered their alternative products too close to the effective date of the ordinance

To offset potential cost impacts, the City of Santa Monica sent outreach material to retail food service establishments with lists of alternative product vendors[8] The website of the cities of Santa Monica and Richmond[9] cite retailer successes (both large chain and independent) in finding alternative food container products for a variety of needs including hot soups and beverages.

Many jurisdictions also included a provision to request an extension or waiver from a prohibition in the case of economic hardship Although no records were found of any businesses that applied for such a waiver, further promotion of such a provision could ensure that businesses with a potentially significant impact take advantage of it as needed

The County may also mitigate the costs of complying with a prohibition by allowing impacted businesses to apply for a one time grant to offset the costs of purchasing replacement products. Funds would be provided up to a certain limit based on receipts for purchases of alternative food containers showing significantly higher costs than equivalent EPS food containers Costs for implementing such a grant can be limited by capping the total funding available and/or the total number of participants that may apply Based on results in other jurisdictions, it is expected that few businesses would request a waiver or grant.

Through the County Recycling Market Development Zone Grant Program, local manufacturers of alternative recycled-content food container products may be able to receive funding to accelerate their operations A specified percent of the Utility User

[8] http://www.smgov.net/uploadedFiles/Departments/OSE/Business/LATimes_PolyBan_Article2008.pdf
[9] http://www.smgov.net/Departments/OSE/Business/Container_Ban_Successes.aspx; http://www.ci.richmond.ca.us/index.aspx?nid=1824

Tax may be discounted for those retailers that use no EPS products at all and/or use alternative products.

Implementation Plan, Schedule, and Recommended Changes to County Code

Implementing a prohibition on the use of EPS food containers at retailers in the unincorporated areas of the County would require several steps.

- Environmental Documents in Compliance with the California Environmental Quality Act - An Initial Study may need to be completed to assess the potential environmental impact of a prohibition and determine if further environmental assessment is necessary This process may take as little as 2-3 months, and up to 18 months if a full Environmental Impact Report (EIR) is completed However, it is possible that a categorical exemption may apply, which would not add time to the process. As a result, costs to complete this process range from as low as $50,000 up to $500,000

- Development and Adoption of an Ordinance - This can be completed in 3-4 months, and can occur concurrently with compliance with CEQA. It is expected to cost up to $100,000 in staff time to develop

- Public Education Campaign - Public education is important to the successful implementation of a prohibition Other benefits, such as increasing awareness of County residents and obtaining buy-in from businesses, are discussed in more detail in Chapter 5 It may also help reduce the costs for ongoing enforcement, which is expected to be minimal if existing inspections are conducted by the County Department of Public Health through their current Facility Rating program To complement retailer outreach and increase awareness of EPS food container litter impacts, Public Works could conduct public outreach, which may potentially reduce littering from consumer use Consultants may be used to complete these outreach efforts, which may take up to one year A public education campaign could be implemented concurrently with the environmental review process and/or leading up to and shortly following the implementation date of the ordinance Costs for such a campaign range from $150,000 to $400,000 or more

If the Board of Supervisors were to pursue adoption of an ordinance prohibiting the use of EPS food containers, Public Works would recommend incorporating the following provisions within the ordinance

- As with the restriction at County internal operations, a prohibition applied to retail vendors should focus on EPS food containers, such as cups, clamshells, bowls, plates, and serving trays. Because they are less prone to littering by the public, some containers may be exempted, such as raw meat trays, coolers, and ice chests

- Since the majority of EPS food containers consumed in the County are distributed at food service establishments rather than at retail stores, the prohibition should apply to food service providers, such as restaurants, retail food

vendors, and caterers Food vendors at large venues and events may also be included in the policy

- If food vendors at large venues and events are made subject to the ordinance, such venues may be suitable to implement an on-site EPS collection and recycling program Similar to provisions in the restriction of EPS food containers at County operations, providing this option will ensure EPS food containers do not end up as litter and also further reduce the life cycle environmental impacts of EPS food containers

- The prohibition can be phased in to allow for easier compliance and more effective outreach efforts targeted to various types of food service providers. To obtain buy-in from more food service providers, a six-month grace period may be included to those who can provide supporting documentation of recent purchases of old inventory This will allow time for food providers to use up their current stock of EPS food containers and purchase alternatives

- It is recommended that the ordinance provide exemptions due to a locally declared emergency or for immediate preservation of public peace, health, or safety

- With proper planning and effective outreach to affected stores and residents, costs for enforcement can be maintained at a minimum The implementation of the Single-Use Carryout Bag Ordinance, adopted by your Board in November 2010, could serve as a model for the implementation of this ordinance

- To obtain contact information and a baseline of EPS usage to evaluate reduction in EPS usage, and to prepare retail food vendors to comply with the ordinance, a survey of affected retail food vendors should be conducted before the effective date of the ordinance

Expected Results

Expanding the EPS restriction to retail food establishments in the unincorporated County areas would greatly reduce EPS litter and directly affect behavior of food container purchasers Vendors would purchase more sustainable biodegradable and/or recyclable products, which would also positively impact consumer behavior

Although an EPS prohibition may reduce the negative environmental impacts of EPS litter, it would reduce purchasers' choices in food container products An exemption for those instituting EPS recycling service could avoid limiting the viability of EPS recycling efforts, which currently only collect a small fraction of the total EPS sold in the marketplace (see Chapter 4 for additional information regarding EPS recycling)

A prohibition on EPS products is expected to impact retailer operations due to the higher cost of alternative products with similar performance characteristics to EPS food containers Although costs may initially increase, over time the market may be

expected to normalize as more retailers demand alternative products, and as other jurisdictions adopt similar prohibitions

A Statewide EPS prohibition would be a more effective approach compared to a County EPS prohibition A County prohibition would mainly impact the unincorporated areas of the County Since the unincorporated areas of the County consist of numerous communities that are spread throughout the County, including many small islands surrounded by cities, the increase in prices resulting from a prohibition on EPS may cause businesses located in the unincorporated areas to be placed at a competitive disadvantage compared to businesses in adjacent cities. Due to the lightweight nature of EPS, food containers from neighboring communities can easily be blown or carried into unincorporated areas, undermining the benefits of a prohibition As detailed in the Case Studies (see Appendix B), there are currently four cities in the County that have adopted an EPS prohibition impacting retailers To effectively reduce EPS litter in the region, cities would need to adopt similar regulations A Statewide EPS prohibition would be most effective and provide for a more consistent implementation of the prohibition

CHAPTER 2

EXPANDED POLYSTYRENE FEE ON DISPOSABLE FOOD CONTAINERS

Introduction

Manufacturers and retailers only pay the up-front costs for production or utilization of single-use food containers However, they are not financially responsible for the costs for their disposal or the cost of litter abatement. Instead, these costs fall to consumers, and especially in the case of litter impact, to local governments Two potential methods to reduce Expanded Polystyrene (EPS) food container litter is the implementation of either a deposit/return system or some form of a fee, charge or minimum pass through charge If crafted correctly to account for Proposition 26 concerns, it may be possible that funds collected from an EPS food container charge could be used to prevent and/or mitigate the environmental impacts of EPS food container litter Depending on who is charged and the amount of the charge, the increased cost of EPS food containers may make alternative food containers more cost competitive and encourage more retailers to voluntarily switch

However, case studies regarding such a policy do not exist for most types of food packaging, due to the lack of implementation by jurisdictions of either a single-use food container deposit/return system or a waste fee structure To offset the lack of data, an analysis was made on other types of products with either a deposit/return arrangement or a waste fee structure implemented by local jurisdictions

Case Studies

In the 1970s, Oregon and several other States including California introduced "bottle bills" as a way to reduce the hazards, clean-up costs, and waste of discarded glass containers (mostly from beverages) These laws mandate that consumers pay a deposit when they purchase specified items, which will be returned when the container is returned [10] The Oregon law is credited with reducing beverage container litter and increasing their recycling, with return rates of up to 90 percent. The Oregon Department of Environmental Quality reports that roadside litter of discarded items covered by the laws was reduced from 40 percent to 6 percent since the "bottle bill" was introduced in 1971 [11]

In March of 2002, the Republic of Ireland became the first country to introduce a plastic bag fee, or PlasTax. Primarily designed to rein in and control litter of single-use plastic carryout bags produced by the rampant consumption of 1 2 billion plastic shopping bags

[10] Oregon Liquor Control Commission "*Bottle Bill & Redemption Center Info*". http://www.oregon.gov/OLCC/bottle_bill.shtml#About_the_Bottle_Bill

[11] Ibid. http://www.oregon.gov/OLCC/bottle_bill.shtml

per year, the fee resulted in a 94 percent drop in consumption within weeks[12], and approximately 1 billion fewer bags were consumed annually resulting in a dramatic decrease in single-use plastic bag litter The purpose of the fee was to change consumer behavior, moving consumer habits from consumption to reducing and reusing Individuals were charged approximately $0.24 per plastic bag consumed at checkout, Ireland's Environment Minister made it illegal for retailers to pay the plastic bag fee on behalf of customers Retailers saved money since they were able to stock a smaller quantity of bags (in Ireland, an annual average of $50 million was spent on single-use plastic bags before the fee[13]) Many retailers benefitted from increased reusable bag sales. Compliance was straightforward where retailers kept simple records on purchases and receipts, and the government monitored retailer compliance and collected revenue In its initial year, approximately £9 6 million (roughly $16 7 million) were raised from the fee and used in a Green Fund established to benefit the environment [14] The Irish EPA reported that these dramatically lower levels of plastic bag use and litter were being maintained [15]

Similarly, the 5-cent tax on plastic bags in Washington D C implemented in January 2010 has already proven to have a significant impact in reducing the consumption of single-use plastic carryout bags The District of Columbia Office of Tax and Revenue estimated that affected establishments issued about 3 3 million bags in January 2010, which was a significant 86 percent decrease from the estimated 22 5 million bags issued per month in 2009[16] The reduced demand has directly translated to less pollution in rivers and streams While significantly reducing plastic waste, the tax simultaneously generated $150,000 in revenue in its first month of implementation, which will be used to clean up the Anacostia River [17]

Single-use food containers or more specifically EPS food containers may be sold with a "deposit" to be refunded when the package is returned to the vendor As with bottles and cans, financial reward could spark interest in the proper disposal of these products on the part of consumers and provide income to others who retrieve littered food containers It would also increase the costs of single-use food containers, thus having a salutary effect on reduced consumption There are significant implementation challenges, due to the brittleness of EPS containers and their proper collection

Benefits of Fee

A charge on disposable single-use food containers, or on EPS food containers specifically, could be utilized to reduce the consumption of EPS food containers and decrease the amount of litter associated with such products It can combat litter and enhance the current disposal maintenance infrastructure This includes litter collection along roads and in flood control facilities, vehicular street sweeping, trash disposal from

[12] Elisabeth Rosenthal, "By 'bagging it,' Ireland rids itself of a plastic nuisance," *NY Times*, January 31 2008 http://www.nytimes.com/2008/01/31/world/europe/31iht-bags.4.9650382.html

[13] "How Viable is a Plastic Bag Tax?, " *Environmental News Network*

[14] Sara Ruch, "Breaking the Plastic Habit," *Organic Gardening*, November 2007 January 2008, 68.

[15] R. Mulhall 2009. Waste Policy: Prevention and recovery. Letter to the City of San Jose, Environmental Services Department. http://www.sccgov.org

[16] Tim Craig, "D .C. bag tax collects $150,000 in January for river cleanup" *Washington Post*, March 30, 2010 http://www.washingtonpost.com/wp-dyn/content/article/2010/03/29/AR2010032903336.html

[17] Ibid.

trash receptacles, catch basin cleanouts, stormwater pollution prevention outreach programs, capital improvement projects, and implementing best management practices.

Although a fee may help offset the more than $24 million per year the County of Los Angeles Department of Public Works spends on clean-up activities such as those previously mentioned, the provisions of California Proposition 26 (Prop 26) may cause difficulty in implementing this new fee Prop 26, passed by voters in 2010, broadens the definition of taxes to include payments traditionally considered to be fees or charges As a result, local proposals to increase government revenues may require approval by local voters [18]

Evaluation of Fee Methods

Due to the nature of a deposit/return fee structure on single-use food containers, implementation of such a structure would only be ideal in a closed system affecting the entire State, similar to that of California's Beverage Container Recycling Program If the deposit/return fee structure is not applicable to the entire State than the jurisdiction or entity providing the rebate might also have to contribute for returned single-use food containers originating outside its boundaries Given that the market for this material is weak and EPS single-use containers have a tendency to break up into smaller pieces when handled by machinery, the jurisdiction would also have to supplement the cost of collection, transportation, cleaning, densifying, and recycling of these materials Considering the magnitude of the litter problem, such a program designated and operated in only the unincorporated areas in the County of Los Angeles would not be productive or financially sustainable

A fee-based structure can target EPS food containers, or more broadly to all disposable single-use food containers If a fee targets all single-use food containers, consumers need to be made aware of the negative environmental impacts of these disposable products. If a fee targets solely EPS single-use food containers, the fee would promote equity and give consumers a choice to use EPS single-use food containers or alternatives A fee-based structure on either all single-use disposable food containers or specifically EPS single-use food containers imposed on the manufacturer/retailer would streamline the process However, in order to affect a positive change in consumer behavior, the fee would need to be imposed directly on the consumer, rather than the retailer or manufacturer Otherwise, consumers may not be aware of the fee or the reasons it is imposed Consumers are more likely to notice a direct request to pay extra for each single-use food container used, stimulating a change in consumer behavior by providing a choice for consumers to either pay the fee, use an alternative, or bring their own containers

Given the provisions of Prop 26, implementing any type of new fee that would be directly administered by the County would be difficult. Furthermore, a fee implemented in one jurisdiction creates the potential to encourage residents to shop in adjacent jurisdictions to avoid the fee. Thus a fee-based structure implemented on a Statewide basis would be far more effective

[18] Colin Sullivan, " Calif.'s Little-Noticed Prop 26 Squeaks Through in Dead of Night" *The New York Times*, November 3, 2010 http://www.nytimes.com/gwire/2010/11/03/03greenwire-califs-little-noticed-prop-26-squeaks-through-59912.html

Conclusion

The recommended approach to implementing a fee to address the negative impacts of EPS food container litter would be a fee imposed directly on the consumer imposed on a Statewide basis Funds collected would be disbursed to local governments, authorized regional organizations, or non-profit entities comprised of stakeholders, to mitigate litter, expand public education efforts, and enhance alternative waste disposal programs Such an effort would require the passage of Statewide legislation

CHAPTER 3

INFRASTRUCTURE TO MANAGE ALTERNATIVE PRODUCTS

Life-Cycle Analysis

In July 2008, the Department of Public Works completed a preliminary analysis of prohibiting the purchase and use of Expanded Polystyrene (EPS) food containers at all County operations. To supplement the findings of Public Works' analysis, the County contracted with the Responsible Purchasing Network (RPN) to serve as a consultant to further quantify the impacts of phasing out EPS food containers

Compared to the Franklin Lifecycle Assessment (LCA), which focused on the manufacture of food containers, the LCA conducted by University of California, Berkeley professor, Dr Arpad Horvath, with Mikhail Chester, as part of the research for RPN, found that end-of-life disposal of food containers is a significant factor in determining emissions footprint. The LCA studied the following three end-of-life options for food containers composting, recycling, and landfill disposal

The RPN report[19] found that for each end-of-life strategy, there are alternative food containers with equal or lesser greenhouse gas (GHG) emissions throughout their life cycle than EPS Not only does EPS have an equal or greater negative life cycle impact, it also presents additional unique issues related to local litter, water pollution, wildlife, and human health The RPN report concluded that biodegradable and recyclable products are more environmentally friendly compared to EPS products, therefore County operations were recommended to eliminate the purchase and use of EPS food containers

Recycling

Recycling helps substitute virgin material with secondary feedstock at the manufacturing stage The historical focus of residential recycling dating back to the 1990's has been to keep material out of landfills The key to achieving the environmental and economical benefits of recycling is to keep material circulating and used for as many different product lives as possible [20]

The lifecycle analysis performed by RPN determined that recyclable single-use alternative products have lower GHG emissions than EPS products. Alternative products may be produced from materials that would otherwise be considered waste, and, therefore, no additional GHG emissions result from their production

[19] EPS Food Containers Alternative Products Analysis and Lifecycle Assessment, RPN Final Report 10/2009

[20] Container Recycling Institute. Understanding economic and environmental impacts of single-stream collection systems. December 2009.

Recycled products, such as paper and plastic cups, are often made from 10 percent to 50 percent post-consumer material There are some disposable containers made of other recyclable materials that are more valuable in the recycling market, such as aluminum tin Recycling from residents and commercial businesses has been in place and available in the unincorporated County areas for many years

- *Residential Recycling*

  Most cities and their haulers offer recycling as part of their curbside collection service In an effort to increase recycling volumes and reduce high recycling collection costs, most cities and their haulers have transitioned from the traditional source-separated or dual-stream recycling system to the single-stream recycling system as part of their curbside collection service In the source-separated system, separate recycle bins are provided for different recyclable materials Waste haulers providing single-stream recycling typically provide residents with one cart for collecting all recyclable materials together Waste haulers collecting from the County Garbage Disposal Districts and unincorporated area franchises all use the single-stream collection method Automated trucks pick up the containers and deliver material to material recovery facilities (MRFs) for processing This single-stream method increases efficiencies for haulers by collecting more material with less labor and less distance traveled [21] It also reduces the number of employees, improves route efficiency, and reduces workers' compensation cost, and also encourages residents to place more material in one cart to simplify the system These materials are usually more contaminated than material collected in a dual-stream system The contaminated material, which is eventually thrown in the trash for landfill disposal, reduces the value of the collected recyclables Contamination also creates problems at paper mills, leading to equipment failure, lost productivity, and expensive repairs This then results in a cost increase for the processors and recyclers, and affects the ability of the recycler to produce quality end products [22]

  A study in Pennsylvania showed that even as single-stream collection matured, a higher percentage of contaminants were found and rejected in the incoming streams at single-stream MRFs (3 7 percent) than at dual-stream MRFs (1 8 percent) [23]

  A study conducted in 2002 by Eureka Recycling compared five different collection methods and found that single-stream systems collected 21 percent more material than the baseline source-separated curbside collection method The Eureka study did not recommend a single-stream system because the low collection cost benefits were outweighed by the increased processing and recycling cost, and lower material revenues.[24]

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[21] Container Recycling Institute. Understanding economic and environmental impacts of single-stream collection systems. December 2009.

[22] Ibid.

[23] R.W. Beck and Dan Krivit & Associates, City of Roseville Recycling Pilot Program Summary. Ramsey County. Minnesota, December 2005

[24] Eureka Recycling, A comparative Analysis of Applied Recycling Collection Methods in St. Paul, May 2002

- *Commercial Business Recycling*

  Depending on business needs, most haulers offer a variety of bin sizes to contain recyclable material for pick-up Containers contaminated by food must usually be washed prior to recycling, increasing processing costs[25] Rigid recyclable alternatives, such as crystalline polystyrene, are easier to wash than foam, such as expanded polystyrene Training of clients' employees and customers are usually available upon request. Some recyclers even provide clients with onsite roll-off compactors, onsite baling, and direct shipment to end-users

The food container and foodservice industries have also extended efforts to increase the recycling infrastructure Rock-Tenn Company has nine paper mills that produce recycled paper, all located in the midwest to eastern United States Their mills collect recycled paper and accept a small amount of poly-coated paper mixed with uncoated paper Third party haulers deliver collected paper from all over the nation, including from California Most of the company's recycled paper product is made from old corrugated boxes, newspaper, and phone books

Although Starbucks Coffee Company represents approximately one percent of the carryout cup market in the Country, the company is working to reduce their disposable cup consumption In 2009, San Francisco, California, and Ontario, Canada stores began an in-store recycling program to test bin design to reduce contamination In Seattle, Washington as a response to a city-mandated recycling ordinance, they are working with a number of paper mills to test what kind of processes can handle poly-coated cups

While expanding recycling of alternative products will further enhance their lifecycle environmental benefits compared to EPS when recycled, these efforts will not independently reduce the amount of EPS ending up as litter

Composting

Composting is the natural decomposition of organic material like leaves, twigs, grass clippings, and food scraps Composting helps to keep the high volume of organic material from breaking down in landfills producing methane, and instead turns it into a useful product Compostable food containers can be more sustainable and carbon neutral[26], and can be derived from potato, corn, wheat, sugarcane, or tapioca sources, and are suitable for hot and cold applications, as detailed in the 2008 staff report. These products are capable of undergoing decomposition, where the compost developed from commercial facilities can be used as an organic feedstock or soil amendment. Food contamination of compostable food packaging is not an issue

[25] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

[26] Green Packaging GP (Tapioca Bake Ware), http://www.greenerpackage.com/renewable_resources/tapioca-based_bakeware_compostable_biodegradable
Smithsonian.com Corn Plastic, http://www.smithsonianmag.com/science-nature/plastic.html
Clean Techies, biodegradable, renewable, sustainable, carbon neutral and – compostable! potatoes or wheat or sugar beats http://blog.cleantechies.com/2009/06/19/biopolymers-biodegradable-renewable-sustainable-carbon-neutral-and-compostable/

Although large scale commercial composting facilities can handle more material and potentially produce a more consistent product than onsite or home composters, they may be faced with regulatory issues [27]

In regards to public concern over emissions, ozone potential, and odor produced from composting operations, CalRecycle and other agencies have conducted studies[28] In 2002, the CIWMB (now CalRecycle) completed emissions tests on greenwaste composting designed to evaluate emission reductions that could be achieved by controlling feedstock mixtures and aeration techniques[29] The tests were conducted at Tierra Verde Industries in Irvine, and indicated that ammonia emissions were extremely low and should not be a concern for greenwaste composting The emissions from the woody blend were lower than the grassy blend In 2006, emissions-reducing best management practices were tested in Modesto, California[30] Compared to a pair of commercial inoculants, the pseudo-biofilter was more effective and reduced emissions by about 75 percent during the first two weeks This is significant because the Modesto study suggests that roughly 80 percent of all emissions occur during the first two weeks of composting

Food and other organic materials can be diverted from the waste stream by establishing a composting program that provides organic materials for landscaping operations or local farms Compostable food containers, such as those made from paper or bioplastics, which are contaminated with food, can be composted along with food scraps, requiring no pre-washing [31] Materials to be composted in commercial composting facilities can be collected via one or few location site pick-ups per client or through a residential curbside collection program The feasibility of these collection options are based on factors such as volume and control of the source environment. Collection bins are usually provided at pick-up sites by the composting facility company

- *Methods*

  Onsite composting is an attractive, simple method of managing organic wastes at home or other small enclosed locations. It has the advantage of being readily adaptable to fit location size, funds, and goals. Some municipalities such as the County of Los Angeles, Santa Monica, City of Los Angeles, and City of San Diego encourage onsite residential composting

  There are at least 36 jurisdictions in California that have a collection program for composting food waste, nine of which are located in the County of Los Angeles

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[27] http://www.calrecycle.ca.gov/Organics/HomeCompost/

[28] CalRecycle Air Emissions Reduction from Composting and Related Facilities webpage, http://www.calrecycle.ca.gov/organics/Air/default.htm; CalReycle. Composting Air Emissions PowerPoint presentation: January 25, 2011 http://www.calrecycle.ca.gov/organics/Air/AirEmissions.pdf

[29] Best Management Practices for Greenwaste Composting Operations: Air Emissions Tests vs. Feedstock Controls & Aeration Techniques. CalRecycle. October 21, 2008, http://www.calrecycle.ca.gov/Publications/Organics/2008016.pdf

[30] Emissions Testing of Volatile Organic Compounds from Greenwaste Composting at the Modesto Compost Facility in the San Joaquin Valley. CalRecycle. October 2007 http://www.calrecycle.ca.gov/Publications/Organics/44207009.pdf

[31] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

Of the 36 composting programs, 29 accept compostable food containers, 3 of which are located in the County of Los Angeles

The City of Santa Monica, like most cities that accept composting material, does not accept currently available compostable plastic because of their low decomposition rate. There are businesses located in Fontana and Riverside that have their compostable plastic processed by a local composting facility

There are few municipalities with the infrastructure to operate and maintain a large scale composting facility. Factors such as volume, types of acceptable material, onsite land availability, location, availability of labor, and local demand for compost will directly determine the feasibility of composting facilities. Location and space can determine the size and material used for composting. Composting facilities close to residential neighborhoods have to consider the impact operations will have on daily life. The biggest complaint from most residents is odor. To address this issue most facilities will choose not to accept dairy products and other material that may create offensive odors. Green waste is usually the preferred material for composting facilities located near residential areas.

If available, the ideal place for commercial composting is on existing landfills. This provides the ideal space and location for composting facilities. Composting profit margins are typically low. It takes a significant amount of time, equipment, and manpower to handle the amount of material and to produce a consistent product. Most municipalities consider composting as a way to divert organic waste from landfills and turn it into a useful product that helps improve the environment. Labor costs associated with waste sorting can be reduced by providing clearly marked compost bins to improve the waste separation system. Paper food containers are accepted by commercial composters because they are biodegradable.

Co-sponsored by the County of Kern, the Mt. Vernon Recycling and Composting Facility was opened in an effort to divert recyclable yard and wood material from the landfills. By turning the green waste received at the facility into useable material, such as compost and mulch, much-needed space at area landfills is saved for future use. In 2007, it was estimated that the green waste facility received over 200,000 tons of recyclable organic material [32]

The long-range plan of the Sanitation Districts of Los Angeles County includes utilization of two state-of-the-art composting sites. The Inland Empire Regional Composting Facility in Rancho Cucamonga is an entirely enclosed composting facility recently developed in a joint venture with the Inland Empire Utilities Agency. The Westlake Farms Biosolids Composting Facility in Kings County will compost Sanitation Districts' biosolids with the Central Valley's agricultural waste and urban green waste. This facility is scheduled to be operational in 2013 [33]

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[32] City of Bakersfield Department of Public Works website, http://www.bakersfieldcity.us/cityservices/pubwrks/solidwaste/greenwaste_recycling.html

[33] Sanitation Districts of Los Angeles County website, http://www.lacsd.org/about/default.asp

Composting food containers, especially those made of or coated with plastic has been a major problem for composting facilities In order to produce high quality compost, contamination must be kept to a minimum Many composting programs do not accept coated paper because the coating may or may not be compostable Both consumers and composting facilities cannot easily and readily identify paper products that are coated with compostable coating and plastic products that are compostable per ASTM Standard D6400 This often leads to unacceptable materials being placed in compost bins and contamination to resulting compost. Contamination leads to low quality compost and increases labor hours due to sorting and removal of material before and after the composting process More uniform design and labeling of compostable products is key to solving this problem

- *Composting from the Business Sector*

In Santa Barbara food scraps are the largest single element in the business sector's waste stream Almost 13,000 tons of food and other compostable waste generated by food serving businesses are disposed of in Tajiguas Landfill This represents over 30 percent of the total waste generated and landfilled by the business sector of Santa Barbara [34] Food waste creates large amounts of methane gas within a very short time when landfilled Methane gas is one of several gases and is 23 times more potent than carbon dioxide.[35]

To divert the food waste from landfills, the City of Santa Barbara implemented a pilot Food Scraps Recovery and Composting Program in 2007 The program included Cottage Hospital, City College, the Santa Barbara Zoo, and local restaurants and coffee shops By March 2008, over 120,000 pounds (60 tons) of food waste had been collected and taken to a certified composting facility near Santa Maria Plastic food containers are not acceptable in this facility [36] The collected food waste is combined with other organic material and used to produce compost which is then sold to local farmers

To expand on the business food scraps collection program, the Single-Family and Multi-Unit Residential Organics Collection Program was developed The Single-Family and Multi-Unit Residential Organics Collection Program captured food scraps from residents, which enhanced the benefits of organic material diversion from landfills and produced quality compost for the local agricultural community in north Santa Barbara County and San Luis Obispo County

In the September 30, 2008, City of Santa Barbara Council Agenda Report, it was reported that since April 2007, over 420,000 pounds (or 210 tons) of food scraps were diverted from landfill disposal. This resulted in a GHG emission drop comparable to removing 125 Toyota Prius cars off the road Since then, the City

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[34] City of Santa Barbara Council Agenda Report of March 11, 2008 Meeting. http://www.santabarbaraca.gov/CAP/MG66007/AS66011/AS66026/AS66032/AI69305/DO70344/DO_70344.PDF

[35] Ibid.

[36] http://www.santabarbaraca.gov/Recycling-Trash/pdf/Foodscraps_Brochure.pdf

has reported that about 2,700 tons of food scraps are currently being collected annually from approximately 150 retail food establishments

On Earth Day 2009, Stater Bros Markets® rolled out a composting program in partnership with Community Recycling and Resource Recovery, Inc., to all 166 store locations The program collects the organic waste, such as produce trim and cull, as well as waxed cardboard, wooden crates, and paper The items from the individual locations are collected at their distribution center, and picked up by the composter [37]

Assembly Bill 2176 (Chapter 879, Statutes of 2004) was enacted to create and encourage planning and implementing waste reduction, recycling, and composting programs at large venues and events [38] Event organizers of the Governor's Conference on Women and Families, an annual conference held at the Long Beach Convention Center attracting nearly 12,000 participants, sought ways to improve solid waste diversion The conference diversion goal was to generate zero waste A major aspect of the program was the development of a "Great Taste, Less Waste" lunch box that was pre-planned to include compostable bags, serving ware, and food The material was collected in compostable bags and taken to a processor, where they were mixed with green waste then transported to a composting facility All other recyclable items were collected and recycled Unrecoverable material went to a waste-to-energy facility In 2005 over nine tons of materials were collected and diverted In 2008 the collected amount doubled to 18 tons Due to request from the City and facility users, the Convention Center is considering options to introduce a year-round food recovery program The City has switched to compostable serving ware, and expanded its collection programs to include beverage containers and waste paper [39]

The 2008 Indio International Tamale Festival was a two-day festival featuring tamale and other various food vendors from Southern California In collaboration with California Bio-Mass and Burrtec, the City of Indio initiated a "zero-waste" system that utilized green waste and recycling collection at the event eliminating the need for landfill hauling service They used a dual-receptacle system that included one container for recyclables and another container for green waste This program diverted 15 46 tons of organics from the landfill to a compost facility [40]

The Indian Wells Tennis Center and Garden not only recycles bottles, cans, cardboard, and paper products, it also has one of the State's model food scrap composting programs Each year it hosts the largest tennis event in the United States The small city population grows to over 200,000 for the 14-day event During that time, more than 58 tons of waste materials are produced The tennis

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[37] Stater Bros. Markets Press Release, http://www.staterbros.com/getdoc/27907ee3-2b3f-406a-8ae0-8d8a85f33b60/PR_Composting.aspx

[38] CalRecycle. Report to the Legislature: Large Venue and Event Waste Reduction, Recycling, and Composting Programs. October 2009.

[39] Ibid.

[40] Ibid.

center has a goal of collecting 70 percent of post-consumer food scraps and a 90 percent kitchen recovery rate. The program has reduced disposal cost by 18 percent. Food scraps are hauled to the California Bio-Mass Agricultural Products Production & Research Facility and later returned to the tennis garden as soil amendment for the flowers.[41]

- *Composting in the City of Los Angeles*

  California law (AB 939) required all cities and Counties to reduce the amount of waste they send to landfills by 50 percent by the year 2000. The City of Los Angeles met and surpassed that goal and has adopted the further goal of reducing landfilled waste by 70 percent by the year 2015.[42]

  One of the largest single components of the City's waste stream is greenwaste (grass and tree trimmings, leaves, garden waste and other vegetable material). The Bureau of Sanitation operates three mulching/composting facilities: the Harbor Yard Trimmings Facility in San Pedro, which uses the contents of the Bureau-collected residential green bins in the Harbor area, the Griffith Park Composting Facility, which uses greenwaste from Griffith Park, biosolids from the Hyperion Wastewater Treatment Plant and animal waste from the Los Angeles Zoo, and the Lopez Canyon Environmental Center, which uses greenwaste collected by the City's Bureau of Sanitation and tree trimmings generated by private contractors to mix with horse manure collected from nearby residents. The mulch and compost produced by these three facilities is a high-quality product given away free of charge to community gardens, City residents, businesses, and farmers.

  The City of Los Angeles' RENEW LA Five-Year Milestone Report[43] states that there are over 8,000 restaurants in the city. Since approximately 70 percent of restaurant waste is organic and recyclable, the City Bureau of Sanitation implemented a pilot commercial Food Waste Recycling Program in April 2004, which was expanded to full scale in April 2007. As of June 2011, about 1,000 restaurants are participating in the Food Waste Recycling Program. It is estimated that 33,000 tons of compostable organic material including food and non-recyclable paper products are being diverted annually to composting facilities in Victorville and Lamont, which are just outside of Los Angeles County, as well as to the City's mulching facilities. The City also encourages their permitted private waste haulers to recruit other restaurants into the program. The haulers offer training to restaurant staff on how to properly separate organic food waste. The Restaurant Food Waste Recycling Program reduced greenhouse gas emissions by 32,400 tons per year in the pilot program and about 284,800 tons each year when the program went full scale.

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[41] Ibid.

[42] City of Los Angeles Bureau of Sanitation Recycling website, http://www.lacitysan.org/solid_resources/recycling/services/ab939.htm

[43] Smith, Grieg. RENEW LA Five-Year Milestone Report: A Resource Management Blueprint for the City of Los Angeles. June 2011. http://cd12.lacity.org/stellent/groups/electedofficials/@cd12_contributor/documents/contributor_web_content/lacityp_013244.pdf

The City of Los Angeles also initiated a Foodwaste to Green Curbside Cart pilot program to divert residential food waste from landfill by having the material placed in the residential curbside green cart initially intended for only green (yard) waste The pilot residential food waste program includes approximately 8,700 homes The one year pilot program resulted in 68 tons of food scraps and 24 tons of soiled paper products diverted from landfills As a result, the City implemented a citywide program in 750,000 households This program could divert food waste at a rate of 92 tons per year and at a rate of 7,931 tons per year at full scale [44] 85 percent of the diverted materials from the green carts in this program are shipped to composting facilities outside the County, and the remaining is sent to the City's mulching facilities.

Expected Effects

Alternative products that are recyclable include paper, plastic, and metal products not contaminated with oil or grease and are already widely accepted through curbside programs Contaminated or non-recyclable alternative products must be manually sorted and discarded If organic or compostable, they may be sent to a composting facility Composting reduces the cost of hauling material to landfills. Diversion methods agreed to and further developed by impacted stakeholders, such as recycling and composting of alternative products are viable methods that would enhance the impacts of a retailer prohibition. Other California cities[45] were recommended to offer food scrap and container composting to businesses and residents in conjunction with an EPS prohibition Recycling and composting of alternative products has several benefits. They divert waste from landfills, reduce the negative environmental impacts of these items, reduce the use of new material to make products, and help create useful products at a lower cost

Priorities would need to be rearranged to focus and intensify development of a comprehensive infrastructure to divert alternative products from landfills Implemented in conjunction with increases to the landfill tipping fee and/or subsidies to other forms of waste disposal may promote the use of alternative single-use food containers that would have a more sustainable life cycle To accomplish this, recycling and composting service may be required of haulers and recyclers servicing the residents (both single-family homes and multi-family complexes) in the unincorporated areas, if not currently mandated to do so Jurisdiction agreements with various waste haulers can include bringing a specific minimum percentage of waste to composters As the City of Berkeley has done, restaurants and retail food vendors can be required to establish separate waste receptacles for each type of recyclable food packing generated on the premises. This would ensure that the alternative materials are recycled or composted and not mixed with materials to be sent to landfills

Although recycling and composting alternative products will not reduce EPS litter, it is the next best method to reducing usage in handling properly disposed solid waste

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[44] Ibid.

[45] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

CHAPTER 4

RECYCLING OF EPS FOOD CONTAINERS

Material Recovery Facilities (MRFs) separate materials delivered using a variety of mechanical and manual sorting systems Their main objective is to maximize diversion of recyclables from the waste stream, while reducing cost and maximizing revenue from those materials targeted for recovery The most commonly recovered materials include plastic containers, paper, aluminum cans, and cardboard because they are easy to collect, have an available market, and provide the most revenue without costly specialized sorting machinery

Due to static cling and their ability to break apart easily, Expanded Polystyrene (EPS) products placed in co-mingled recycling carts are easily contaminated Disposed EPS food containers are typically soiled by the food they were used for and contaminate other recyclables in the recycling cart. For many years recyclers did not accept EPS Any EPS received usually was disposed of with the trash that eventually was placed in landfills. According to a study[46] reported in April 2011, food contamination and the low density of EPS pose challenges to cost-effective collection, transport, and recycling of waste EPS food containers

Municipal Curbside Collection

For one municipal curbside program that used to collect EPS in the late 1990s, they found that winds scattered EPS onto streets when bins were tipped, compacting trucks broke up EPS into pieces and scattered it when the truck emptied, and at the MRF, front end loaders and spinning screens broke up the EPS, which with its beads and peanuts contaminated the paper and glass to be recycled

As a result of tremendous efforts from industry, there are 32 cities in the County of Los Angeles that currently offer EPS recycling to their residents, where about a dozen cities collecting EPS actually have the material recycled into manufactured recycled-content products or sold to other EPS buyers Through research and contacts with waste haulers, MRFs, recyclers, and city representatives, we have found that of the 32 cities that allow their residents to deposit EPS food containers in their recycle bins, EPS material from 17 of the cities eventually go to recyclers that do not separate them and is landfilled The EPS material from the remaining 15 cities go to 8 recyclers that process EPS, but reportedly food containers are not being separated and recycled at this time due to the following factors

- High cost to separate EPS food containers since they are difficult and labor intensive to quickly separate

[46] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

- The material is often contaminated with food residue
- The material is very lightweight and therefore requires a large volume in order to aggregate sufficient quantities to market.
- A small percentage of the recycling stream contains EPS food containers.
- Special equipment is required to compact it for storage and shipping

In an effort to more readily identify and separate EPS food containers, one of the cities offering curbside recycling is encouraging their residents to clean out excess food and place the EPS food containers into clear plastic bags before placing them into the recycle bin This would facilitate an increase in the quantity of materials collected, however presents a challenge to encourage participation by residents due to the additional steps involved Studies of MRF sorting lines that separate EPS would be needed to determine how much of the EPS food container waste is being separated and if there are ways of increasing its diversion. Packaging EPS is often the primary material recycled since it is solid EPS which results in greater weight and density, when compared to food containers which are designed to contain food or beverages

Large Venues and Institutions

In order to be successful, EPS collection sites must produce significant quantities of uniform EPS food containers that are relatively clean and entirely separated from other materials for collection. In certain applications this system can provide for the collection and recycling of EPS food containers.

Large venues and institutions, such as school cafeterias, have had greater success in implementing EPS recycling programs, especially those focused on meal trays There are case studies (see Appendix B) showing that such recycling programs can be highly successful Some reasons for their success may be attributable to some of the following factors.

- There are typically larger quantities of EPS materials, making collection more economical
- Stations can be organized to facilitate separate collection of the EPS food containers
- The cost of a densifier can be more readily justified due to the larger volumes.
- In the case of schools, children are supervised which may help to ensure proper disposal of meal trays at collection areas Similar situations may be the case in other institutions
- In the case of a school district, a central warehouse can be utilized to facilitate collection of EPS materials Similar situations may be the case in other institutions

According to the City of Los Angeles RENEW LA Five-Year Milestone Report[47], there are markets to recycle EPS, such as Timbron, who manufactures building material, and NEPCO, who manufactures picture frames

[47] Smith, Grieg. RENEW LA Five-Year Milestone Report: A Resource Management Blueprint for the City of Los Angeles. June 2011.
http://cd12.lacity.org/stellent/groups/electedofficials/@cd12_contributor/documents/contributor_web_content/lacityp_013244.pdf

Six school districts in Los Angeles County and four in the rest of Southern California have been found participating in an EPS meal tray recycling program Over 1 million EPS lunch trays are being recycled through this collaborative effort, involving Dart Container Corporation, waste haulers, foodservice distributors, and others [48] These school lunch tray recycling programs have been established and operated as follows

- Education of students about cleaning and stacking trays
- Development of condiment stations or other types of control to help ensure less condiment is spilled onto trays
- Development of a dump station to remove tray contents, where students are taught to turn their tray upside down and knock it against the rim of the trash receptacle and wipe off excess condiments with napkins
- Repacking of trays into their original carton, where a sealed bag may be required to maintain a clean environment for storage
- Set up of a storage area for the used trays awaiting transportation to the recycling facility
- Transportation of used trays to recycling facility

In addition to diverting EPS waste from landfills, the lunch tray recycling program allows school districts to save a significant amount of money Long Beach Unified School District estimates saving $1 million a year through this recycling effort.[49] Savings are attributed to the lower cost of EPS versus alternatives as well as a decrease in waste hauling expenses At Westwood Elementary in Stockton, EPS litter was reduced so much that they were able to reduce the number of trash collection days from 5 days to 4 days per week.

Dart currently provides EPS drop-off containers at their manufacturing facilities. In addition, they have recycling centers in Michigan, Pennsylvania, Florida, and Ontario, Canada, capable of reprocessing 12 million pounds of EPS annually Dart heat densifies the collected EPS material into plastic pellets. The processed plastic pellets are sold to EPS manufacturers like NEPCO, who reprocess the pellets into useful products, such as picture frames, lumber, egg cartons, building insulation, toys, and office desk products. Dart has recently installed a wash and dry facility to accept soiled EPS at their plant in Corona, California [50] P&R Paper Supply, Incorporated delivers EPS trays from six school districts within the County of Los Angeles for recycling to the Corona plant.[51]

EPS is used to produce food containers and merchandise packaging Collecting and processing waste EPS is difficult and expensive Two key requirements for making EPS recycling cost effective are separation of foam products from other recyclables, and maximum consolidation of the collected material into the least amount of space Proper collection and sorting at the collection point is essential for an efficient recycling process Most collected foam material is co-mingled with other recyclables that often

[48] http://culvercity.patch.com/articles/recycled-trays-balance-cost-with-sustainability
[49] PR News Wire: http://www.prnewswire.com/news-releases/1000000-per-month-california-serves-up-new-milestone-in-foam-school-lunch-tray-recycling-123131653.html
[50] Dart Container Website, retrieved on August 9, 2011, http://www.dart.biz/web/products.nsf/pages/index.html
[51] P&R Paper Supply Service, contact with Lindsey Maiberger on August 11, 2011

leads to contamination Compacting and compressing collected material into the least amount of space is achieved with a densifier There are two types of densifiers typically used, which are the thermal densifier that heat compresses the material and the hydraulic densifier that uses pressure Densifiers are expensive to rent or own One recycler located in the County reported that their densifer cost $40,000 to purchase and install at client sites, but were able to sell the recycled EPS for only about 20 cents per pound According to SF Recology, it costs $42 to process 100 pounds of EPS into a recycled bale that is sold for no more than $25.[52] The high cost of special washing and drying equipment to process dirty-contaminated material is expensive Foam Zone, Incorporated provides hauling of industrial quantities of clean block EPS within a 60-mile radius of its recycling facility in San Bernardino County, California Material may also be dropped off at their facility Foam Zone turns the packaging blocks into packaging peanuts.[53] The company recycles an average of three million cubic feet of EPS per year Depending on customer needs, they may use any of three methods to process EPS pressure densifying, regrinding, and cubing Almost all of their recycled material is sold as recycled EPS product.

NEPCO recycles EPS and manufactures EPS densifying machines for various needs and size of business Their facility heat densifies the collected EPS, forming them into pellets The recycled EPS pellets are sold to companies manufacturing recycled-content products such as picture frames As part of their buyback program, NEPCO can schedule hauling of densified EPS blocks from customers of their EPS densifying machines [54]

Expected Results

A tremendous effort is being made from various stakeholders to inform and educate the community about the benefits of recycling EPS by residents, businesses, schools, and government agencies. Although progress continues, the infrastructure needed to collect, sort, and process EPS into new products is currently not in place to significantly impact the negative effect EPS has on the environment.

Recycling EPS from MRFs and most recyclers is not an economically feasible option at this time The purchase of equipment, space, and labor to install and operate an EPS recycling and processing unit is far greater than the revenues collected from the final product, since the demand and market for recycled EPS is low Densifiers and compressors at many local MRFs have been subsidized by a large EPS manufacturer Recycled EPS pellets currently can be used to manufacture a small number of products, many of which are not typically recycled at their end of life

Although the technology exists to recycle EPS, soiled EPS is rarely collected and recycled due to difficulty with cleaning the material Recyclable material is typically discarded by recyclers if they are soiled Thus, municipal collection of EPS costs taxpayers and provides no benefit with recyclers refusing to invest in equipment to clean soiled EPS The high cost of equipment, labor, training, and high contamination rate of

[52] Sue Vang of Californians Against Waste, letter dated October 26, 2011
[53] Foam Zone Inc. Website, retrieved on August 9, 2011 http://www.foamzoneinc.com/index.php?customernumber=925962177329352&pr=Home_Page&=SID
[54] NEPCO website, retrieved on August 9, 2011 http://www.nepco21.com/

EPS food containers result in a low profit margin or even a loss in profit for facilities that recycle EPS

At this time, efforts to recycle EPS food containers are low to non-existent in most communities. Municipalities lack the infrastructure to collect, sort, wash, and process EPS, especially soiled EPS food containers. As a result of the low demand and market value of recycled EPS, the infrastructure needed to address the growing use of EPS and resulting litter problem has not yet been developed. Currently, recycling EPS is not a feasible alternative at this time for most municipalities. Since food containers are not generally targeted for EPS recycling by local haulers and recyclers doing business in the County of Los Angeles, the alternative rigid plastic food containers would stand a better chance at being diverted from landfill disposal.

Increasing recycling outlets for EPS will recover some additional material, although most recyclers that accept EPS from municipalities discard EPS for landfill disposal due to contamination. Until more recyclers develop the infrastructure to sort, wash, and process EPS material, curbside collection of EPS food containers are likely to have a low to moderate ability to meet the County's objectives. A take-back program with a confirmed EPS recycler for collection at enclosed large venues and events may fare better for the future of recycling EPS food containers.

CHAPTER 5

EDUCATION

Current County Outreach Efforts for Litter Mitigation

The Los Angeles County Department of Public Works is responsible for various programs to promote litter prevention and waste reduction To promote environmentally friendly practices, various methods are employed, such as public education, bag exchange programs, and participating in targeted grass roots campaigns including community fairs.[55]

Pubic Works coordinates and implements events throughout the County to educate and promote environmentally friendly practices, such as recycling To further enhance educational outreach, Public Works joined the Los Angeles County Fair's "Going Green - A World of a Difference" exhibit This major event has an audience of over 1 4 million people Another successful partnership included the City of Los Angeles and Universal Studios Hollywood at the Eco-Green event.[56]

Currently, Public Works spends more than $24 million per year on clean-up activities which includes litter prevention and education efforts In its part to offset Expanded Polystyrene (EPS) food container litter specifically, the County restricted the purchase of EPS food containers at County operations. Additionally, the County continues to examine opportunities to recycle EPS products in an effort to promote recycling where health, safety, and economic considerations favor recycling over alternative products [57]

Current Industry Outreach Efforts for EPS Litter Mitigation

In an effort to combat litter, the EPS manufacturing industry with the help of the California Restaurant Association (CRA) has enabled restaurants, customers, and the youth through public education campaigns to promote recycling of EPS food containers through established residential curbside programs Industry's effort to promote EPS recycling is carried out through a partnership with non-profit environmental organizations, various jurisdictions, and school districts Their partners include but are not limited to Los Angeles Conservation Corps' River Corps Program, Keep LA Beautiful, Keep California Beautiful, and Friends of the Los Angeles River

An example of industry's public education campaigns to promote EPS recycling is its engagement with local school districts in the collection, transportation, and recycling of EPS lunch trays This partnership with local school districts helps educate and instill proper behavioral pattern in school children on suitable ways of disposing EPS food

[55] "2007-2009 Biennial Report County of Los Angeles Department of Public Works" County of Los Angeles Department of Public Works. http://dpw.lacounty.gov/general/biennialReport2007_09.pdf
[56] Ibid.
[57] Ibid.

service ware[58] As noted in the case studies summary (Appendix B), there are currently six local school districts within the Los Angeles County that have an EPS lunch tray recycling program

Another example of industry's environmental outreach efforts is the voluntary program developed by the CRA and the Plastic Foodservice Packaging Group in which 750 restaurants in the cities of Pasadena and Los Angeles have joined to increase residential recycling of EPS This is done by directly engaging and educating its customers on the proper disposal of EPS food containers through flyers and posters displayed at restaurant doors and near cash registers[59]

Public Education to Promote Litter Mitigation

Given the magnitude and scale of single-use container litter, along with other types of littered products, an education component must be incorporated to any option the Board of Supervisors chooses to implement regarding EPS food containers. An independent study[60], reported in April 2011 found that although more expensive, an active outreach approach is usually also more effective than providing only written information Similarly, providing informational materials to all affected parties is more effective than targeting only businesses or only consumers Education and outreach were identified as key to increasing recycling in the business sector To maximize the impact on the City's diversion rate, the City of Santa Barbara had staff provide technical assistance to large malls, big box stores (e.g., Office Max, Staples), hotels, and banks After two months of store outreach, over 151 business contacts were made and 115 businesses increased their recycling capacity [61] The County's outreach efforts towards restaurant owners and the general public to bring awareness of the negative environmental impacts of littered EPS food containers would need to be expanded This can be done through a media campaign, including television, radio, newspaper, and social media

An example of such an educational outreach campaign is the outreach efforts of the City of Los Angeles through its RENEW LA Plan In 2007, the City established the Recycling Ambassadors Program which trained employees to go door-to-door in areas of the City with the poorest participation in the Blue Bin recycling program Their mission was not only to encourage participation, but to educate the residents on the proper materials to put in the blue, green, and black bins. As a result of this program, contamination levels in the Blue Bins in the South Los Angeles waste collection district dropped markedly, making the sorting of this material much more productive while increasing the levels of diversion and the value of the materials collected [62]

In 2007, the Los Angeles City Council passed a "Pay-As-You-Throw" program to incentivize waste reduction The City partnered with RecycleBank® to offer a Recycle

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[58] "Tray Recycling Helps School District Save Money and Teach a Lesson". Culver City Patch, June 3, 2011. http://culvercity.patch.com/articles/recycled-trays-balance-cost-with-sustainability

[59] conversation with Vanessa Rodriguez, representative of the CRA, on August 17 2011.

[60] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

[61] City of Santa Barbara Council Agenda Report of September 30, 2008 Meeting. http://www.santabarbaraca.gov/CAP/MG67285/AS67289/AS67304/AS67310/AI75593/DO75604/DO_75604.PDF

[62] "RENEW LA: A Resource Management Blueprint for the City of Los Angeles." City of Los Angeles, June 2011.

Rewards pilot incentive program that rewards residents for proper Blue Bin recycling The pilot program is available without charge to 15,000 single-family homes along selected routes in the West Valley and North Central collection areas of the City Neighborhoods in the pilot areas include Chatsworth/Northridge, East Hollywood/Los Feliz, Highland Park, and Lincoln Heights.[63]

These are two examples of outreach programs which the City of Los Angeles has conducted in educating a segment of its residence on the recycling of EPS food containers Without industry involvement, outreach efforts to educate the public on the harmful impacts of littered EPS food containers will face implementation costs that will be borne by public agencies, and will also have to operate with a long-term perspective by the County Previous efforts in changing consumer behavior have failed to take hold right away, therefore a new campaign may take years to effect change

Increased outreach targeting restaurant owners along with the general public is supported by the EPS industry as well as by environmental organizations This will help enhance other EPS litter reduction plans by increasing exposure and participation of industry, restaurant owners, and the general public.

A multi-tier, multi-language mass media educational campaign to combat EPS food container litter may financially constrain the County of Los Angeles, depending on the scope, frequency, and type of campaign As previously indicated DPW spends millions of dollars annually to carry out numerous programs for public outreach and combating litter A public education outreach campaign is integral in the success of other options being considered for implementing EPS litter reduction, but will fall short in meeting the County objectives if implemented without the financial and active support of environmental organizations, the EPS manufacturing industry, and the CRA. Given the restrictions of the State of California's Proposition 26, implementing any type of new fee that would be directly administered by the County would be difficult

Eighteen years prior to prohibiting EPS food containers, the City of Santa Cruz had a voluntary polystyrene reduction program [64] In 1991, a survey of Santa Cruz businesses (52 percent response rate) reported that 66 percent of businesses did not use EPS products. Therefore, it was recommended that the voluntary compliance program continue with increased public education However, in later years despite extensive public outreach and the decreased use of polystyrene by some businesses, Santa Cruz found that the reductions were not significant compared with their goals, and that polystyrene was a growing part of the waste and litter streams According to Figure 1 in Chapter 1, there was more than a 60 percent decrease in beach litter after implementation of the Santa Cruz ordinance Unless incentives such as lower product costs and better performance exist for alternative products, then businesses that do not have a strong desire to protect the environment would not be compelled to voluntarily give up polystyrene products

[63] Ibid.
[64] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26. 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf

Thus educational outreach efforts on disposable single-use food containers or on EPS food containers specifically would also have to be implemented by either the retailer or manufacturer within a voluntary extended producer responsibility program

The CRA has 16,000 member restaurants[65] in Los Angeles County alone, which would expand the number of restaurants in the County who could voluntarily join in the educational program to increase residential curbside EPS recycling

Similarly, the EPS food container manufacturing industry would have to voluntarily expand its efforts in educating its customer base along with the general public on the harmful effects of littered EPS food containers and benefits of disposal through residential curbside recycling programs While the County may consider directing its contracted waste haulers to accept EPS through curbside programs, industry must also assist and help expand its anti-litter campaign, and EPS recycling operations and markets with MRFs, recyclers, and industry

Outreach Efforts Restricting EPS Food Service Ware

With the increased distribution of alternative disposable products, the litter stream may also in turn change to reflect an increased amount of littered alternative products. This would be one significant objective for incorporating a public and retailer outreach campaign to support an EPS prohibition Aside from increasing litter awareness to change consumer behavior, retailers would be educated in the positive environmental impacts of sustainable and biodegradable materials, to encourage the purchase of products made from these materials

Interviews by a consultant[66] found that cities that replaced a voluntary program with a prohibition noted that a significantly larger number of businesses switched from polystyrene to alternatives after compliance became mandatory In cities researched, voluntary reduction programs achieved lower compliance rates than mandatory prohibitions while still requiring an extensive investment in education and outreach

Examples of such education and outreach include media campaigns, which may be conducted using television, radio, newspaper, and social media An additional aspect of this outreach is the capability to work collaboratively with environmental and special interest groups, such as the foam food container industry, retail food vendors and businesses, community members, government, and neighborhood organizations, to convey a unified message The County can help educate the public, restaurant owners, and suppliers on the long-term environmental benefits of reusable food containers and/or alternatives to EPS food containers and its proper disposal The County assists businesses in recycling by providing free consultations through the Business Recycling Program

Informational resources can be provided at a lower cost than more active outreach involving phone calls and site visits Thus, prior to any restriction on EPS food

[65] conversation with Vanessa Rodriguez, representative of the California Restaurant Association, on August 17 2011
[66] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf, http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_d.pdf

containers, the County can provide signage, flyers, and other outreach materials to inform stores of the impending restriction of EPS food containers. While most chain restaurants are already using alternative products, given the volume and popularity of such chain restaurants, it is crucial that the County reach out to the chain restaurants to ensure that they are in compliance with the prohibition

Based on consultant interviews of businesses that may be affected by a polystyrene prohibition in Milpitas, small businesses would most benefit from outreach [67] The County would be wise to also accommodate a majority of its resources aiding and educating small food service businesses to comply with the EPS restriction To assist businesses, the County could provide a list of local suppliers that offer approved alternative products The list should include local vendors, which may reduce the cost of shipping, thus lowering economic barriers to an EPS food container prohibition

Because small food establishments may have limited access to bulk suppliers, the County may establish a purchasing co-op or assist a third party non-profit in establishing a purchasing co-op GreenTown Los Altos, a grassroots environmental group in the City of Los Altos, has established a co-op through which businesses that purchase alternatives from a certain supplier receive a 25-percent discount on their purchase [68] Bulk purchasing will help independent small food establishments be more cost effective which would help them to compete with chain restaurants

The County may also provide staff or hired contractors to provide technical assistance to businesses in making the transition to using alternative food container products, including selecting the most appropriate and cost-effective alternatives The County may also expand its Business Recycling Program to include this type of technical assistance to affected Program members

Enforcement of any EPS food container restriction is also crucial In the past the threat of fines for noncompliance has given teeth to the jurisdictional prohibitions [69] Site visits by County inspectors or non-compliance complaints by citizens received through a customer service hotline or website will help verify and ensure continued compliance

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[67] Ibid.
[68] "GreenTown Co-op Helps Restaurants Eliminate Styrofoam," GreenTown Co-op. http://greentownlosaltos.org/wp-content/uploads/About_GreenTown_CoOp.pdf
[69] Cascadia Consulting Group. "Expanded Polystyrene Food Service Take-Out Container Study" for the City of Milpitas. April 26, 2011. http://www.ci.milpitas.ca.gov/_pdfs/commissions/rsrac/2011/042611/item_c.pdf

CHAPTER 6

LITTER MAINTENANCE

Background on the County's Storm Drain System

The storm drain system begins with catch basins located in the roadways and other large runoff areas, i.e. parking lots, etc. Many of these storm drains have been significantly upgraded to keep the litter in the roadways, and prevent it from entering the storm drain system. Street sweepers are utilized to collect this refuse. However, trash does find its way into the catch basins during major rain events and most of this trash comes from the curb and gutters along the streets. In addition to intentional littering, litter ends up at the curb and gutter due to improper waste disposal, scavengers, and by being windblown from other areas. Residential carts that are left out in the street prior to pick-up and public trash receptacles are especially susceptible to scavengers. Placing lockable lids on these trash and recycle carts could deter scavengers, but would significantly increase service fees due to retrofitted carts and equipment used in disposal operations. The number of public trash receptacles along roadways and the frequency of emptying them are dependent on the historical fill rate of specific receptacles and the organization responsible for their maintenance, which has been found to vary from municipal agencies, transportation agencies, businesses, business districts, and other organizations. Public trash receptacles are costly to maintain due to the required frequency of disposal. Placing locking lids with a small opening could help reduce the frequency of disposal but this type of receptacle is more expensive to purchase and maintain. Receptacles with a lid or closing mechanism (i.e. a swinging door) would be effective in keeping animals out of them, although lids with smaller openings or hood-shaped lids would not offer the same deterrent.

Many best management practices (BMPs) have been put in place for preventing construction litter from even arriving into catch basins. BMPs are conducted by County Road Maintenance, Flood Maintenance, and Construction staff as well as County contractors during construction and maintenance activities on County roadways and flood control facilities to prevent litter and debris from their activities entering into the storm drain system. Best management practices include damming around catch basins, placing barriers at site entrances and exits as well as at retention areas.

There are nine watersheds within Los Angeles County. The County and incorporated cities have identified those catch basins and storm drains each separate jurisdiction will monitor and maintain.

The County maintains and inspects 4,289 catch basins within the Los Angeles River Watershed, and plans to retrofit each catch basin with a connector pipe screen (CPS) at all capture devices by September 2016. As of 2011, 55 percent of these catch basins have been retrofitted.

Full capture devices, such as CPS, are installed in catch basins determined to be impaired under the Clean Water Act. Currently the County has installed or contracted to install over 14,000 catch basin inserts at County-maintained catch basins throughout all the watersheds in the County Each catch basin is inspected at least once during the dry season, monthly during the storm season, and as-needed due to resident complaints Overall, a minimum of 5,440 catch basins now have street level screens, or automatic retractable screens, which prevent litter and debris from entering the catch basin during low flow events[70] Since 2003, the County has spent over $9.2 million installing catch basin screens and inserts within all the watersheds in the County

These allow for a greater chance that the debris and litter will be captured by street sweepers Public Works sweeps the streets of the unincorporated areas at least once a week, which complies with requirements of their National Pollution Discharge Elimination System (NPDES) permit. Catch basin stenciling has become popular, and the County has painted over 75,000 catch basins with the phrase "No Dumping-Drains to Ocean "

Continuous diversion systems work by spinning debris, thus creating a centripetal force that moves the litter and debris to the center of the device and the water is able to exit under a gate which traps the floating material These systems are relatively new and very expensive Catch basin inserts are installed only to certain heights within the catch basin basket to allow overflow of stormwater into the connecting pipe during times of sudden peak flow as in flash flood events The primary intent of catch basin inserts are to prevent material flowing into the storm drains, but these inserts often cause the catch basin baskets to become filled with debris and litter This captured debris is removed from the baskets at a rate dependant on the debris capture history of specific catch basins.

For material that is windblown out from the streets and end up in open flood control channels, there is a system of booms and nets to capture them at the end of the channel The material collected in the booms and nets as well as in the catch basins and through street sweeping operations is generally not recyclable due to the large amount of contamination

Not all material is captured by these systems Some material bypasses these capturing devices and makes it through the flood control systems onto the beaches or into the oceans Once on the beach or in the ocean, this litter either floats further out to sea and becomes a part of a "garbage patch" caught in a gyre, or is washed back up on shore where it litters the beach Still other material that never makes its way into the flood control system remains in the environment This increases maintenance costs by constantly requiring someone to patrol for escaped litter The Department of Beaches and Harbors rakes the beach as well as provides on-foot litter patrol each and every day This required vigilance towards trash cleanup comes at a significant cost as the County's beach maintenance has a normal annual operating budget of $7 million [71]

[70] Excel spreadsheet provided by Flood Maintenance Division, "Trash Insert Counts.xlsx" August 17 2011.
[71] County of Los Angeles Department of Beaches & Harbors, "Beach & Marina Maintenance FACT SHEET" Accessed on July 13, 2011, http://beaches.lacounty.gov/wps/portal/dbh/!ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3hXAwMDd3-3YCMDbwNDA08jPxM3d8dAAyAbKB-JLB9saWbgGWzgaBli4GZkEGJAQHc4yD6c-v2dzfDKg80HyRvgAI4G-n4e-bmp-

Large Venues and Public Areas

Large venues and public areas usually possess well-defined boundaries and have distinct periods of high and low visitations These sites include parks and beaches heavily patronized during the summer and on weekends, and museums, concert halls, and sports complexes with specific schedules The large influx of people often using disposable food packaging presents a challenge for sustainable waste management practices If these large amounts of waste are not handled correctly, they can easily become litter, which makes them much more difficult and costly to mitigate This situation is especially challenging at parks and beaches where there are vast open spaces, and often times constant winds, marsh lands, brush and shrubs or other environmental elements that make collection difficult. The County of Los Angeles maintains over 25 miles of beachfront, with 3,000 covered trash receptacles in service, averaging one bin per 44 feet of beachfront. The beaches also have 32 sets of locking recycle bins, which are strategically placed near popular concession stands According to County Beaches and Harbor, these locking recycling bins are very expensive to purchase and fix, and are often tampered with by scavengers and vandals The trash receptacles and recycling bins are maintained by the County seven days a week, all year round

Open space public areas may also benefit from trash receptacles and recycle bins with lockable lids, and from trash compactor units Currently, Public Works maintains over 1,300 public trash receptacles, where they are emptied between 2 to 12 times each week as well as on an as-needed basis Many of these receptacles have some kind of cover that reduces the chance of blow-away litter and keeps rainwater from entering the basket. Uncovered baskets are locked to nearby permanent posts to ensure stability as well as to prevent scavenging Trash compacting units can replace conventional trash receptacles to reduce the frequency of pick-up These units are also lid locking which helps to prevent scavenging Compacting bins are similar in size to conventional trash receptacles and can be solar-powered, thus reducing the amount of energy required to operate They can also be remotely connected to a command center that can organize and optimize collection schedules These compactors are expensive to purchase initially but offer the possibility of reduced operating costs over the long term

Some large venues have the advantage of being enclosed with a limited number of entrances and exits Litter can be contained more easily in this situation with a much higher density of receptacles strategically placed around concession stands, common areas, and exits This concept of strategically placing trash and recycling receptacles has been in use for a number of years at County beaches and parks Unfortunately the nature of outdoor facilities is that of continuous open space and limited physical boundaries, which make litter propagation a problem.

Expected Results

Although the effectiveness of implementing these disposal and litter reduction methods offers improved litter mitigation and prevention over the current activities, the cost burden would be substantial In addition the County may already be implementing the best available practices and infrastructure (i.e Beaches and Harbors already empties trash receptacles daily).

Trash compactor units are one of the latest technologies However, more research into their lifespan, durability, and replacement and maintenance costs is required Because of the compaction performed by these units, there is a higher percentage of recyclables placed in the bins that may not be sorted out at Material Recovery Facilities and thus will not be diverted from landfill disposal Therefore, these units can lower diversion from landfills since waste may not be able to be separated from recyclables once placed in the unit itself Recyclables would need to be sorted prior to being placed into the trash compactor unit. There are also commercially available compacting units for specific recyclable material Public Works is considering purchasing a number of these bins for use in high foot-traffic, high litter areas Upgraded trash receptacles, including lidded or compacting, are generally effective against fly-away litter However, replacing those that become vandalized or damaged could become expensive, and the investment may not significantly reduce Expanded Polystyrene (EPS) litter

Installing more litter capture devices, such as catch basin screens, inserts, street sweeping, and nets/booms in flood channels, may reduce the amount of litter flowing into the ocean, but as these are designed for low rainfall events (peak flow resulting from a one-year one-hour storm), the effectiveness against a moderate or heavy rainfall would be low Also, installation requires heavy initial investment and increased ongoing maintenance resulting in increased maintenance costs The County is responsible for meeting all of the trash Total Maximum Daily Load (TMDL) requirements regardless of EPS prohibitions A restriction on EPS, which makes up as much as 17 percent of the litter stream, would reduce the amount of that litter material in the storm drain system

Increasing the frequency of catch basin cleanouts will not guarantee that all the material would be captured and may be very costly Increasing the frequency of street sweeping and trash collection would increase the amount of material captured and decrease the probability that EPS would be flushed into catch basins and other open channels, but it would also increase the noise and air pollution, road stress from the vehicles, and traffic congestion as well as costing more taxpayer money

The current system of catch basin screens, inserts, cleanouts, and street sweeping, though extensive, does not solve the problem of EPS litter entering the storm drain system Pump station forebays and downgrades from catch basins are often filled with floating EPS, which highlights some of the main issues of relying solely on the above mentioned litter capture practices Relying on BMPs to solve the EPS litter issue will not keep small particles and other litter from not being captured As EPS breaks into smaller and smaller pieces it becomes more likely to float over an insert screen or possibly flow through an opening in the screen Insert screens have 5mm diameter holes which allow for the passage of water, but block large-sized litter These screens

also allow litter pieces smaller than 5mm diameter to pass through the screen, while material of almost any size can pass over the screen during a large rain event. It has been well documented that plastic particles smaller than 5mm have been found on beaches around the world [72]

Heavy rains can easily overwhelm the flood control system and allow floating litter to escape over the insert screens Even after fully complying with TMDL/NPDES regulations, the system may not capture all of the littered EPS, as they are designed to be most effective during light rain events The combination of catch basin inserts and street level screens are effective in preventing litter and debris from flowing into the drain pipes, and downstream towards the ocean during low flow periods but are not effective during high flow periods. Similar to the catch basin screens, nets at the end of flood channels are not as effective during large runoff events and once overwhelmed/filled with material they will not capture any more material

EPS is a substantial portion of the litter stream which, together with other litter, can clog the flood control system and increase maintenance costs. Increasing the frequency of emptying and inspecting the catch basins would result in reduced trash in the catch basins but at a significant cost. Currently the County has plans to increase the reach of the catch basin insert, street level screens, and cleanout frequency Upstream solutions are needed to couple the end-of-pipe infrastructure already in place, especially for products that are disproportionately present in the litter stream compared to the waste and recycling streams

EPS litter places a disproportionate strain on these litter maintenance methods, due to the rampant use of EPS products by retailers, its propensity to become litter, durability and persistence of EPS once littered, its very high buoyancy, and the difficulty in capturing EPS material once littered EPS food containers are widely used because they are inexpensive and provide adequate insulation For some restaurants with a carryout service, EPS is the only product used Other restaurants have switched to alternative products for environmental reasons, customer preference, and business image

[72] Kershaw, P et. al. (2011). Plastic Debris in the Ocean. UNEP Year Book 2011: Emerging Issues In Our Global Environment, United Nations Environment Programme, Nairobi, Kenya. http://www.unep.org/yearbook/2011/pdfs/plastic_debris_in_the_ocean.pdf

CHAPTER 7

FINDINGS AND RECOMMENDATIONS

Findings Regarding the Feasibility of Extending the Prohibition

- Legal Barriers No legal barriers to adopting an EPS prohibition were identified, and many jurisdictions have adopted prohibitions through local ordinances without legal challenges The County would need to determine what level of review is necessary for compliance with the California Environmental Quality Act (CEQA), if any, which may or may not require the development of an environmental document.

- Case Studies. We reviewed case studies of at least 53 jurisdictions in California have restricted EPS in some form, including Los Angeles County's restriction at County operations Of these, 43 have prohibited retailers from utilizing EPS Also, it is important to note the following:
  - Enforcement efforts are typically limited.
  - There is little information regarding the potential financial impact on businesses or consumer preference
  - Some ordinances incorporate hardship provisions that would allow a business to apply for an extension We did not find a record of any businesses requesting such an extension

- Alternative Products. Alternatives to EPS (paper and other compostable products, aluminum, plastics including recyclable plastics, etc.) are readily available, although generally they are more expensive The environmental benefit of these alternatives is maximized if they are recycled or composted

- Economic Impact: An EPS prohibition may result in additional costs to businesses of up to $3,000 to $5,000 per year An economic analysis would be required to validate this estimate

- Development, Implementation, and Enforcement. Cost to fully comply with CEQA, complete an economic study, develop a draft ordinance, and implement an educational campaign is estimated at up to $1,000,000 Enforcement costs are unknown, but are expected to entail development of a public-driven reporting system, minor inclusion of food establishment inspection for the EPS policy by County Public Health inspectors, and monitoring and processing of violations and fines

Other Key Findings

- EPS prohibitions in other jurisdictions within California have significantly decreased the amount of EPS litter in the litter stream, although some studies

show that alternative products have replaced the prohibited EPS in the litter stream Moreover, the Board of Supervisors can only enforce an ordinance in the unincorporated County areas (UCAs), which constitute approximately 10 percent of the Countywide population

- An EPS prohibition would impact the UCAs Adoption of similar prohibitions by a majority of the Cities within the County would be necessary in order to substantially reduce the prevalence of EPS litter in Los Angeles County A Statewide EPS prohibition would be most effective and provide for a more consistent implementation of the prohibition

- Some residential and commercial areas of the County have access to composting for food scraps and compostable food containers Public Works is working to expand this access, and also encourages residential backyard composting through our Countywide Smart Gardening Program

- Curbside recycling of recyclable food containers is widely available to most residents and businesses in the County Thirty-two cities allow EPS food containers to be deposited in the recycling bin at curbside However, most material recovery facilities (MRFs) do not process EPS and instead landfill the material

Policy Options Considered by the Working Group

After careful consideration of these elements, the following four broad Policy Options were developed for further consideration

- Statewide Prohibition – Aggressively pursue passage of a Statewide prohibition on the use of EPS at food service establishments. This option would be most effective since it would be uniformly applied and enforcement costs would not be borne by the County

- County Prohibition (Unincorporated Areas) – Partially or fully prohibit EPS food containers at certain food service establishments in the UCAs Would need to develop a draft ordinance, determine whether compliance with CEQA is required and whether an EIR is needed, conduct an economic study, conduct an educational campaign, and develop an enforcement plan May cost up to $1 million (not including enforcement cost)

- Voluntary Efforts – Would potentially cost hundreds of thousands or millions of dollars, depending on scale of implementation and level of support from industry Effectiveness of voluntary efforts would depend heavily on how comprehensive they are and how many resources are devoted by the industry and other partners

- Status Quo – Under this option, no additional funds would be required This is not a "do nothing" option, but rather a commitment to continue efforts currently being implemented, including

- Litter prevention
- Public education
- Litter collection and infrastructure
- Recycling, composting, and other waste diversion strategies, including EPS recycling

Recommendation for Consideration

Although there was broad agreement among the members of the Working Group regarding a number of issues as well as support for many of the elements discussed above, consensus could not be reached by the Working Group on a comprehensive recommendation In general, industry representatives remained strongly opposed to a prohibition, while environmental organization representatives strongly favored a prohibition

There was recognition by the Working Group that EPS food containers contribute disproportionately to the litter problem and that reducing the prevalence of these containers should be a priority There was also recognition that no single element discussed by the Working Group is expected to be as effective as a prohibition in significantly reducing the volume of EPS food containers that become litter However, Public Works believes that some of these elements can be incorporated into a more comprehensive effort that may achieve comparable results to a prohibition in addition to contributing to an overall reduction in litter Also, an ordinance prohibiting EPS may have a negative economic on businesses in the UCAs if a Statewide prohibition or prohibitions in other jurisdictions are not widely adopted

Therefore, based on our research and evaluation of case studies and upon consideration of the feedback from the Working Group, Public Works recommends pursuit of the following combined strategy:

1) *Pursue the passage of a prohibition of EPS food containers at a Statewide level*

   A Statewide prohibition would be the most effective measure to reduce EPS food container litter in the County Senate Bill 568 (Lowenthal), already supported by the County, is currently pending in the State legislature after passage in the State Senate earlier this year

2) *Partner with the industry to establish a Comprehensive Program to reduce litter, including EPS food container litter, and otherwise enhance the environment in the region*

   This comprehensive Program will combine efforts from municipalities, industry, and environmental organizations through the County's existing Working Group The focus of the efforts would be to reduce the prevalence of EPS food container litter, while also reducing other forms of litter The Program would consist of an integrated strategy that incorporates public education, litter collection and management, EPS recycling, composting infrastructure, enhanced enforcement of anti-litter laws,

extended producer responsibility, and conversion technologies/waste-to-energy A more detailed discussion of this Program can be found further below

3) *Consider a prohibition in the UCAs if measures 1 and 2 above are not found to be successful*

If the State Legislature fails to adopt legislation addressing EPS litter, and the comprehensive program is not determined to be successful, your Board may consider additional measures, including a prohibition in the UCAs

Program Implementation--Responsibilities

Stakeholders would share responsibilities in implementing the Program As identified below, the number of asterisks designates the party that is anticipated to be primarily responsible for carrying out and/or funding a particular component:

* = The County would take the lead on this component, with assistance and in-kind support, as appropriate, from industry and other stakeholders.
** = Industry and the County would collaborate on funding/implementing this component, with participation from other stakeholders as appropriate.
*** = Industry representatives would be primarily or wholly responsible for carrying out/funding this component.

Key Components

A. *Public Education Program****

i) Anti-litter, including EPS food containers in particular
ii) Promoting environmentally-friendly alternatives, including reusable containers as well as recyclable and biodegradable products
iii) Recycling of EPS, as applicable, as well as recycling and composting food containers rather than disposing or littering them

B *Litter collection and management*

i) Additional infrastructure to accelerate compliance with water quality, trash, and litter regulations and mitigate litter (e.g catch basin inserts, additional trash and recycling receptacles, upgraded receptacles that have lids or other means of preventing litter, and collection of these receptacles)**
ii) Additional litter cleanup events in beaches, parks, communities and other unincorporated area locations***

C. *EPS recycling****

i) Provide or subsidize the purchase or lease of densifiers to MRFs willing to recycle collected EPS materials
ii) Increase the market value for recovered EPS material (e.g by offering a premium for recycled EPS feedstock)

iii) Comprehensive recycling infrastructure at large venues, restaurants and retail food vendors (including collection bins and bags, printed outreach material, and forms for documenting volumes collected/recycled)

D *Composting infrastructure*[*]

i) Encourage the development of additional composting facilities in the County
ii) Facilitate additional opportunities for residents to compost, including curbside collection and backyard composting
iii) Encourage residents to participate in composting to the extent feasible, educate the public about what items are and are not compostable

E *Enforcement*[**]

i) Provide additional funding to enforcement agencies to enhance their focus on littering, and provide sufficient resources to enable agencies to issue citations to litterbugs
ii) Promote this enhanced enforcement to ensure residents are aware of the potential financial consequences of littering (in addition to other negative consequences)

F *Extended Producer Responsibility*[***]

i) Take responsibility for managing EPS products at the end of their useful life, ideally through collection for recycling or other beneficial use
ii) Promote future redesign of EPS products to be less persistent in the natural environment, less prone to become litter, and/or less likely to be mistaken for food by wildlife

G *Conversion Technologies*[**]

i) Provide incentives to divert unrecyclable plastics, including contaminated EPS or EPS without local recycling, opportunities, to conversion technology facilities or waste to energy facilities rather than landfilling

H *Litter Characterization Studies and Evaluation of the Program*

i) Initiate a baseline characterization study for litter in public areas (e.g roads, parks, and beaches) and within DPW stormwater infrastructure[*]

ii) Conduct yearly follow up studies to establish trends for litter[***]
iii) Conduct surveys to evaluate the success of the outreach campaign[***]

Measurement of Success

The Program would be considered a success if it can achieve a similar reduction in the prevalence of EPS food containers being littered to a prohibition This is estimated to be a 35 percent or more reduction in EPS food containers identified in waste characterization studies from litter collected in roadways in the unincorporated County areas within 18 months Additional measures of success would also be taken into consideration when evaluating the success of the program, including but not limited to

1 Reduction in overall litter, including litter in other public areas and litter within DPW stormwater infrastructure
2 Effectiveness of the public education efforts to raise awareness and bring about changes in consumer or retailer behavior/purchasing patterns
3 Participation in the Program by industry representatives, including EPS manufacturers and distributors as well as restaurants and food vendors
4 Increase in diversion of EPS food containers to recycling and other beneficial uses
5 Additional litter prevention infrastructure beyond that required by State and Federal regulations

Industry Commitment

At the time of this report, industry representatives reviewed the proposed recommendations above and agreed to commit the following resources to supporting this effort:

- Keep California Beautiful (KCB) is attempting to establish a major anti-littering public education campaign in Southern California and is eager to partner with the County in this effort. They have a established a target of assembling $1 million in funds to implement this campaign, although at this time the majority of the funds have not been committed by KCB partners The Plastics Foodservice Packaging Group (PFPG) will provide some funding towards this effort, and direct the funds towards focusing the campaign in Los Angeles County, and on EPS food containers in particular

- Within 90 days of initiating the comprehensive program, PFPG would deposit $150,000 in to an escrow account to support sustainable programs to reduce litter and increase recycling This money would be used by the County, with input from the working group, to assist in the funding of activities to address EPS litter including - a litter characterization survey, litter collection and management, clean ups, recycling and/or enforcement. Assessment of progress/investment with the County would be conducted within 18 months regarding these programs

- PFPG and California Restaurant Association (CRA) will develop a joint program to provide outreach to the over 1,500 restaurants in Los Angeles County with a targeted public education campaign focused on reducing EPS and foodservice litter and promoting recycling of EPS and other foodservice materials as appropriate PFPG and CRA would also promote the public education campaign

through business, civic and community organizations and partners throughout the County This outreach will be quantified for the working group Approximate cost is estimated at over $50,000

- PFPG and the American Chemistry Council (ACC) would continue its financial support of local non-profit groups including FoLAR, Los Angeles Conservation Corp River Corp Program, Keep Los Angeles Beautiful in their education and cleanup efforts Support in 2012 is estimated at $55,000

- PFPG would support and promote voluntary programs to manage EPS products at the end of life, such as take-back, recycling, education of customers and end users, and promotion of material collection via using recycled materials in new products. Efforts would be reported to the working group

APPENDIX A

EPS Staff Report Part I

An Overview of Expanded Polystyrene Food Containers in Los Angeles County

PART ONE

Banning Expanded Polystyrene Food Containers at County Operations

A STAFF REPORT TO THE LOS ANGELES COUNTY BOARD OF SUPERVISORS

October 2008

"To Enrich Lives Through Effective and Caring Service"

COUNTY OF LOS ANGELES

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Preface

Report Mandate

On May 22, 2007, the Los Angeles County Board of Supervisors approved the following actions related to the use of expanded polystyrene food containers:

1. Instruct the Director of Public Works, in consultation with the Director of Internal Services and County Counsel, to investigate the impact of prohibiting the purchase and use of expanded polystyrene food containers at all County-owned facilities, County offices, County-managed concessions, County-permitted events, and County-sponsored events, and report back with recommendations, including:
   a) A recommendation on the earliest practical effective date for such prohibition;
   b) A recommendation on whether there should be a case-by-case temporary waiver as a result of contractual obligations or if there are no other viable alternatives for specific products; and
   c) A description of the proposed outreach program to provide information and assistance in identifying environmentally friendly alternatives to expanded polystyrene food containers;
2. Instruct the Director of Public Works, in consultation with County Counsel, to investigate and report back in six months on the feasibility of prohibiting the use of expanded polystyrene food containers at all food service establishments and retail stores in the unincorporated County areas, including recommended changes to the County Code;
3. Instruct the County's Legislative Advocates in Sacramento to pursue passage of AB 820 (Karnette) which seeks to ban the selling, possession, or distribution of expanded polystyrene food containers at State facilities, including universities and colleges;
4. Instruct the Chief Executive Office to update the County's policies and proposals for the 2007-2008 State Legislative Session to pursue legislation which promotes market development and manufacturer stewardship of products made of alternatives to polystyrene; and
5. Instruct the Director of Public Works to enhance the educational and public outreach campaigns to encourage Los Angeles County residents, public agencies, school districts and Cities on environmentally-friendly alternatives to polystyrene.

This Part I report highlights staff findings in response to Item 1 above: prohibiting the purchase and use of expanded polystyrene food containers at all County operated facilities. As reported to the Board of Supervisors in 2007, the timing and implementation of Part II (Item 2 above) will rely upon the findings of this report and implementation of its recommendations, if approved. Items 3, 4 and 5 have been completed.

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EXECUTIVE SUMMARY

Background

This report is in response to a motion by the Los Angeles County Board of Supervisors to investigate the impact of prohibiting the purchase and use of expanded polystyrene (EPS) food containers at all County-owned facilities, County offices, County-managed concessions, and County-permitted and sponsored events. This report summarizes the impacts of EPS food containers and the options available to transition County operations to more environmentally friendly alternatives. The Board has elected to make County offices the first to act in order to demonstrate leadership on this critical issue.

Need to Reduce Expanded Polystyrene Litter

The properties of EPS make it an inexpensive and effective material for product packaging and food/beverage containers. As a result, 56,000 tons of EPS products (primarily product packaging and food containers), equivalent in volume to over eight Empire State Buildings, enter the marketplace in California annually, with the overwhelming majority either disposed or littered.[1] Once littered, EPS food containers are easily blown into our storm drain system. Their lightweight characteristic enables them to be readily carried downstream into our waterways, negatively impacting the environment and wildlife. They also end up entangled in brush, tossed along freeways, and washed up on our beaches. Because EPS crumbles and is often difficult to collect, it is a greater eyesore and nuisance than other littered materials. This littering also impacts recreational areas and the quality of life for residents in Los Angeles County.

Public agencies collectively spend tens of millions of dollars annually on litter prevention, cleanup, and enforcement activities. The litter collected includes EPS food containers that are most often white and highly buoyant. EPS containers are often seen floating in gutters, rivers, and creeks following rain events, clearly standing out among other debris. Several litter studies have found EPS to make up the majority of particles in the total litter stream.[2] A 1998 study in Orange County, California, quantified the composition of beach debris and found that foamed plastics comprise 43 percent of materials collected.[3] The cost to local governments is expected to dramatically rise over the next few years due to compliance with requirements under the Federal Clean Water Act. Currently, the County of Los Angeles Department of Public Works (DPW) and the

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[1] "Use and Disposal of Polystyrene in California," California Integrated Waste Management Board 2004, http://www.ciwmb.ca.gov/Publications/Plastics/43204003.doc

[2] Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California - C.J. Moore, G.L. Lattin, A.F. Zellers, Algalita Marine Research Foundation
http://conference.plasticdebris.org/whitepapers/CJ_Moore_Working_Our_Way_Upstream.doc

[3] Moore, S.L., D. Gregorio, M. Carreon, S.B. Weisberg and M.K. Leecaster. – 2001. Composition and distribution of beach debris in Orange County, California. Mar. Pollut. Bull., 42(3): 241-245., The percentage is calculated outside of pre-production pellets, which do not originate from consumer or residential sources.

Flood Control District (FCD) spend approximately $18 million per year on clean-up activities such as street sweeping, catch basin cleanouts, cleanup programs, and litter prevention and education efforts.

Figure 1 – Expanded Polystyrene Cups And Other Plastic Trash Captured In The Los Angeles River Debris Net

Key Findings

Findings in the report are based on two components, the first involving research findings related to environmental factors and the second involving findings based on questionnaire responses received from County departments and agencies. (Appendix D)

Findings based on environmental factors:

- Reducing the use of EPS food containers would result in a benefit to the environment by reducing litter, and in turn, reducing the negative impact on the marine environment and other wildlife. This reduced litter would also lead to a decrease in cleanup costs.
- Replacing EPS products with reusable and durable goods, where applicable, would have the highest positive impact on the environment.

- Developing a policy restricting the use of EPS products and promoting environmentally friendly alternatives would boost other environmental initiatives and raise environmental awareness.

Findings based on County questionnaire responses:

- Prohibiting the purchase and use of EPS food containers at all County-owned facilities, County offices, County-managed concessions, County-permitted and County-sponsored events would be feasible to a great extent since use of EPS by County departments is relatively moderate and several County departments already use alternative products to some extent.
- In comparison to EPS food containers, comparable alternative products may be significantly more expensive to purchase, depending on the nature of the material used, manufacturing process, and the durability of the product. However due to the diversity of readily available alternatives, some of which are comparable in cost to EPS, the vast majority of County Departments can comply with this restriction with little or no impact on their overall budgets, of which food container purchases are only a small component. For other Departments where health, safety and/or security may require a specific type of alternative product in lieu of EPS food containers, the transition to an alternate product may not be feasible for the foreseeable future based on the significant cost involved.
- Utilizing alternative products is a viable option for departments and agencies provided that additional funding is available. It is expected that Departments will be able to make the necessary adjustment in future year budgets. If this is not possible, Departments will need to apply for a waiver.

Recommendation for Consideration by the Board of Supervisors:

Since EPS food containers contribute disproportionately to the litter and environmental problems within the County of Los Angeles, the County working group recommends phasing out the purchase and use of EPS food containers and encouraging the use of environmentally preferable alternatives within all County operations. The following Board action would facilitate implementation of this recommendation:

Adopt a restriction on the purchase and use of all EPS food containers, beginning July 1, 2009, at County-owned facilities, County offices, County-managed concessions, County-permitted events, and County-sponsored events.

Further, authorize the County's Energy and Environmental Team (Team) to grant a waiver under the following circumstances:

- Health and/or safety operational issues are demonstrated;
- Existing contract requirements stipulate the purchase of EPS products and the contract cannot be amended; and/or
- A County facility incorporates full containment and collection of all EPS food containers generated on site, for the purposes of recycling those containers.

Note: County agencies requiring a waiver must submit a request to the Team specifying the reason(s) a temporary waiver is needed. The Team, in consultation with ISD and Public Works, will make a determination regarding requests on a case by case basis.

In consultation with ISD and Public Works, the Team will provide semi-annual progress reports for a three-year period describing the progress and efforts to phase-out the use of EPS food containers at County operations, including a summary of approved waivers. The Team will also notify Departments of the new policy and provide training on environmentally-friendly alternatives to EPS food containers.

ISD will update the existing Countywide Purchasing Policy for the Purchase of Environmentally Preferable (Green) Products, Policy No. P-1050 (Appendix C), to include an EPS food and beverage container component with specific emphasis on the following hierarchy for procurement of alternative products, as shown in Figure 2 below:

a. Reusable and durable goods
b. Biodegradable single-use products, including paper-based single-use products with no petroleum coating
c. Recyclable single-use products
d. Other non-EPS products
e. EPS products, for those cases where a waiver is approved

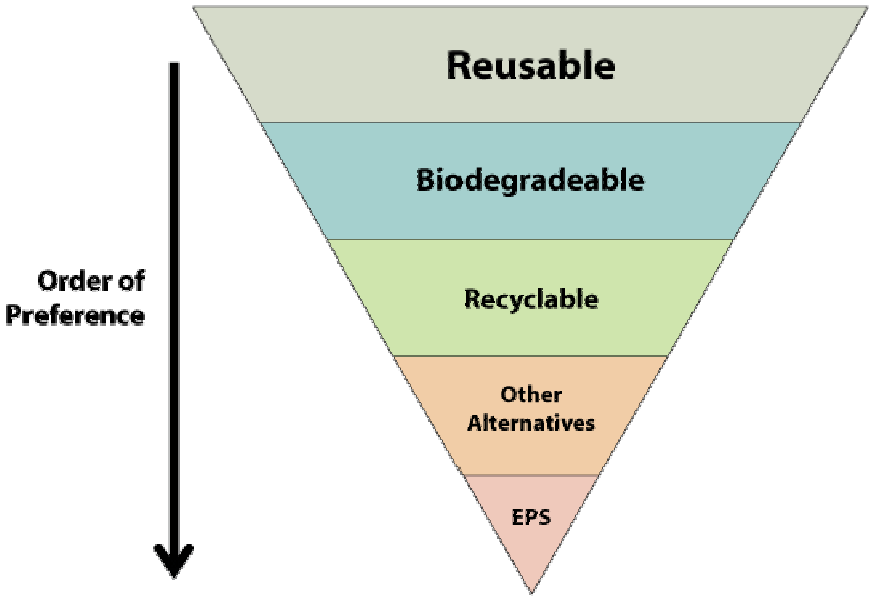

Figure 2 – Hierarchy of Preferred Alternatives for Procurement

In consultation with ISD and DPW, the CEO will retain a consultant to initiate product alternative and guideline study for County purchase agreements for vendors who provide alternative products based on the hierarchy cited in Figure 2 above. The consultant will then develop an EPS training program and train County departments.

CHAPTER 1

INTRODUCTION AND METHODOLOGY

Introduction

On May 22, 2007, the Los Angeles County Board of Supervisors approved the following actions related to the use of expanded polystyrene food containers:

1. Instruct the Director of Public Works, in consultation with the Director of Internal Services and County Counsel, to investigate the impact of prohibiting the purchase and use of expanded polystyrene food containers at all County-owned facilities, County offices, County-managed concessions, County-permitted events, and County-sponsored events, and report back with recommendations, including:
    a. A recommendation on the earliest practical effective date for such prohibition;
    b. A recommendation on whether there should be a case-by-case temporary waiver as a result of contractual obligations or if there are no other viable alternatives for specific products; and
    c. A description of the proposed outreach program to provide information and assistance in identifying environmentally friendly alternatives to expanded polystyrene food containers;
2. Instruct the Director of Public Works, in consultation with County Counsel, to investigate and report back in six months on the feasibility of prohibiting the use of expanded polystyrene food containers at all food service establishments and retail stores in the Unincorporated County Areas, including recommended changes to the County Code;
3. Instruct the County's Legislative Advocates in Sacramento to pursue passage of AB 820 (Karnette) which seeks to ban the selling, possession, or distribution of expanded polystyrene food containers at State facilities, including universities and colleges;
4. Instruct the Chief Administrative Officer to update the County's policies and proposals for the 2007-2008 State Legislative Session to pursue legislation which promotes market development and manufacturer stewardship of products made of alternatives to polystyrene; and
5. Instruct the Director of Public Works to enhance the educational and public outreach campaign to encourage Los Angeles County residents, public agencies, school districts and Cities on environmentally-friendly alternatives to polystyrene.

This Part 1 report highlights staff findings in response to Item 1 above. The timing and implementation of Part II (Item 2 above) will rely upon the findings of this report and implementation of its recommendations, as reported to the Board of Supervisors in 2007. Items 3, 4, and 5 have been completed.

Current Disposal Conditions

Los Angeles County has the most extensive and complex solid waste system in the nation. It covers an area of approximately 4,084 square miles and encompasses 88 cities and 140 unincorporated communities.[4] One in three Californian's live in Los Angeles County, which has a population of 10.2 million people. Los Angeles County is the most populous county in the nation, having a larger population than 42 states and 162 countries.[5] The County's population is expected to increase to approximately 11 million people by 2020.[6] If it were a country, Los Angeles County would rank 17th in the world in terms of Gross Domestic Product.[7] This vigorous population growth, coupled with comparable increases in economic activity, will have a major impact on the solid waste management infrastructure in Los Angeles County.

In 1989, the California Legislature passed the California Integrated Waste Management Act (Assembly Bill 939). Assembly Bill 939 requires every city and county to divert 50 percent of all solid waste generated from landfill disposal or face a fine of up to $10,000 per day. Counties have the added responsibility of assuring adequate disposal capacity for the residual trash that remains after recycling for a 15-year planning period.

Since 1990, numerous programs have been implemented at the city and County levels, including curbside recycling, construction and demolition waste recycling, and business recycling enhancement programs. In addition, the County has implemented countywide recycling programs to assist jurisdictions in complying with Assembly Bill 939, such as the Countywide Household Hazardous/Electronic Waste Management Program, the Waste Tire Collection Program, and the Smart Gardening Program.

Methodology Used

Published studies were reviewed and analyzed to comprehensively assess the operational, environmental and fiscal impacts of EPS. In addition, surveys of major food vendors, solid waste facilities, Caltrans, cities, and County departments were conducted to gather information on prevailing recycling, cleanup methods, litter characterizations, and costs. Several public and environmental interest groups, industry, and manufacturing trade organizations were also consulted regarding EPS consumption data, management options, litter impacts, and cleanup efforts. Finally, a questionnaire was provided to County departments and agencies to assess current County practices and determine the viability of eliminating the purchase and use of EPS food containers as called for in the Board motion.

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[4] County of Los Angeles Statistical Data, http://lacounty.info/statistical_information.htm, December 13, 2007

[5] Los Angeles County Economic Development Corporation, Los Angeles County Profile, May 2006.

[6] Los Angeles County Economic Development Corporation, L.A. Stats, June 2006.

[7] County of Los Angeles Annual Report 2006-2007, http://lacounty.info/miscellany.pdf, (December 18, 2007).

CHAPTER 2

OVERVIEW OF EXPANDED POLYSTYRENE

Overview

Polystyrene, the polymer used to create EPS, was developed in 1938. EPS products were produced after 1944 and used as packaging material. After fast food and take-out restaurants became more commonplace in the 1950's and 1960's, EPS food packaging containers became more prevalent.

History of Expanded Polystyrene (EPS)

1944: EPS first used as packaging material.

1960's: Fast food restaurants begin using EPS for food containers.

1987: City of Berkeley, CA bans the use of EPS food containers at restaurants and other retail food establishments.

1988: Suffolk County, NY bans the use of EPS for food containers in restaurants and other retail food establishments.

1989 The U.S. Department of Interior banned EPS food containers at its Washington, DC headquarters.

1990: McDonald's begins to phase out EPS food containers nationwide.

2004: The California Integrated Waste Management Board issues a report which finds that public education efforts need to be improved to deliver a consistent litter message, litter studies are needed to determine how to best handle the litter problem, and biodegradable alternatives to EPS containers need to be tested.

2005: City of Malibu bans the use of polystyrene food containers (Type #6 plastic, which includes EPS) citywide.

2006: City of Santa Monica bans the use of polystyrene food containers (Type #6 plastic, which includes EPS) citywide. Ordinance took effect February 2008.

2007: City of Calabasas bans the use of polystyrene food containers (Type #6 plastic, which includes EPS) citywide. Ordinance took effect March 2008.

How Is EPS Manufactured?

Plastic resin is created from long chemical chains called polymers, commonly extracted from petroleum and natural gas processing. The main polymer used, styrene, is treated with a polymerization indicator to convert it to polystyrene. Once the polymer chain is at the correct length, terminating agents are introduced to stop the reaction. The results are a chain of beads which are cleaned. The beads are melted down and a blowing agent is added to extrude the beads, which are reheated, expanded, and cooled. After cooling, the beads are fed into a mold of the desired shape.

How is EPS Recycled?

A survey of waste haulers and materials recovery facilities (MRFs) found that the overwhelming majority of haulers and facilities do not accept EPS food containers from curbside recycling. MRFs separate materials delivered using a variety of mechanical and manual sorting systems. Their main objective is to maximize diversion of recyclables from the waste stream, while reducing cost and maximizing revenue from those materials targeted for recovery. The most commonly recovered materials include some plastic containers, paper, aluminum cans, and cardboard because they are easy to collect, have an available market, and provide the most revenue without costly specialized sorting machinery. Interviews and site visits of these recovery and recycling facilities revealed that EPS *product packaging* is targeted for recovery; however, EPS *food containers are not targeted for recovery*, but instead taken to landfills for the following reasons:

- EPS *food containers* have high contamination rates from food and may contaminate other recyclables as well. Additionally, EPS *food containers* are contaminated when they come into contact with items in the recycling collection bin. EPS *food containers* that are contaminated cannot be efficiently recycled.
- EPS *food containers* are smaller than EPS product packaging (e.g., for TVs, stereos, etc.), and tend to break up into smaller pieces when handled by machinery, making collection of EPS challenging.
- It is not currently cost efficient to recycle EPS *food containers* as the market for this material is weak, largely due to contamination issues coupled with the relative cost to collect, clean, and densify these materials.

The national recycling rate for all EPS products (which includes product packaging and food containers) is only 0.2 percent.[8] Since food containers are even more challenging to collect and recycle, it is assumed that the 0.2 percent recycling rate is mostly due to product packaging and that the recycling rate for food containers is virtually nonexistent. Very recently, a method has been developed for the separate collection and aggregation of source separated EPS food packaging containers for recycling. In order to be successful, EPS users must have significant quantities of uniform EPS food

[8] "Use and Disposal of Polystyrene in California," California Integrated Waste Management Board, 2004. (http://www.ciwmb.ca.gov/Publications/Plastics/43204003.doc). EPS food containers may have a lower overall rate due to additional challenges of collecting and recycling these materials.

packaging containers that can be relatively clean and entirely separated from other materials for collection. In certain applications this system can provide for the collection and recycling of EPS food packaging containers.

Figure 3 – Typical view of source-separated recyclables traveling along a sorting conveyor belt at a recycling facility

EPS Usage Information

Below is a table summarizing consumption, disposal and recycling rates of EPS in California. Rates for Los Angeles (countywide and unincorporated) are extrapolated based on population.

Table 1 – Expanded Polystyrene Usage Statistics

Item	Statistic
Annual EPS Consumption Rate	
California	56,637 tons
Countywide	15,858 tons
Unincorporated County area	1,586 tons
Annual Rate of Disposal at Landfills	
California	45,000 tons
Countywide	12,000 tons
Unincorporated County area	1,200 tons
Percentage of Overall Disposal Waste Stream	0.12 percent by weight
Annual Rate of Recycling	

Item	Statistic
National	0.2 percent[9]

Do County Departments Use EPS Food Containers?

In order to determine possible impacts to County departments, DPW distributed a questionnaire in September of 2007 to all County departments assessing current usage of EPS food containers at County operations, including cafeterias and food service provided at County offices. In coordination with the Internal Services Department, usage information was gathered and compiled in Table 2 below. Only seven departments indicated any substantial use of EPS food containers. A complete summary of responses from all departments and a sample questionnaire are included in Appendix D.

Table 2 -- Use of EPS Food Containers by County Departments and Agencies

County Department	Use EPS?	Quantity of Use/Comments
Agricultural Commission/Weights and Measures	**No**	
Alternate Public Defender	**No**	
Animal Care and Control	**No**	
Auditor-Controller	**No**	
Beaches and Harbors	**No**	
Board of Supervisors	**No**	
Chief Executive Office	**Yes**	500-1,000 units per year
Chief Information Office	**No**	
Child Support Services	**No Response**	
Children and Family Services	**No**	
Commission on Human Relations	**Yes**	5,000 cups, 2,000 plates per year
Community and Senior Services	**Yes**	49,000 trays, 24,000 bowls, 47,000 cups per year
Community Development Commission	**No**	
Consumer Affairs	**Minimal**	Used for special events only

[9] Ibid. Based on recycling rate of all polystyrene food containers; EPS food containers may have a lower overall rate due to additional challenges of collecting and recycling these materials.

County Department	Use EPS?	Quantity of Use/Comments
Coroner	**No Response**	
County Counsel	**No**	
District Attorney	**No Response**	
Fire Department	**Yes**	72,000 cups per year
Health Services	**Yes**	1.6 million cups per year
Human Resources	**No**	
Internal Services Department	**No**	
Mental Health	**Minimal**	Used to educate consumers on how to cook and prepare meals
Military and Veterans Affairs	**No Response**	
Museum of Art	**No**	
Natural History Museum	**No**	
Office of Affirmative Action Compliance	**No**	
Office of Public Safety	**No**	
Office of Small Business	**No Response**	
Office of the Assessor	**Minimal**	Used for special events only
Ombudsman	**No**	Phased out the use of EPS
Parks and Recreation	**Yes**	Used at concession stands, exact figures unknown
Probation	**No**	Phased out EPS in mid 2008
Public Defender	**No**	
Public Health	**No Response**	
Public Library	**No Response**	
Public and Social Services	**No Response**	
Public Works	**Minimal**	10,000 cups, 3,800 other containers per year. Phases out all EPS food containers Earth Day (April) 2008
Regional Planning	**No**	
Registrar-Recorder/County Clerk	**No**	
Sheriff	**Yes**	65,000 24oz. cups; 4 million 8oz. cups; 100,000 food containers; and 500,000 trays per year

County Department	Use EPS?	Quantity of Use/Comments
Treasurer & Tax Collector	**No**	

How is EPS Managed in Los Angeles County Jurisdictions?

Out of 88 cities within the County, 19 indicated that they have a curbside EPS collection program. A survey of waste haulers and materials recovery facilities (MRFs) found that the overwhelming majority of haulers and facilities do not accept EPS food containers from curbside recycling. MRFs separate materials delivered using a variety of mechanical and manual sorting systems. Their main objective is to maximize diversion of recyclables from the waste stream, while reducing cost and maximizing revenue from those materials targeted for recovery. The most commonly recovered materials include paper, aluminum cans, cardboard, and certain plastic containers, since these particular materials are easy to collect, have an available market, and provide the most revenue without costly specialized sorting machinery. Interviews and site visits of these recovery and recycling facilities revealed that while in some cases EPS *product packaging* is targeted for recovery, EPS *food containers are not targeted for recovery*, but instead primarily disposed, for the following reasons:

- EPS *food containers* have high contamination rates from food and may contaminate other recyclables as well. Additionally, EPS *food containers* are contaminated when they come into contact with items in the recycling collection bin. EPS *food containers* that are contaminated cannot be efficiently recycled at traditional recycling facilities.
- EPS *food containers* are smaller than EPS product packaging (e.g., for TVs, stereos, etc.), and tend to break up into smaller pieces when handled by machinery, making collection of EPS challenging.
- It is not currently cost efficient to recycle EPS *food containers* as the market for this material is weak, largely due to contamination issues coupled with the relative cost to collect, clean, and densify these materials.

The national recycling rate for all EPS products (which includes product packaging and food containers) is only 0.2 percent. Since food containers are even more challenging to collect and recycle, it is assumed that the 0.2 percent recycling rate is mostly due to product packaging and that the recycling rate for food containers is virtually nonexistent. Very recently, a method has been developed for the separate collection and aggregation of source separated EPS food packaging containers for recycling. In order to be successful, EPS users must have significant quantities of uniform EPS food packaging containers that can be relatively clean and entirely separated from other materials for collection. In certain applications this system can provide for the collection and recycling of EPS food packaging containers.

Legislative Information

Within the past several years, the State legislature has advanced a handful of bills dealing directly with EPS food containers. These bills have dealt with limiting and

prohibiting the distribution of EPS food containers at State facilities, as well as conducting studies dealing with the potential impacts of EPS. Below is a summary of each bill.

AB 904 (Feuer) - Amended 1-29-08, Died in Committee

This bill would prohibit a take-out food establishment from distributing single use food service packaging unless the packaging is either compostable or recyclable. The Board of Supervisors voted to support this bill.

AB 820 (Karnette) - Amended 4-09-07, Died in Committee

This bill would prohibit a State facility from selling, possessing, or distributing EPS food containers after January 1, 2009. State agencies would be directed to require each prospective contractor to certify that it will not sell, possess, or distribute an EPS food container at a State facility. The Board of Supervisors voted to support this bill.

AB 1866 (Karnette) - Amended 5-01-06, Died in Committee

This bill would prohibit State facilities from selling, possessing or distributing EPS food containers, with certain exemptions.

SB 1127 (Karnette) - Chaptered 10-01-01

This bill required the California Integrated Waste Management Board to prepare a study on the use and disposal of EPS in the state and submit a report to the Governor and the Legislature. The report, entitled “Use and Disposal of Polystyrene in California,” can be found online at www.ciwmb.ca.gov/Publications/Plastics/43204003.doc.

CHAPTER 3

LITTER AND ENVIRONMENTAL IMPACT

Litter Impact

The widespread use of EPS in the fast food industry and its propensity to become litter has resulted in large quantities of EPS material entering our streams, rivers, and ocean. These light-weight materials are easily windblown into our storm drain system, and are subsequently carried downstream where they pollute and harm our environment and wildlife. They are frequently entangled in brush, tossed along freeways, and caught on fences. Because EPS food containers persist in the natural environment and are also easily broken into small pieces, they are very challenging to contain or collect, and pose a significant nuisance and source of visual blight compared to other littered materials. They are also easily mistaken for food and end up ingested by wildlife, where they can cause harm in the following unintended ways: clogging the throat, thus choking the animal; artificially filling the stomach so that the animal cannot consume food, depriving them of nutrients; and infecting them with harmful toxins that can poison the animal.[10] This blight impacts the County's recreational areas and the quality of life for residents and visitors.

The unsightly accumulation of EPS food containers is clearly visible in our storm drains and waterways. They are commonly seen floating on the water among other debris. Several litter studies have found that EPS makes up a majority of particles in the total litter stream.[11]

[10] http://www.marinedebris.noaa.gov (December 12, 2007), http://www.plasticdebris.com (December 12, 2007), http://www.algalita.org (December 12, 2007)

[11] "Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California" - C.J. Moore, G.L. Lattin, A.F. Zellers, Algalita Marine Research Foundation http://conference.plasticdebris.org/whitepapers/CJ_Moore_Working_Our_Way_Upstream.doc pg 6, Table 5. December 18, 2007.

Figure 4 – EPS food containers caught in fence

Public agencies collectively spend tens of millions of dollars annually on litter prevention, cleanup, and enforcement activities to address this litter problem. The litter collected is composed of constituents including EPS food containers. Compounding the situation, the cost to local governments in Los Angeles County is expected to dramatically rise over the next few years in order to comply with the Federal Clean Water Act.

Inevitably, the cost for cleanup is passed on to residents in the form of higher disposal costs and other taxes. In addition, despite the efforts of various cleanup activities and thousands of residents who annually volunteer countless hours in beach, roadside (e.g., Adopt-A-Highway programs), park, and neighborhood cleanups, EPS food container litter remains a significant problem.

Litter Impact on Local Waterways and Beaches

Los Angeles County beaches are a tourist attraction, attracting millions of residents and visitors each year. In 2004, a study of litter in the Los Angeles River conducted by the Algalita Marine Research Foundation found that EPS made up the majority of the total litter stream.[12] A 1998 study quantified the composition of beach debris in Orange County, California, and found that foamed plastics (refers to EPS) comprised 43 percent of materials collected by abundance.[13] Due to its very low weight density, the composition of EPS was found to be only 6 percent by weight of the debris within the study area.[14] Because EPS is significantly less dense (lighter) than other materials, it is typical for this material to show up in much higher volumes or quantities while being a relatively small proportion of the material by weight. Additionally, the results show that EPS food container fragments from the waterways are often carried to local beaches.

Table 3 includes a summary of recent analyses of litter cleanups and the composition of the collected litter with regard to EPS, followed by a short description of each study.

Table 3 -- Summary of Litter Studies

	All Plastics			Plastic Foam/EPS		
	Weight %	Volume %	Count / Abundance %	Weight %	Volume %	Count / Abundance %
Caltrans Litter Management Pilot Study (1998-2000)	33	43		5	15	
City of Los Angeles Characterization of Urban Litter (6/10/2004)	71	79		7	17	
Composition and Distribution of Beach Debris in Orange County, California (1998) [15]	34		81	6		43
Greater Los Angeles River Clean-Up (4/30/2004)		37			3	
"Working Our Way Upstream" (2004-2005)[16]				18		83

[12] Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California - C.J. Moore, G.L. Lattin, A.F. Zellers, Algalita Marine Research Foundation http://conference.plasticdebris.org/whitepapers/CJ_Moore_Working_Our_Way_Upstream.doc

[13] Moore, S.L., D. Gregorio, M. Carreon, S.B. Weisberg and M.K. Leecaster. – 2001. Composition and distribution of beach debris in Orange County, California. Mar. Pollut. Bull., 42(3): 241-245., The percentage is calculated outside of pre-production pellets, which do not originate from consumer or residential sources.

[14] Ibid.

[15] Ibid.

[16] "Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California" - C.J. Moore, G.L. Lattin, A.F. Zellers, Algalita Marine Research Foundation. The percentage is based on the study of the Los Angeles River over 3 sample dates.

- Caltrans Litter Management Pilot Study -- The purpose of the study was to investigate the characteristics of litter in freeway stormwater and the effectiveness of best management practices. The study was conducted from 1998 through 2000 on a freeway in the Los Angeles area. Results showed that EPS was 5 percent by weight of the litter collected and 15 percent by volume.

- City of Los Angeles Characterization of Urban Litter -- On June 10, 2004, litter was cleaned from 30 storm drain catch basins and characterized for plastics and EPS separately, among other litter types. Approximately 60 cubic feet of litter was collected and sorted. Results showed EPS to be 7 percent of litter by weight and 17 percent of total litter by volume.

- Composition and Distribution of Beach Debris in Orange County, California -- The purpose of this study was to quantify the distribution and types of beach debris by sampling 43 stratified random sites on the Orange County coast from August to September 1998. Outside of pre-production pellets, which do not originate from consumer or residential sources, EPS made up 6 percent of the weight and 43 percent of the abundance of the beach debris collected.

- Greater Los Angeles River Clean-Up -- During an April 30, 2004 clean-up event, organized by the Friends of Los Angeles River, a waste characterization study was conducted. Approximately 60 cubic feet of litter was collected and sorted. Results showed plastic film to be 37 percent of the total litter by volume. This percentage does not include moldable plastics, which was a separate category.

- Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastics and Other Trash to Coastal Waters and Beaches of Southern California, -- Conducted by the Algalita Marine Research Foundation, this study analyzed plastic trash between 1 mm and 5 mm in size as well as plastic trash less than 5 mm from two Southern California Rivers; the Los Angeles River and the San Gabriel River. Based on three sampling dates for the Los Angeles River, the EPS averaged 18 percent of the weight and 83 percent of the abundance of the plastic trash gathered.

Current cleanup equipment is ineffective at collecting EPS fragments from beaches, rivers, and parks due to the tendency of EPS food containers to break apart into smaller pieces. At County beaches, litter is primarily collected using machines that quickly pick up a majority of litter. The two most common machines are called the Rake and the Sanitizer. The Rake uses metal fingers to comb through the sand to pickup litter on the beach; however these metal fingers only pick up larger items and are ineffective at collecting items with a diameter of 0.5 inches (13 mm) or less. The Sanitizer, which is the most common machine utilized, skims the top 2 inches (50 mm) of sand with a large flat blade. The sand and are then screened, sending litter up the screen conveyer to a collection bucket and returning sand to the beach. Although the Sanitizer is effective in collecting items larger than 5 mm (0.2 inches), it cannot collect smaller littered fragments.

Figure 5 – Sanitizer machine cleaning Venice Beach

Figure 6 – EPS fragment not collected by the sanitizer beach cleaning machine at Venice Beach

Another collection issue is that current machines do not work near the wet sand area, allowing debris in this area to be washed into the ocean. Furthermore, other recreational areas such as parks cannot utilize such machinery, and must pick up littered items manually. The propensity for EPS food containers to break apart makes this task daunting.

Financial Impact

County of Los Angeles' Litter Clean up/Prevention Costs

The Los Angeles County Department of Public Works (DPW), as the lead County agency responsible for implementing litter reduction and education programs, implements a variety of programs to reduce the impact of litter on our communities. This includes litter collection along roadways, street sweeping, emptying public trash containers, catch basin cleanouts, flood control channel cleanups, stormwater pollution prevention activities, capital improvement projects, implementing best management practices, and implementing public education and outreach activities. The County of Los Angeles and the Flood Control District (FCD) spend approximately $18 million per year to carryout these responsibilities.

In order to maintain the integrity of the County storm drain system and meet National Pollutant Discharge Elimination System (NPDES) permit requirements, DPW cleans out litter from 78,000 catch basins and additional city-owned catch basins at least once a year. Catch basins that collect considerable litter are cleaned up to three additional times a year. Over 644 tons of litter were removed from County and city catch basins in the 2005-2006 storm season.

DPW also installs and maintains numerous devices that remove litter from the storm drain system. These include 1,026 catch basin inserts and 1,826 curb inlet catch basin retractable screens, 61 "full capture" hydrodynamic separators, 4 end-of-pipe screens, and 21 in-stream floating booms or nets. In addition, the County has contracts for services to clean out trash and debris from channel inverts and rights-of-way.

Figure 7 - End-of-pipe net at Hamilton Bowl

Zero Trash TMDL

The FCD, the County of Los Angeles, and cities within the County are required by their NPDES permits to prevent discharges into its rivers, lakes, and ocean. In addition, the Regional Water Quality Control Board (RWQCB) has imposed total maximum daily loads (TMDL) for what can enter these water bodies. Therefore, the County must implement best management practices to meet these TMDL requirements. The County has for years implemented and maintained numerous best management practices to prevent littering and to remove the litter from its right-of-way and its storm drain system.

Recently, the RWQCB established a zero trash TMDL for the Ballona Creek and Los Angeles River watersheds. These TMDLs require a 10 percent annual reduction of trash entering the water body until zero trash is reached. The zero trash TMDL for both watersheds is to be reached in 2014. These TMDLs not only affect the County of Los Angeles, but also many other agencies. For example, the Ballona Creek Trash TMDL also applies to the California Department of Transportation (Caltrans) and the cities of Los Angeles, Culver City, Beverly Hills, Santa Monica, West Hollywood, and Inglewood. The Los Angeles River Trash TMDL also affects Caltrans, the City of Los Angeles, and 41 other municipalities within the Los Angeles River watershed. The estimated annual operation and maintenance costs to comply with these requirements for the DPW and other agencies is expected to exponentially increase in coming years.

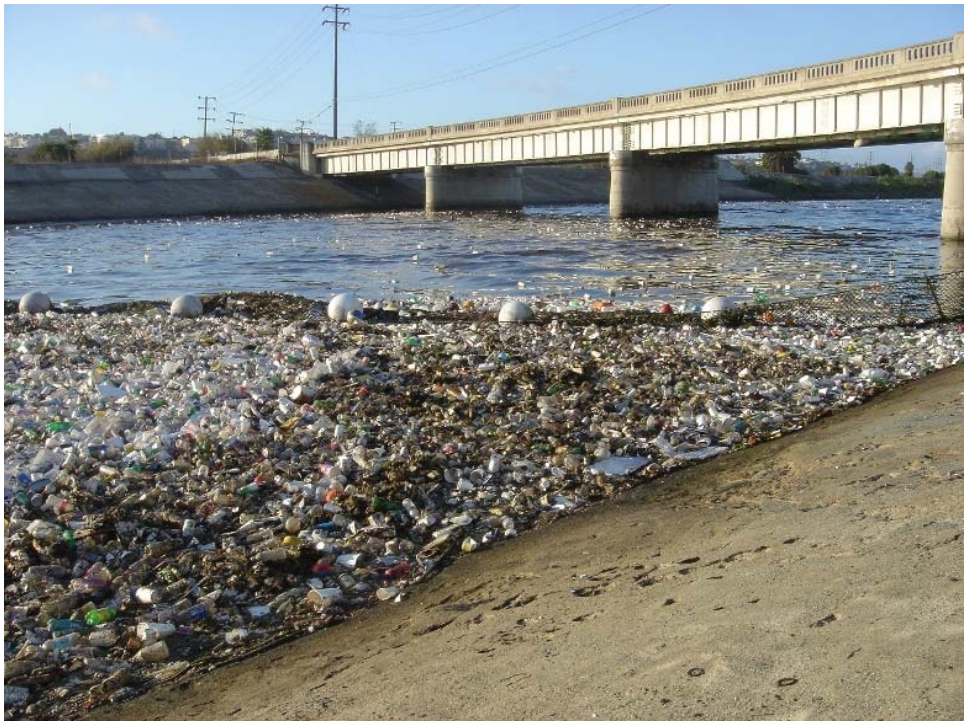

Figure 8 – EPS caught in the In-Stream Floating Net

Figure 9 – EPS in the river

Caltrans - District 7, which includes Los Angeles and Ventura Counties and is the second largest of the 12 workforce districts, is responsible for maintaining 915 freeway and highway miles in Los Angeles County. Its maintenance activities include removing litter from freeways and highways. In fiscal year 2005-2006, District 7 collected 50,000 cubic yards of litter and debris at a cost of $12 million, not including the thousands of man hours spent by community service workers collecting litter along the highways.

Ecosystem Impacts From Littered Expanded Polystyrene Food Containers

EPS food container litter not only creates blight, it also has many adverse effects on marine and land-based wildlife. Due to the County's extensive and diverse watersheds, many of the littered EPS food containers find their way into local beaches, and eventually the ocean. Studies have reported that up to 90 percent of marine debris is plastic, and most of the debris (60 to 80 percent) is land-based.[17] Several litter clean-ups in Southern California show that EPS food containers make up a considerable portion of the litter.[18] It is estimated that over 267 species of wildlife have been affected by EPS litter, including birds, whales, fish, and many other wildlife.[19]

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[17] "The Problem with Marine Debris," California Coastal Commission, http://www.coastal.ca.gov/publiced/marinedebris.html (June 17, 2008).
[18] Moore, S.L., D. Gregorio, M. Carreon, S.B. Weisberg and M.K. Leecaster. – 2001. Composition and distribution of beach debris in Orange County, California. Mar. Pollut. Bull., 42(3): 241-245.,
[19] "The Plastic Debris, Rivers to Sea Project," Algalita Marine Research Foundation, http://www.plasticdebris.com/PRDS_Brochure_DOWNLOAD.pdf. (December 18, 2007).

Figure 10 – Egret looks for food among EPS and other trash

Although the impacts of EPS on the ecosystem are not precisely quantified, several anecdotal reports have documented numerous health impacts on wildlife and the natural environment attributed to EPS litter. EPS has impacted marine life and the environment in the following unintended ways:

- Depriving animals of nutrients by artificially filling the stomach so that food cannot be consumed. Whales and large birds, for example, often have particles permanently lodged in the stomach after inadvertently swallowing EPS particles during feeding.
- Infecting wildlife with harmful toxins that can poison the animal.[20]
- Photo-degradation causes plastics to breakdown into small pieces, further dispersing EPS particles in the environment.
- Small pieces are capable of absorbing and concentrating other harmful pollutants.[21]

[20] NOAA Marine Debris Program, www.marinedebris.noaa.gov (December 12, 2007), "The Plastic Debris, Rivers to Sea Project," Algalita Marine Research Foundation, http://www.plasticdebris.com/PRDS_Brochure_DOWNLOAD.pdf. (December 18, 2007).

[21] "Pelagic Plastic - A Report to the California Legislature," prepared by the Algalita Marine Research Foundation. April 9, 2007.

Anti-littering Law

State law requires any person convicted for littering to pay the following fines:

- Between $250 and $1,000 (first conviction)
- Between $500 and $1,500 (second conviction)
- Between $750 and $3,000 (third conviction)

In addition, the court may require a person to perform eight hours of community service by picking up litter.[22]

This law is difficult to enforce because a law enforcement officer must observe the person in the act of littering. In addition, the inadvertent littering of EPS food containers due to wind (which is a significant source) is extremely difficult to enforce because it is not possible to identify and fine the person causing the inadvertent litter.

[22] Section 374.4 of the Penal Code.

CHAPTER 4

ALTERNATIVE PRODUCTS ASSESSMENT

Many alternatives are available to assist County facilities in successfully transitioning away from expanded polystyrene (EPS) food containers where appropriate. By utilizing alternative products instead of EPS food containers, the County can reduce the environmental and economic impacts of these materials. The following chapter focuses on these alternative products, including an explanation of their effective use, a brief description of the manufacturing processes, and the relative impact of these products on the environment.

List of Current Alternative Products

The following is a list of alternatives to EPS food containers.

- Reusable Products: Reusable products include glass, ceramic, wood, metal, hard plastic, stoneware, or other durable products designed to be reused.

- Recyclable Products: Single-use products made entirely from plastic, aluminum tin, and other materials that can be readily recycled. This includes non-foamed polystyrene products.

- Biodegradable Polymer Products: These are new products utilizing corn, potato, sugarcane, or other natural starches and fibers to create biodegradable products.

- Paper Products: Paper products are made from tree fibers (virgin or recycled). For purposes of this report, paper products lined with biodegradable materials are considered equivalent to pure paper products.

- Non-biodegradable Coated Paper Products: Paper products coated with a non-biodegradable petroleum-based liner.

A table of these products, with cost information and a visual representation, is presented on Table 4.

Table 4 – Types of alternatives to EPS*

	Product Category	Average Cost/Item	Visual
Reusable	Durable Goods (Reusable)	Various	
Recyclable Products	Recyclable Products	$0.05 - $0.10	
Biodegradable	Biodegradable polymers, including Bagasse and Polylactic Acid (PLA)*	$0.05	
		$0.25	
		$0.12	
		$0.20	
	Paper	$0.06	
Other	Coated Paper Products (cups with non-biodegradable petroleum based coating look the same but cost less, about $0.06)	$0.05 - $0.10	

* Defined on page 26.

- In comparison to EPS food containers, comparable alternative products may be significantly more expensive to purchase, depending on the nature of the

material used, manufacturing process, and the durability of the product. However due to the diversity of readily available alternatives, some of which are comparable in cost to EPS, the vast majority of County Departments can comply with this restriction with little or no impact on their overall budgets, of which food container purchases are only a small component. For other Departments where health, safety and/or security may require a specific type of alternative product in lieu of EPS food containers, the transition to an alternate product may not be feasible for the foreseeable future based on the significant cost involved.

Assessment of Relative Impacts

In order to accurately assess the current market of products available as alternatives to EPS food containers, the materials listed below were evaluated based on the following key criteria: product type, renewable properties, compostibility, recyclable, litter potential. This analysis shaped the hierarchy of alternatives recommended in Chapter 6. A more detailed discussion of the relative impacts of these alternatives follows below in Table 5.

Table 5 – Product Impact Matrix

	ENVIRONMENTAL PROPERTIES			
PRODUCT TYPE	RENEWABLE	COMPOSTABLE OR BIODEGRADES IN NATURAL ENVIRONMENT	RECYCLABLE	TENDENCY TO BECOME LITTER
Reusable	Varies	N/A	Varies	Unlikely
Polylactic Acid (PLA)	Yes	Yes	No	Somewhat
Other Compostable Polymers	Yes	Yes	No	Somewhat
Paper	Yes	Yes	Yes, but challenging	Somewhat
Coated Paper (petroleum-based coating)	No	No	No	Somewhat
Plastic #1&2	No	No	Yes	Somewhat
Plastic #3-7 (incl. non-EPS #6)	No	No	Yes, but challenging	Somewhat
EPS	No	No	Yes, under limited circumstances	Highly

Product Types

Reusable Products

The preferred environmental alternative to EPS products are reusable products. These products can be made from glass, ceramic, wood, metal, hard plastics, stoneware or other durable materials designed to be reused. Since they can be reused over and over again, these products can reduce impacts from the extraction of raw materials, manufacturing, and transportation of disposable products, and thus are exceedingly more sustainable than any other disposable or single-use alternative.

Compostable/Biodegradable Products

Compostable/Biodegradable products are more sustainable and carbon neutral, and can be derived from potato, corn, wheat, sugarcane, or tapioca sources, and are suitable as hot and cold food containers. These materials are capable of undergoing decomposition and can be used as an organic feedstock or soil amendment when commercially composted.

Compostable/Biodegradable products are: 1) certified based on the American Society for Testing and Materials standard D6400; 2) comparable in energy and emissions to EPS; and 3) able to decompose naturally in the environment. However, these products are typically more expensive than EPS. Depending on numerous factors, including quantity, type of container, material type, vendor source, etc., these products may be up to twice as expensive as comparable EPS food containers. In addition, it is unlikely these products will be composted due to the lack of commercial composting facilities in Los Angeles County.

There are a variety of biodegradable materials derived from natural resources and include products made from the following materials:

- PLA: is a corn-based resin used to create clear plastic cups and containers suitable for cold food and drink (up to 110^{o} F). PLA is also used as a coating for various paper products instead of the conventional poly-ethylene liners. PLA is more expensive than many petroleum-derived commodity plastics, but it is becoming more affordable as production increases. The degree to which the prices will drop, and the degree PLA can compete in the marketplace with petroleum-derived polymers remains uncertain.

- Bagasse: French for waste or refuse, is the shredible leftover remaining after sugarcane extraction which can be molded to create an array of food containers (like paper). Bagasse is suitable for hot and cold food, and is heat resistant up to 220^{o} F.

- Other Biodegradable Products: Like Bagasse, products made of the refuse of corn, potatoes, rice, and other starch materials may be molded to create an array

of food containers used for hot or cold food containers (depending on the manufacturer).

- Paper: Historically, paper has been used as the preferred material for single use packaging or as food item containers. Often, paper products are lined with either plastic or wax to prevent leakage and enhance durability. Paper food containers can be made from tree fiber (virgin or recycled), and can be coated with bio-plastics instead of petroleum derived plastics, making the final product compostable. Paper products, however, have slight drawbacks including emissions generated from manufacture.

Recyclable Products

Plastics other than EPS are neither biodegradable nor renewable, however certain plastics, especially type #1 (PET) and type #2 (HDPE), have a well established recycling market. This is due to the widespread acceptance of these plastics in curbside recycling programs and the California Redemption Value placed on certain plastic beverage containers. As a result, these plastic containers have a greater chance of being recycled and are less likely to end up as litter. Higher number (type #3-7) plastics are more challenging to recycle and also have a lower market value, as a result they are recovered for recycling at a much lower rate. Appendix E explains the differences among these plastics and their most common uses among food containers. Other recyclable products include aluminum or tin containers that can be cleaned and recycled through curbside recycling.

Issues Impacting Alternatives Assessment

Sustainability

The sustainability of products is a critical component of the net environmental impacts of different alternatives, and takes into account the life cycle energy and materials needed to make the product, the source of the materials from which the product is made, and the recyclability of the products. In general, products made from renewable, naturally occurring resources (such as tree fiber or other plant material) are more sustainable than products made from non-renewable resources, such as fossil fuels. Since these products are made from natural and renewable resources rather than non-renewable (and by definition non-sustainable) resources, they are considered by industry standards to be carbon neutral and sustainable.

Single-Use Disposal

The CIWMB believes “replacing single-use food service polystyrene, which cannot be effectively recycled, with compostable alternatives may provide additional source

reduction potential."[23] In general, most EPS food containers are highly contaminated by food residue which, as a result, cannot be recycled. Recycling EPS food containers is currently not economically viable due to the high cost of transporting large volumes of the light weight material and the low cost of virgin material. Contamination, along with the low market value of recycled EPS, has hindered development of an EPS recycling market. Consequently, EPS food containers are used and disposed of after a single use.

Biodegradability/Compostability

Biodegradable alternative products that require a commercial composting facility for full breakdown face a considerable hurdle due to the lack of composting infrastructure within Los Angeles County. While there are currently no commercial composting facilities in the County, the Sheriff's Department is currently investigating development of an in-vessel composting facility at their Pitchess Detention Center, a model that can be replicated at other County facilities. Composting would reduce environmental impacts, including disposal impacts of biodegradable alternatives, and may provide an additional cost reduction from disposal costs that would help offset the fact that biodegradable products are generally more expensive.

Recycling

EPS food containers collected through a curbside recycling program or left in a drop-off bin are very often contaminated, which limits their recyclability.[24] Very recently, a method has been developed for the separate collection and aggregation of source separated EPS food packaging containers for recycling. In order to be successful, EPS users must have significant quantities of uniform EPS food packaging containers that can be relatively clean and entirely separated from other materials for collection. In certain applications this system can provide for the collection and recycling of EPS food packaging containers. On the other hand, plastic products, especially those made from #1 or #2 plastics and those with a CRV value, along with aluminum products, have been shown to be effectively recovered and recycled.

[23] "Use and Disposal of Polystyrene in California", California Integrated Waste Management Board. 2004. http://www.ciwmb.ca.gov/Publications/Plastics/43204003.doc
[24] Ibid.

CHAPTER 5

MUNICIPAL BANS – CASE STUDIES

Many cities and counties throughout the nation have adopted resolutions or ordinances aimed at limiting the negative impacts of expanded polystyrene (EPS) in their communities. Since 1988, 14 jurisdictions have been identified as having implemented a ban on polystyrene. Below are summaries of these case studies.

City of Aliso Viejo

The City of Aliso Viejo adopted an ordinance prohibiting the use of EPS food service products in 2004. The ordinance prohibits the use of EPS food containers by the City of Aliso Viejo, within city-owned property, facilities, and city-sponsored events. The ordinance is enforced by the City Manager and violations of the ordinance result in issuance of administrative citations.

City of Berkeley

The City of Berkeley adopted an ordinance in 1988 to prohibit the purchasing and use of EPS food containers, which took effect on January 1, 1990. The ordinance prohibits the use of EPS food packaging containers by the City of Berkeley and at any City-sponsored event. The ordinance also prohibits restaurants and retail food vendors from utilizing EPS food containers. The ordinance is monitored by the City Manager, who may grant specific exemptions. Violations of the ordinance may result in an infraction of the Berkeley Municipal Code, leading the City Attorney to seek legal, injunctive, or other equitable relief to enforce the ordinance.

City of Calabasas

The City of Calabasas adopted an ordinance prohibiting the use of EPS food service products in 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance also requires the use of environmentally acceptable packaging (i.e. recyclable, biodegradable, degradable) by March 31, 2008, and reporting on-going compliance on the first business day of each calendar year. Violations of the ordinance will result in legal, injunctive, or other equitable relief sought by the City Attorney as an enforcement mechanism.

City of Capitola

The City of Capitola adopted an ordinance prohibiting the use of EPS food service products in 2006, which took effect July 1, 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance also requires the use of biodegradable or compostable disposable food service ware. Food vendors are strongly

encouraged to re-use food service ware in place of using disposable food service ware. The ordinance is enforced by the City Manager and violations result in issuance of administrative citations.

City of Emeryville

The City of Emeryville adopted an ordinance prohibiting the use of EPS food service products in 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance also requires the use of biodegradable/compostable or recyclable food service ware. The ordinance is enforced by the City Manager and violations result in issuance of administrative citations.

City of Huntington Beach

The City of Huntington Beach adopted a resolution prohibiting the use of EPS food service products in 2004. The ordinance prohibits EPS food containers to be bought or used by the City, within city-owned property, facilities, and city-sponsored events. The resolution is monitored by the Community Services Director and violations result in forfeiture of the contractor's security deposit.

City of Malibu

The City of Malibu adopted an ordinance prohibiting the use of EPS food service products in 2005. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance is monitored by the City Manager and the Parks and Recreation Director, and violations may result in forfeiture of the contractor's security deposit, and or legal, injunctive, or other equitable relief. Enforcement is augmented via reporting from residents and other businesses.

City of Oakland

The City of Oakland adopted an ordinance prohibiting the use of EPS food containers in 2006, which took effect on January 1, 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance is enforced by the City Administrator by responding to citizen complaints, and violations result in issuance of administrative citations.

City of Portland, Oregon

The City of Portland adopted an ordinance in 1988 banning the use of EPS food containers, which took effect on January 1, 1990. The ordinance prohibits restaurants, retail food vendors or non-profit food providers from utilizing EPS food containers. Violations of the ordnance result in a penalty issued by the Office of Sustainable Development specifying the violation and appropriate penalty. The Office of

Sustainable Development is also authorized to promulgate additional regulations and other actions reasonable and necessary to enforce the ordinance.

City of Rancho Cucamonga

The City of Rancho Cucamonga adopted an ordinance prohibiting the use of EPS food service products in 2007. The ordinance prohibits the use of EPS food containers by the City of Rancho Cucamonga, within city-owned property and facilities, and at City-sponsored events. The ordinance does not specify penalties for non-compliance.

City of San Clemente

The City of San Clemente passed a resolution prohibiting the use of EPS food service products in 2004. The resolution prohibits the use of EPS food containers within City facilities and at City-sponsored events. Violation results in forfeiture of security deposit and an automatic denial of future rental requests.

City and County of San Francisco

The City and County of San Francisco passed an ordinance prohibiting use of EPS food service products in 2006, which took effect June 1, 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and City-sponsored events from utilizing EPS food containers. The ordinance also requires use of biodegradable/compostable or recyclable disposable food service ware. The ordinance is enforced by the City Administrator and violations of the ordinance result in issuance of administrative citations.

City of Santa Monica

The City of Santa Monica adopted an Ordinance prohibiting the use of EPS food service products in 2007. The ordinance prohibits City facilities, restaurants, retail food vendors or non-profit food providers, and city-sponsored events from utilizing EPS food containers. The ordinance also required the use of biodegradable/compostable or recyclable disposable food service ware by February 9, 2008. The ordinance is enforced by the Director of the Environmental and Public Works Management Department and violations result in issuance of administrative citations.

County of Ventura

The County of Ventura adopted a resolution prohibiting the use of EPS food service products in 2004. The resolution prohibits the use of EPS food service products at the County harbor, parks, government center, and at County-sponsored events. The ordinance does not specify penalties for non-compliance.

CHAPTER 6

FINDINGS AND RECOMMENDATIONS

Key Findings

Findings in the report are based on two components, the first involving research findings related to environmental factors and the second involving findings based on questionnaire responses received from County departments and agencies. (Appendix D)

Findings based on environmental factors:

- Reducing the use of EPS food containers would result in a benefit to the environment by reducing litter, and in turn, reducing the negative impact on the marine environment and other wildlife. This reduced litter would also lead to a decrease in cleanup costs.
- Replacing EPS products with reusable and durable goods, where applicable, would have the highest positive impact on the environment.
- Developing a policy restricting the use of EPS products and promoting environmentally friendly alternatives would boost other environmental initiatives and raise environmental awareness.

Findings based on county questionnaire responses:

- Prohibiting the purchase and use of EPS food containers at all County-owned facilities, County offices, County-managed concessions, County-permitted events, and County-sponsored events would be feasible to a great extent, since use of EPS by County departments is relatively moderate and several County departments already use alternative products to some extent.
- In comparison to EPS food containers, comparable alternative products may be significantly more expensive to purchase, depending on the nature of the material used, manufacturing process, and the durability of the product. However due to the diversity of readily available alternatives, some of which are comparable in cost to EPS, the vast majority of County Departments can comply with this restriction with little or no impact on their overall budgets, of which food container purchases are only a small component. For other Departments where health, safety and/or security may require a specific type of alternative product in lieu of EPS food containers, the transition to an alternate product may not be feasible for the foreseeable future based on the significant cost involved.
- Utilizing alternative products is a viable option for departments and agencies provided that additional funding is available. It is expected that most Departments will be able to make the necessary adjustment in future year budgets. If this is not possible, Departments will need to apply for a waiver.

Recommendation for Consideration by the Board of Supervisors

Since EPS food containers contribute disproportionately to the litter and environmental problem within the County of Los Angeles, the County working group recommends phasing out the purchase and use of EPS food containers and encouraging the use of environmentally preferable alternatives by County operations. The following Board action would facilitate implementation of this recommendation:

Adopt a restriction on the purchase and use of all EPS food containers, beginning July 1, 2009, at County-owned facilities, County offices, County-managed concessions, County-permitted events, and County-sponsored events.

Further, authorize the County's Energy and Environmental Team (Team) to grant a waiver under the following circumstances:

- Health and/or safety operational issues are demonstrated;
- Existing contract requirements stipulate the purchase of EPS products and the contract cannot be amended; and/or
- A County facility incorporates full containment and collection of all EPS food containers generated on site, for the purposes of recycling those containers.

Note: County agencies requiring a waiver must submit a request to the Team specifying the reason(s) a temporary waiver is needed. The Team, in consultation with ISD and Public Works, will make a determination regarding requests on a case by case basis.

In consultation with ISD and Public Works, the Team will provide semi-annual progress reports for a three-year period describing the progress and efforts to phase-out the use of EPS food containers at County operations, including a summary of approved waivers. The Team will also notify Departments of the new policy and provide training on environmentally-friendly alternatives to EPS food containers.

ISD will update the existing Countywide Purchasing Policy for the Purchase of Environmentally Preferable (Green) Products, Policy No. P-1050 (Appendix C), to include an EPS food and beverage container component with specific emphasis on the following hierarchy for procurement of alternative products, as shown in Figure 2 below:

a. Reusable and durable goods
b. Biodegradable single-use products, including paper-based single-use products with no petroleum coating
c. Recyclable single-use products
d. Other non-EPS products
e. EPS products, for those cases where a waiver is approved

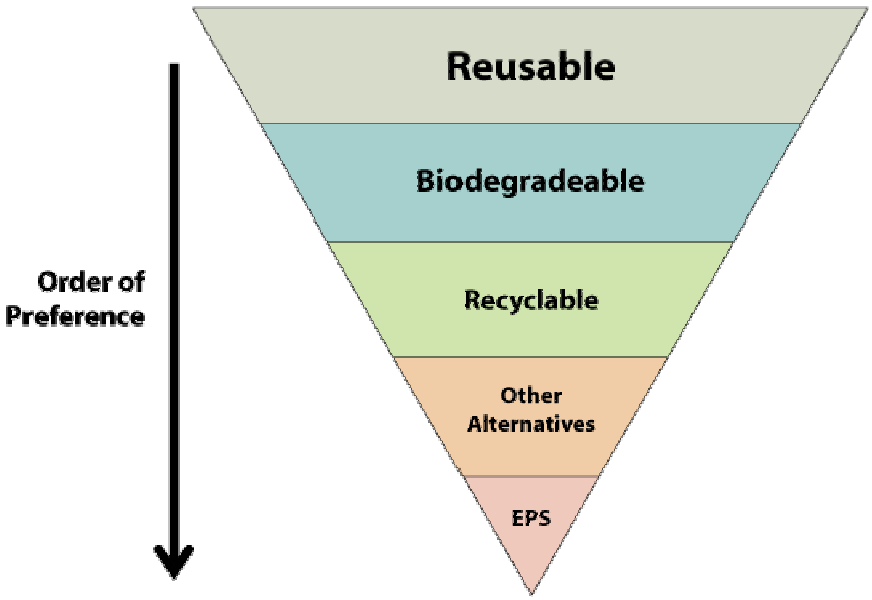

Figure 2 – Hierarchy of Preferred Alternatives for Procurement

In consultation with ISD and DPW, the CEO will retain a consultant to initiate product alternative and guideline study for County purchase agreements for vendors who provide alternative products based on the hierarchy cited in Figure 2 above. The consultant will then develop an EPS training program and train County departments.

Appendices

Appendix A:
Guidance Matrix

APPENDICES

Appendix A: Guidance Matrix

This table provides guidance for compliance with the County ban of EPS food containers.

	Must be educated on environmentally-friendly alternatives to EPS food containers	Should procure and utilize alternatives to EPS products directly*	Procuring products from contracted vendors or through ISD**
Organizers of County-sponsored events	√	√	
Permitee of County permitted events	√	√	
County-managed concessions	√		√
County employees	√	√	
Employee clubs	√	√	
County offices	√		√
County-owned facilities	√		√

*Appendix B provides a list of vendors for this purpose. This is not intended to be an exhaustive list, but serves as a reference.
**ISD has developed a bid for replacements to all EPS products for contracts they coordinate, and is available to assist other Departments in adjusting language in vendor contracts to ensure proper specifications for alternative products.

Appendix B:
List of Vendors

Appendix B: Summary of Food Service Ware Vendors

Distributor	Address	Contact Information	Website	Type of Products	Type of Material	Agreement Vendor?
Access Group	14470 Doolittle Dr San Leandro CA	(510) 567-100	www.accessgroupnca.com	Containers, Bowls, Cups, Plates	PLA, Bagasse, Paper Fiber	No
American Paper and Plastics Inc.	1051 E Valley Blvd, El Monte, CA	(626) 444-0000	www.appinc.com	Containers, Bowls, Cups, Plates	PLA, Bagasse, Paper Fiber, Corn, Paper Fiber,	
Bay Brokerage Company Inc	1776 Laurel St, San Carlos, CA	(650) 595-1189	www.baybrokerage.com	Clear Clamshells for Deli Use		No
BioCorp	15301 140th Ave SE Becker, MN 55308	(866) 428-2242	www.biocorpaavc.com	Bio-containers/cups		No
Biodegradable Food Service LLC	17217 Blue Heron Drive Bend, Oregon 97707-2434	(541) 593-2191 (503) 810-5707	www.bdfs.net	Containers, Bowls, Cups, Plates	Bagasse, PLA, PO, Bamboo Fiber, Potato Fiber	No
Biopak-gsd Packaging	1854 East Home Fresno, CA 93703	(559) 441-1181	www.gsdpackaging.com	Paper Containers		No
BiRite	123 South Hill Drive Brisbane, CA 94005	(415) 656-0187 (800) 227-5373	www.BiRite.com	All	Paper Fiber, PLA	No
Brenmarco Retail Store Supplier	8523 South 117th St. Omaha, Nebraska 68128	(800) 783-7759	www.brenmarco.com	All	Paper Fiber, PLA Coating	No
C&J CO	105 Jackson St Oakland CA	(510) 663-0188	N/A	N/A		No
Cash & Carry	2300 57th Street Vernon, CA 90058	(323) 583-0800	www.jetro.com	All	Paper Fiber, PLA	No
Cater Green	Los Angeles	(323)663-7747	www.catergreen.com	Bio-plastics		No
Cereplast	3421-3433 West El Segundo Boulevard Hawthorne, CA 90250	(310)676-5000	www.cereplast.com		Corn fibers	No
Costco	N/A	(415) 626-4388	www.costco.com	Containers, Bowls,	Paper Fiber, PLA	

Distributor	Address	Contact Information	Website	Type of Products	Type of Material	Agreement Vendor?
				Cups, Plates		
EarthSmart LL	N/A	(480) 206-4513	www.earthsmartllc.com	Containers		No
Eco-Products	3640 Walnut St. Boulder, CO 80301	(303) 449-1876	www.biodegradablestore.com www.ecoproducts.com	Containers, Bowls, Cups, Plates	Bagasse, PLA, Paper Fiber, Corn	No
Excellent Packaging and Supply	3220 Blume Dr, Suite 111,Richmond CA	(510) 243-9501/ (800) 317-2737	www.excellentpackaging.com	Containers, Bowls, Cups, Plates	PLA, Bagasse, Paper	No
Genpak	68 Warren Street. Glen Falls, New York 12801	(310) 676-5000 (518) 798-9511	www.harvestcollection.genpak.com/products.cfm	Containers, Bowls, Cups, Plates	Corn	No
Good Humans	500 Soquel Ave,Suite F, Santa Cruz, CA	(866) 420-4208	www.goodhumans.com	N/A		No
Green Earth Office supply	P O Box 719, Redwood Estates CA	(800) 327-8449	www.greenearthofficesupply.com	Containers	PLA, Bagasse, Paper, Corn Fiber	No
Green Home	850 24th Ave. San Francisco, CA 94121	(877) 828-6400	www.greenhome.com	Containers	Glass, Corn, PLA, Stainless Steel	No
Green is Green	N/A	(415) 215-8553	http://www.greenisgreeninc.com/GiG-product%20list.pdf	Containers, Bowls, Cups, Plates	Bagasse, PLA, Potato, Corn	No
Green Wave by Western Pacific Associates	623 N. Main Street Orange, CA 92868	(714) 538-8810	www.greenwave.us.com	Containers, Plates	Bagasse,	No
GreenLine	631 S. Pine Street, York PA 17403	(800) 641-1117	www.greenlinepaper.com	Containers, Bowls, Cups, Plates	PLA, Bagasse, Paper Fiber PLA coated,	No
GDS Packaging	1854 East Home Fresno, CA 93703	(559) 441-1181	http://gsdpackaging.com/	Containers	Paper	No
Huhtamaki	9201 Packaging Drive, De Soto, KS 66018	(650) 344-3605 (913) 583-3025	www.us.huhtamaki.com	Containers, Bowls, Cups, Plates		No
Maple Trade Corp	122 Starlite Street, South San	(650) 296-8998	www.mapletradecorp.com	Containers, Bowls, Cups, Plates	Plastic #5	No

Distributor	Address	Contact Information	Website	Type of Products	Type of Material	Agreement Vendor?
	Francisco, CA 94080					
Moresco Distributing	1120 Holm Rd, Petaluma, CA	(707) 843-0254	www.moresco.biz	Containers, Cups		No
PAMS	3361 Pomona Blvd, Pomona, CA	(909) 869-7267	www.pamsinc.com	N/A		No
Pan Pacific Export & Import	N/A	(510) 582-4893 (510) 582-4817	www.waterfromfiji.com	Containers, Bowls, Cups, Plates	Bagasse	No
Paper Company	2815 Warner Avenue Irvine, CA 92606	1-(800) 834-6248 (714) 444-2171	http://www.thepapercompany.net	Containers, Bowls, Cups, Plates	PLA, Paper Pla coated, Bagasse, Potato	No
PPT Brothers	N/A	(415) 430-7030	tpm48@hotmail.com	Containers, Bowls	Plastic #5	No
P & R Paper Company	P.O. Box 590 Redlands, CA 92373	(909) 794-1108	www.prpaper.com	Containers	Paper	No
Prime Link Solutions	N/A	(650) 375-1398	alan@primelinksolution.com	Containers, Bowls, Cups, Plates	Bagase	No
Rainbow Grocery	1745 Folsom St., San Francisco, CA. 94103	(415) 863-0620	www.rainbowgrocery.org	Cups, Plates	Bagasse, Corn	No
Recyclaholics	5016 Turtle Lane East, Shoreview MN 55126	(612) 521-5667	www.claholics.com/foodservice.htm	Containers	PLA, Paper Pla coated, Bagasse, Potato	No
Recycline	681 Main St., Waltham, MA 02451	(781) 893-1032	www.recycline.com	Cups, Plates	Plastic #5	No
Restaurant Depot	15-24 132nd Street, College Point, NY 11356	(415) 920-2888	www.restaurantdepot.com	Containers, Bowls, Cups, Plates	PLA, Paper Fiber	No
S F supply Master	N/A	(415) 642-0700	shah@sfsupplymaster.com	Containers, Bowls, Cups, Plates	PLA, Paper Fiber, Bagasse	No
Shop Natural	350 S. Toole Avenue, Tucson, Arizona 85701	(520)884-0745	www.shopnatural.com	N/A		No
Simply Biodegradable	N/A	(509) 910-1430	www.simplybiodegradable.com	Containers	Bagasse, PLA, Corn,	No
Smart and	22631 Ventura	(818) 225-9590	www.smartandfinal.com	Containers, Bowls,		No

Distributor	Address	Contact Information	Website	Type of Products	Type of Material	Agreement Vendor?
Final	Blvd, Woodland Hills CA			Cups, Plates		
Stalk Market	N/A	(707) 935-8439 (415) 531-3758	www.stalkmarket.net	Containers	Bagasse	No
Sunlight Sales	11625 Overhill Dr, Aubum, CA	(530) 308-4116	www.sunlight.com	Containers, Bowls, Cups, Plates		No
Sysco Food Services	N/A	(510) 226-3426	www.sysco.com	Containers, Bowls, Cups, Plates	Corn, PLA, Paper, Bagasse	Yes
The Individual Group	5496 Lindbergh Lane Bell, CA 90201	(323) 981-2800	www.individualgroup.com	Containers, Bowls, Cups, Plates	Paper	No
Three Bridges Trading	N/A	(415) 609-7362	www.threebridgestrading.com	Containers, Bowls, Cups, Plates	Bagasse	No
Trade Supplies	N/A	(323) 581-3250 x:236	www.tradesuppliesinc.com	Cereplast & Nature Biodegradable		Yes
Tree Cycle	24555 Conifer Dr, Huson, MT	(406) 626-0200	www.treecycle.com	Containers, Bowls, Cups, Plates	Paper, Bagasse, Corn, PLA coated.	No
United Natural Foods Inc	1101 Sunset Blvd, Rocklin, CA	(916) 625-4100 (800) 679-8735	www.unfi.com	N/A		No
US Food Service	N/A	(925) 606-3585	www.usfoodservice.com	Containers, Bowls, Cups, Plates	Corn fibers, Bagasse, PLA coated paper.	
WorldCentric Store	195 C Page Mill Rd, Palo Alto, CA	(650) 283-3797	www.worldcentric.org	Containers, Bowls, Cups, Plates	Bagasse, PLA, Potato	No

Note: this table is for reference only – it is not intended to be exhaustive, and is accurate at the time of publication of this report. Please verify information directly with the vendors listed.

Appendix C:
ISD Purchasing Policy

Purpose

Los Angeles County is a very large consumer of goods and services and the purchasing decisions of our employees and contractors can positively or negatively affect the environment. By including environmental considerations in our procurement decisions, along with our traditional concerns with price, performance and availability, we will remain fiscally responsible while promoting practices that improve public health and safety, reduce pollution, and conserve natural resources. The purpose of this document is to establish the framework for establishing an environmentally based purchasing program for Los Angeles County.

Board Policy

On January 16, 2007, the Board of Supervisors adopted a Countywide Policy instructing that all County departments to implement the County's Energy and Environmental Programs for energy conservation and environmental stewardship (See Board of Supervisors Policy No. 3.045, Energy and Environmental Policy). To implement the County's "green" initiatives, County departments will be tasked to:

- Institute practices that reduce waste by increasing product efficiency and effectiveness;
- Purchase products that minimize environmental impacts, toxics, pollution, and hazards to worker and community safety to the greatest extent practicable, and to
- Purchase products that include recycled content, are durable and long-lasting, conserve energy and water, use agricultural fibers and residues, reduce greenhouse gas emissions, use unbleached or chlorine free manufacturing processes, and use wood from sustainable harvested forests.

To meet the Board's policy objectives, we must develop and implement procedures for the procurement of environmentally preferable (or "green)" and energy efficient products and services.

Purchasing objectives will include acquisitions that:

- Conserve natural resources;
- Minimize environmental impacts such as pollution and use of water and energy;
- Eliminate or reduce toxics that create hazards to workers and our community;
- Support strong recycling markets;
- Reduce materials that are put into landfills;
- Increase the use and availability of environmentally preferable products that protect the environment;
- Encourage manufacturers and vendors to reduce environmental impacts in their production and distribution systems; and
- Create a model for successfully purchasing environmentally preferable products that encourages other purchasers in our community to adopt similar goals.

In coordination with the County's Environment and Energy Team, ISD's Purchasing Division will have overall responsibility for this program. This will include establishing appropriate standards for green purchasing, assessing cost effectiveness and making recommendations related to acquisition strategies and maintaining data and issuing reports related to the County's progress in environmental purchasing. These areas are further detailed in the attached procedures.

PURCHASING PROCEDURES AND STANDARDS

Defining Environmentally Preferable Products

All products for which the United States Environmental Protection Agency (U.S. EPA) has established minimum recycled content standard guidelines, such as those for printing paper, office paper, janitorial supplies, construction, landscaping, miscellaneous, and non-paper office products, shall contain the highest post-consumer content practicable, but no less than the minimum recycled content standards established by the U.S. EPA Guidelines.

In general, environmentally preferable products and services are those that would have a reduced effect on human health and the environment when compared with competing products and services. More specifically, this comparison would include consideration of all phases of the product's life cycle, including raw materials acquisition, production, manufacturing, packaging, distribution, operation, maintenance and disposal, including potential for reuse or ability to be recycled.

In practice, the objective is to purchase products that have reduced environmental impact because of the way they are made, used, transported, stored, packaged and disposed of. It means looking for products that do not harm human health, are less polluting and that minimize waste, maximize use of bio-based or recycled materials, conserve energy and water, and reduce the consumption or disposal of hazardous materials. When determining whether a product is environmentally preferable, the following standards should be considered:

✓ Biobased	✓ Made from renewable materials
✓ Biodegradable	✓ Compostable
✓ Carcinogen-free	✓ Low toxicity
✓ Bioaccumulative toxic (PBT)-free	✓ Recycled content, Reusable
✓ Chlorofluorocarbon (CFC)-free	✓ Reduced packaging, Refurbished
✓ Heavy metal free (i.e., no lead, mercury, cadmium)	✓ Reduced greenhouse gas emission
✓ Low volatile organic compound (VOC) content	✓ Energy, Resource and Water efficient

Purchasing Environmentally Preferable Products

County Purchasing Agent Responsibilities – General

In coordination with the County's Environment and Energy Team, ISD's Purchasing Division will be responsible for:

- Working with other governmental purchasing groups and agencies, such as U.S. Communities, NACO and CSAC to determine appropriate standards for green purchasing.

- Assigning central purchasing staff to evaluate various green products and to provide guidance and assistant to County departments.

- Developing and implementing a 5-year plan to phase in various categories of purchased goods under the green program umbrella. Relative easy to implement items (e.g., paper, cleaning supplies, etc.) will be implemented very early in the program.

- Heading up teams to evaluate various types of products where the cost differential is great and/or the products are not considered good substitutes.

- Assessing and making recommendations on the use of price preferences.

- Maintaining data and issuing reports related to the County's progress in environmental purchasing.

- Establishing central purchasing agreements with a catalogue of environmentally friendly and energy efficient products and to modify our existing agreement data bases for the easy identification of green products.

In establishing countywide commodity agreements, the County's Purchasing Agent will specify the requirement for environmentally preferable products where applicable, and will evaluate product alternatives where appropriate. This evaluation would include: consideration of total costs expected during the time a product is owned, including, but not limited to, acquisition, extended warranties, operation, supplies, maintenance, disposal costs and expected lifetime of a product(s) as compared to other alternatives.

In the evaluation and/or award process:

- ✓ Products that are durable, long lasting, reusable or refillable will be preferred whenever feasible.

- ✓ Wherever possible, suppliers of electronic equipment, including but not limited to computers, monitors, printers, and copiers, shall be requested to take back equipment for reuse or environmentally safe recycling when the County discards or replaces such equipment; and

- ✓ All suppliers shall be required, where applicable, to use and recycle packaging material used for product delivery.

County Department Responsibility – General

Under the delegated authority of the County Purchasing Agent, departmental buyers are responsible to evaluate short-term and long-term costs in comparing product alternatives. Through Purchasing Agent agreements, Departments shall be required to:

1. Purchase only Recycled-Content Bond Paper in accordance with the Board of Supervisors instructions of September 7, 1999 instructions to all Departments.

2. Purchase Energy Efficient products in order to conserve electrical power, reduce peak power consumption, lower energy costs, provide market leadership and support energy-efficient purchasing by County government.

3. Review and use "green" product alternatives in County and other authorize government agreements provided on-line at: http://www.uscommunities.org/gpa/green/grSupplier.htm

Remanufactured Products

The County shall purchase remanufactured products such as laser toner cartridges, furniture, and equipment whenever practicable, but without reducing safety, quality or effectiveness.

Energy and Water Conserving Equipment

Where applicable, energy-efficient equipment shall be purchased with the most up-to-date energy efficiency functions. This includes, but is not limited to, high efficiency space heating systems and high efficiency space cooling equipment.

When practicable, the County shall replace inefficient lighting with energy efficient equipment.

Energy Star®

Energy Star is a labeling program derived from a partnership between the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). All products displaying the Energy Star label meet Federal Energy Management Program (FEMP) standards. Typically, this means that labeled products are in the top 25 percent of all similar products when ranked by energy efficiency, and use 25 to 50 percent less energy than their traditional counterparts.

Solicitation for Equipment or Products

Wherever practicable, when equipment or product purchases where FEMP recommended standards or Energy Star labeled products are available, County departments and agencies are expected to include an Energy-efficiency requirement component to their solicitation to purchase those products that meet the recommended standards. Examples of these products include computers, monitors, printers, photocopiers and facsimile machines.

Sample Solicitation Language

"Notice to Bidder: In line with the County policy for the procurement of energy-efficient equipment and products, preference will be given to those products that meet the Federal Energy Management Program (FEMP) standards or possess an Energy Star® label."

For energy consuming products where there are no FEMP recommended criteria or Energy Star label, departments must consider the purchase products that conserve electrical power and/or natural gas to the maximum extent possible, based on minimum life-cycle costs.

Cost Analysis

Even where energy-efficient products have a higher purchase price than their less efficient counterparts, these products usually save money because they use less energy, often have a longer life, and typically incur less maintenance cost.

These savings, such as from lower energy bills, are achieved throughout the entire lifetime of the product. Thus, when deciding how much money an Energy Star labeled product will save, it is necessary to consider both initial cost (the purchase price) and the costs that will be incurred throughout the life of the product (such as energy and maintenance costs). This is known as Life Cycle Cost.

A listing of Energy Star approved products, as well as the formula for determining Life Cycle Cost is available through the ISD Purchasing web page or by access through the following Internet address:

http://yosemite1.epa.gov/estar/consumers.nsf/content/officeequipment.htm

Benefits

The benefits of purchasing Energy Stat labeled and FEMP recommended products include:

- Reduced energy costs without compromising quality or performance
- Significant return on investment
- Extended product life and decreased maintenance

Products purchased by the County, and for which the U. S. EPA Energy Star certification is available shall meet Energy Star certification, when practicable. When Energy Star labels are not available, energy efficient products shall be purchased that are in the upper 25% of energy efficiency as designated by the Federal Energy Management Program.

The County shall purchase water-saving products whenever practicable.

Note: Nothing contained in this policy shall be construed as requiring a department to procure products that do not perform adequately for their intended use, exclude adequate competition, or are not available at a reasonable price in a reasonable period of time.

Landscaping

Workers and contractors providing landscaping services for the County shall be encouraged to employ sustainable landscape management practices whenever possible, including, but not limited to, integrated pest management, grass-cycling, drip irrigation, composting, and procurement and use of mulch and compost that give preference to those produced from regionally generated plant debris and/or food waste programs.

Plants should be selected to minimize waste by choosing species that are appropriate to the micro-climate species that can grow to their natural size in the space allotted them and perennials rather than annuals for color. Native and drought-tolerant plants that require no or minimal watering once established are preferred.

Hardscapes and landscape structures constructed of recycled content materials are encouraged.

Toxins and Pollutants

To the extent practicable, no cleaning or disinfecting products (i.e. for janitorial use) shall contain ingredients that are carcinogens, mutagens, or teratogens. These include chemicals listed by the U.S. EPA or the National Institute for Occupational Safety and Health on the Toxics Release Inventory and those listed under Proposition 65 by the California Office of Environmental Health Hazard Assessment.

When maintaining buildings, the County shall use the lowest amount of VOCs (volatile organic compounds), highest recycled content, and low or no formaldehyde when purchasing materials such as paint, carpeting, adhesives, furniture and casework.

The County shall reduce or eliminate its use of products that contribute to the formation of dioxins and furans. This includes, but is not limited to:

- Purchasing paper, paper products, and janitorial paper products that are unbleached or that are processed without chlorine or chlorine derivatives, whenever possible.

- Eliminating the purchase of products that use polyvinyl chloride (PVC) such as, but not limited to, office binders, furniture and flooring, whenever practicable.

Agricultural Bio-Based Products

Paper, paper products and construction products made from non-wood, plant-based contents such as agricultural crops and residues are encouraged whenever practicable.

Balancing Environmentally Considerations with Performance, Availability and Financial Cost

Los Angeles County is committed to procuring environmentally preferable goods and services wherever they meet performance standards and requirements of the County at a competitive cost. Nothing in this policy shall be construed as requiring a purchaser or contractor to procure products that do not perform adequately for their intended use, exclude adequate competition, or are not available at a reasonable price or in a reasonable period of time.

However, when comparing product costs, the County does not focus exclusively on the quoted vendor pricing but also the costs over the life of the product, which includes the initial cost along with maintenance, operating, insurance, disposal, recycle or replacement, and potential liability costs. Examining life cycle costs will save money by ensuring we are quantifying the total cost of ownership before making purchasing decisions.

Conservation and Waste Reduction

Wherever practicable and cost-effective, departments are responsible to institute practices that reduce waste and result in the purchase of fewer products without reducing safety or workplace quality.

Examples would include:

- ✓ Using electronic communication instead of printed,
- ✓ Using double-sided photocopying and printing,
- ✓ Using washable and reusable dishes and utensils,
- ✓ Using rechargeable batteries,
- ✓ Streamlining and computerizing forms,
- ✓ Using “on-demand” printing of documents and reports as they are needed,
- ✓ Leasing long-life products when service agreements support maintenance and repair rather than new purchases,
- ✓ Choosing durable products rather than disposable,
- ✓ Buying in bulk, when storage and operations exist to support it,
- ✓ Re-using products such as, but not limited to, file folders, storage boxes, office supplies, and furnishings.

Departmental Responsibilities

Every County department is responsible to ensure that their respective employees, contractors, and vendors are fully aware and supportive of the County’s initiative to purchase environmentally preferable goods and services. To this end, departments are responsible to exercise due diligence in their procurement decisions as well procurements made by their contractors and consultants, promoting the purchase and use environmentally preferable products whenever cost effective, and to the extent practicable for all work completed on behalf of Los Angeles County.

Appendix D:
County Department Survey Results

Appendix D: Summary Responses From County Departments

A questionnaire regarding the EPS usage and the use of alternatives was sent to all departments and agencies in the County of Los Angeles.

Nineteen departments do not purchase or use EPS food service products; 12 noted some use of EPS food service products, and nine departments' did not respond to the questionnaire.

Of the 12 departments and agencies that use EPS products:

- Five responded that they use EPS in a minimal nature with two responding that EPS will be phased out by the end of 2007 or early 2008.
- Five departments and agencies use significant amount of EPS products with two responding that they are currently under contractual obligation requiring the purchase of EPS food service products.
- Two departments and agencies indicated modest use of EPS products.

The following is a copy of the EPS questionnaire.

Expanded Polystyrene Food Service Products:
Questionnaire for County Departments

Contact Person: _____ Department: _____

Phone: _____ Fax: _____

E-mail: _____

1. Does your Department purchase or use expanded polystyrene food service products? If so, please list the facilities and briefly describe the current usage, including annual consumption figures:

2. Do any of the programs listed above have specific requirements for food service containers, such as the ability to manage hot/cold food, microwave safe, etc.?

3. Does your Department have contracts or agreements **requiring** the purchase of expanded polystyrene food service products? If so, when do those contracts end, and do they allow for any revisions prior to expiration?

4. If environmentally friendly alternative products were twice as expensive as expanded polystyrene food service products, how much of an impact would this ban have on your Department?

5. Other than cost, do you foresee any problems transitioning your Department away from the use of expanded polystyrene food service products?

	Q1:Purchase /Utilize EPS	Q2: Have Specific Requirement for EPS	Q3: Have Contracts Which Utilize EPS	Q4: Significant Budget Impact Under Worst Case Scenario	Q5: Concerns With Impact of Ban
Agricultural Commission/W&M	NO	NO	NO	NO	NO
Alternate Public Defender	NO	N/A	NO	N/A	NO
Animal Care and Control	NO	N/A	NO	N/A	N/A
Auditor - Controller	NO	N/A	NO	NO	NO
Beaches and Harbors	NO	N/A	NO	NO	NO
Board of Supervisors	NO	NO	NO	NO	NO
Chief Executive Office	YES	Must be Microwavable/Hold Hot Food/Liquids	NO	NO	NO
Chief Information Office	NO	N/A	N/A	N/A	NO
Child Support Services	Minimal	No	No	N/A	No
Children and Family Services	NO	N/A	N/A	N/A	N/A
Commission on Human Relations	YES	Must be Microwavable/Hold Hot Food/Liquids	NO	YES	NO
Community and Senior Services	YES	Hold Hot Food/Liquids	YES	YES	NO
Community Development Commission.	NO	NO	NO	NO	NO
Consumer Affairs	Minimal	NO	NO	Minimal	NO
Coroner	N/A	N/A	N/A	N/A	N/A
County Counsel	NO	N/A	NO	N/A	N/A
District Attorney	N/A		N/A	N/A	
Fire Department	YES	Must Hold Hot Food/Liquids	NO	Minimal	NO
Health Services	YES	NO	NO	NO	NO
Human Resources	NO	N/A	NO	NO	
Internal Services Department	YES	N/A	N/A	N/A	N/A
Mental Health	Minimal	Must be Microwavable	NO	NO	NO
Military and Veterans Affairs	N/A	N/A	N/A	N/A	N/A
Museum of Art	NO	NO	NO	NO	NO
Natural History Museum	NO	NO	NO	N/A	NO
Office of Affirmative Action Compliance	NO	NO	NO	N/A	N/A
Office of Public Safety	NO	NO	NO	N/A	NO
Office of Small Business	N/A	N/A	N/A	N/A	N/A
Office of the Assessor	Minimal	Must be Microwavable/Hold Hot Food/Liquids	NO	NO	NO
Ombudsman	YES	NO	NO	NO	NO
Parks and Recreation	YES	N/A	N/A	NO	NO

	Q1:Purchase /Utilize EPS	Q2: Have Specific Requirement for EPS	Q3: Have Contracts Which Utilize EPS	Q4: Significant Budget Impact Under Worst Case Scenario	Q5: Concerns With Impact of Ban
Probation	**NO**	**NO**	**NO**	**YES**	**NO**
Public Defender	**NO**	**NO**	**NO**	**NO**	**NO**
Public Health	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Public Library	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Public and Social Services	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Public Works	**Minimal**	**NO**	**NO**	**NO**	**NO**
Regional Planning	**NO**	**NO**	**NO**	**N/A**	**N/A**
Registrar-Recorder/County Clerk	**NO**	**N/A**	**NO**	**N/A**	**N/A**
Sheriff	**YES**	**Must be Microwavable/Hold Hot Food/Liquids**	**YES**	**YES**	**NO**
Treasurer And Tax Collector	**NO**	**N/A**	**N/A**	**N/A**	**N/A**

Appendix E:
Plastic Recycling Chart

Many plastic containers manufactured today are stamped with symbols as an aid to recycling. These stamps identify the type of resin or resin mix in the plastic container. Only two types, PET and HDPE, are commonly collected for recycling.

Symbol	Acronym	Full name and uses
	PET	Polyethylene terephthalate - Fizzy drink bottles and frozen ready meal packages.
	HDPE	High-density polyethylene - Milk and washing-up liquid bottles
	PVC	Polyvinyl chloride - Food trays, cling film, bottles for squash, mineral water and shampoo.
	LDPE	Low density polyethylene - Carrier bags and bin liners.
	PP	Polypropylene - Margarine tubs, microwave-able meal trays.
	PS	Polystyrene - Yoghurt pots, foam meat or fish trays, hamburger boxes and egg cartons, vending cups, plastic cutlery, protective packaging for electronic goods and toys.
	Other	Any other plastics that do not fall into any of the above categories. For example melamine, often used in plastic plates and cups.

Appendix F:
Banning of EPS Food Containers

Brochures

What Resources are Available for Environmentally Acceptable Food Packaging?

National Distributors*

1. Bay Brokerage Company, Inc.
1776 Laurel Street
San Carlos, CA
(650) 595-1189

2. Excellent Packaging and Supply
3220 Blume Drive, Suite 111
Richmond, CA
(510) 243-9501 or (800) 317-2737
www.excellentpackaging.

3. Good Humans
500 Soquel Ave. Suite F
Santa Cruz, CA
(866) 420-4208
www.goodhumans.com

4. Green Earth Office Supply
PO Box 719
Redwood Estates, CA
(800) 327-8449
www.greenearthofficesupply.com

5. GSD Packaging
1854 East Home
Fresno, CA
(559) 441-1181
West@GSDPackaging.com
www.gsdpackaging.com

6. Moresco Distributing
1120 Holm Road
Petaluma, California
(707) 843-0254
tomc@moresco.biz
www.moresco.biz

7. PAMS
3361 Pomona Blvd.
Pomona, CA
(909) 869-7267
www.pamsinc.com

8. Sunlight Sales
11625 Overhill Drive
Auburn, CA
(530) 308-4116
www.sunlight.com

9. Tree Cycle
21555 Conifer Drive
Huson, MT
(406) 626-0200
www.treecycle.com

10. United Natural Foods Inc.
1101 Sunset Boulevard
Rocklin, CA
(916) 625-4100 or (800) 679-8735
www.unfi.com

11. World Centric
195 C Page Mill Rd
Palo Alto, CA
(650) 28303797
www.worldcentric.org

12. Smart and Final
22631 Ventura Blvd.
Woodland Hills, CA
(818) 225-9590
www.smartandfinal.com

Internet Distributors*

1. Brenmarco Retail Store Supplier
(800) 783-7759
www.brenmarco.com

2. Green Home
(877) 282-6400
www.greenhome.com

3. GreenLine
(800) 641-1117
www.greenlinepaper.com

4. Recycline
www.recycline.com

5. Shop Natural
www.shopnatural.com

6. Simply Biodegradable
(509) 764-0233
www.simplybiodegradable.com

7. US Food Service
www.usfoodservice.com

* The City of Calabasas does not endorse the listed distributors. They are listed here as available resources.

CITY of CALABASAS

Environmentally Acceptable Food Packaging Ordinance

Ordinance No. 2007-233

Frequently Asked Questions

Starts March 31, 2008
Section 8.18.030

Public Works Department
Environmental Services Division
(818) 878-4225
www.cityofcalabasas.com/environment

What Does the Ordinance Say?

1. Retail food establishments and nonprofit food providers in Calabasas may *no longer* use food packaging made of expanded polystyrene, known more commonly by the trademark name Styrofoam™, for prepared food, and must use environmentally acceptable food packaging.

Compliance must begin by March 31, 2008

2. What does "**environmentally acceptable food packaging**" mean?

Packaging that is:

- **Returnable**- food or beverage containers are capable of being returned to the distributor for reuse

- **Recyclable**- material that can be recycled, salvaged, composted, processed, or marketed by any means other than land-filling or burning. Recyclable materials include plastic which can be feasibly recycled by a municipal recycling program in California. Such plastics have recycling symbols #1 through #5 and include PET or PETE, HDPE, LDPE, and PP plastics. Polystyrene bears the recycling symbol #6, but is not feasibly recyclable in Calabasas.

- **Biodegradable**- capable of being broken down by micro-organisms in the environment into non-toxic components within a reasonably short time after disposal

- **Degradable**- capable of being broken down through natural processes via natural organisms or ultraviolet light.

3. What does "**prepared food**" mean?
Food or beverages, which are served, packaged, cooked, chopped, sliced, mixed, brewed, frozen, squeezed or otherwise prepared for consumption by a retail consumer on the premises of a retail food establishment. Does not include raw, butchered meats, fish and/or poultry.

4. **Annual Certification**
After March 31, 2007 each retail food establishment in Calabasas must report their awareness of and compliance to the ordinance on the first business day of each calendar year via a written certification, signed under penalty of perjury, that is provided by the City.

What Alternatives to Polystyrene Foam are Available?

- Uncoated paper
- Coated paper
- Cardboard
- Other plastics
- Aluminum foil food service ware
- "Bioplastics" made from corn, potato, and other plant materials
- Bagasse made from plant pulp, e.g. sugar cane

What Resources are Available for Environmentally Acceptable Food Packaging?

Local Distributors*

1. **American Paper and Plastics CO.**
Marty Flacks (local sales rep.)
(626) 444-0000
10511 E. Valley Blvd.
El Monte, CA 91731
www.appinc.com

2. **CaterGreen!**
Allan and Herminia
(323) 663-7747
Catergreen@eco-now.net
www.catergreen.com

3. Smart and Final
22631 Ventura Blvd.
Woodland Hills, CA 91364
(818) 225-9590
www.smartandfinal.com

Ordinance NO. 2007-233 (EPS Ban)
Certification

I, _____, owner/manager of
(Print Name)

_____
(Business name)

located at _____

certify that I received a copy of the City of Calabasas Ordinance No. 2007-233 and I am aware of the requirements that this ordinance entails and will comply to the ordinance by March 31, 2008.

_____ _____
(Signature) (Date)

Public Works Department - Environmental Services Division
26135 Mureau Road, Calabasas, CA 91302-3172
T: 818.878.4225 F: 818.878.4205
www.cityofcalabasas.com/environment

Non-Recyclable Plastic Disposable Food Service Container Ban

Frequently Asked Questions

Background:

On January 9, 2007 the Santa Monica City Council unanimously voted to ban the use of non-recyclable plastic disposable food service containers within Santa Monica: SMMC: 2216 (pdf)

When does the ordinance take effect?

- **February 9, 2007** for all city facilities and operations, city managed concessions, and city sponsored and permitted events.
- **February 9, 2008** for all food service providers in Santa Monica.

Why did the City of Santa Monica ban non-recyclable plastic and polystyrene?

Expanded polystyrene and non-recyclable plastic together make up the largest amount of waste that ends up on Santa Monica's beaches. At the annual Coastal Cleanup Day, 10,000 volunteers came out to clean the beaches and in three hours picked up over 75,000 lbs. of trash, most of which was identified as Styrofoam® and plastic. This plastic waste causes significant environmental damage to the beach and marine environment. It can also harm marine animals and birds who mistake it for food. Polystyrene is made from crude oil and when improperly disposed persists in the environment for hundreds of years. By banning these types of disposable plastic food containers, the ordinance will help to reduce the amount of these materials that pollute Santa Monica's beaches and the bay.

What are the banned food service containers?

Non-recyclable plastic refers to any plastic which cannot be feasibly recycled by a municipal recycling program in the State of California. This specifically refers to expanded polystyrene (also known as Styrofoam®) and clear or rigid polystyrene, both of which are marked with the symbol #6 on the bottom.

This ban applies to single-use disposable containers intended for serving or transporting prepared, ready-to-eat food or beverages. Examples include cups, plates, trays, bowls, and hinged or lidded containers. This ordinance does not apply to single-use disposable food service items which are not used as food containers, such as straws, cup lids and utensils.

Who must comply with this ordinance?

This ordinance prohibits all food providers in the City of Santa Monica from dispensing prepared food in non-recyclable plastic food service containers. "Food provider" means any establishment, located or providing food within the City of Santa Monica, which provides prepared food for public consumption on or off its premises and includes without limitation any store, shop, sales outlet, restaurant, delicatessen, grocery store, super market, catering truck or vehicle, or any other person who provides prepared food, and any organization, group, or individual that regularly provides food as a part of its service. The ordinance also covers food containers purchased by city staff; food programs sponsored by the city, city-sponsored events, city-managed concessions and city-permitted events.

What are the penalties for non-compliance?

- The 1st violation results in a written warning.
- The 2nd violation results in a fine up to $100.
- The 3rd violation & any following violations result in a daily fine up to $250.

What types of containers are allowed under the ordinance?

- Aluminum
- Coated and uncoated paper
- Recyclable plastics
- Biodegradable products made from corn, sugar cane, bamboo, and other rapidly renewable resources.

What is the heat tolerance of biodegradable products?

When determining what type of biodegradable product line to use, it is important to know whether you will be serving hot or cold food. For example, a popular corn-based container has a heat tolerance of around 110 degrees F and is excellent for salads, sandwiches and cold drinks, but not hot foods or drinks. Specific brands of biodegradable food containers are designed for hot foods and drinks. Before you choose a container, be sure to ask for information on heat tolerance and other product specifications.

Where do I find acceptable food service containers?

Contact or visit your sales representative to inquire about acceptable containers. If they do not carry them, request that they begin doing so. As a service to the community, the city will provide a list of suppliers of acceptable food service containers. See list of local food service container distributors at www.smepd.org/container.

Who can I call for questions about where to find alternative products, ordinance enforcement, exemptions, recycling technical assistance or community presentations?

Contact Josephine Miller of the Environmental Programs Division at 310-458-4925 or josephine.miller@smgov.net.

City of Santa Monica
Environmental Programs Division
200 Santa Monica Pier
Santa Monica, CA 90401
Phone: 310.458.2213
Email: environment@smgov.net
Website: www.smepd.org/container

City of Santa Monica®

City of Santa Monica
A Sustainable Community
www.smepd.org

Success Stories

Leaders in Providing Sustainable Take Out Food Services for Santa Monica











Santa Monica is famous for excellent food, and now, excellent take-out food containers. With over 600 food related businesses, Santa Monica now stands with several other leading cities in banning Styrofoam® and other non-recyclable plastics due to their inability to breakdown in the marine environment.

Eat well and protect our valuable natural resources—support the leaders, and become a leader. To learn more, visit us on the web at www.smepd.org/container.

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Environmental Programs Division
200 Santa Monica Pier
Santa Monica, CA 90401
Phone: 310.458.4925
Email: environment@smgov.net
Website: www.smepd.org/container

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A Sustainable Community
www.smepd.org

Container Successes

Zabies
Compostable Bioplastic Clear Cups made from Corn
Compostable Paper Cups w/ Cardboard Sleeve
Compostable Paper To-Go Containers

Library AleHouse
Compostable Cutlery made from Potato Starch
Compostable Bagasse To-Go Containers with lids or clamshells made from sugarcane fiber waste.
Compostable Bioplastic Clear Cups made from Corn

Border Grill
Compostable Paper Cups & To-Go Containers with Corn based lining
Compostable Bioplastic Clear Cups and To-Go Clamshell & Sauce Containers made from Corn
Compostable Cutlery made from Potato Starch

Ocean Park Café
Aluminum To-Go Containers with cardboard lids
Compostable Paper Cups
Compostable Paper Cups w/ Cardboard Sleeves

Santa Monica Airport
Compostable Coated Paper Cups
Compostable Paper Plates & Bowls
Compostable 100% Post-Consumer Waste Napkins

City of Santa Monica

Distributors of Biodegradable and Recyclable

Food Service Containers

Advisory: All of the companies below sell biodegradable and recyclable products as well as non-recyclable products. Be sure to specify "biodegradable and recyclable."
If you would like to suggest additions or corrections, please call the Environmental Programs Division at 310.458.4925 or visit us at **www.smepd.org/container**.

Distributors	Website	Contact	Phone
American Paper and Plastics, Inc.	www.appinc.com	Steven Silver	310.409.5076
BioCorp	www.biocorpaavc.com	Kelly Lehrmann	800.348.8348
Biodegradable Food Service LLC	www.biodegradablefoodservice.com	Kevin Duffy	541.593.2191
BioPak-GSD Packaging	www.gsdpackaging.com	Jim Keitges	559.441.1181
California Recycles, Inc.	www.californiarecycles.com	Elham Ebiza	310.478.3001 x101
Cater Green	www.catergreen.com	Allan Haskell	323.663.7747
EarthSmart LLC	www.earthsmartllc.com	Wes Cradock	480.206.4513
Eco Products	www.ecoproducts.com	Order online	303.449.1876
Excellent Packaging and Supply	www.excellentpackaging.com	Steve Levine	800.317.2737
Giancola Brothers, Inc.	giancolabrosinc@gmail.com	Jennifer Giancola	310-450-1464
Green Earth Office Supply	http://store.yahoo.com/greenearthofficesupply/	Order online	800.327.8449
Green Wave by Western Pacific Assoc.	http://greenwave.us.com/	Joe Battung	562.208.6695
The Individual Group	www.theindgrp.com	Richard Zionts	323.981.2800
Pak West Paper	www.pakwest.com	Chris Smith	714.481.3846
Paper Company	www.thepapercompany.net	Mike Madden	714.444.2171
P & R Paper Supply	www.prpaper.com/	Dionne Marie Stewart	951.316.7800
Recyclaholics	http://recyclaholics.com/foodservice.htm	Order online	612.521.5667
Renewable Products	http://www.renewable-products.com/	Bob Pondo	612.521.5667
Smart and Final - Venice	www.smartandfinal.com	Enrique Perez	310.392.4954
Smart and Final - W. Los Angeles	www.smartandfinal.com	Evan Howell	310.473.0344
Stalk Market	www.stalkmarket.net	Order online	503.295.4977
Sysco Food Service	www.sysco.com	Phillip Waring	800.800.1199 x3039
Trade Supplies	www.tradesuppliesinc.com	Aaron Fishbain	323.581.3250
US Food	www.usfood.com	Miriam Corver	800.379.5633 x6147
WorldCentric Store	www.worldcentric.org/store/index.htm	Order online	650.283.3797

Disclaimer: Reference to any commercial business, organization, or product does not constitute nor imply endorsement or recommendation.

Last updated 11.27.07

Food service ware contributes to litter and blight on our streets, in our creeks throughout Oakland, and in the Bay.

According to the EPA, FDA and OSHA, many food service ware products made from polystyrene foam may be hazardous to our health.

To make our city cleaner and healthier and help our community achieve zero waste, Oakland has passed a disposable food packaging ordinance.

This information is provided by the City of Oakland Public Works Agency Recycling Program
(510) 238-SAVE (7283)
www.oaklandrecycles.com

中文: (510) 614-5495
Espanol : (510) 614-5496
Tiếng Việt : (510) 614-5497

OAKLAND RECYCLES

City of Oakland
Public Works Agency
Environmental Services Division
250 Frank Ogawa Plaza; Suite 5301
Oakland, CA 94612

OAKLAND'S GREENWARE ORDINANCE

Polystrene Foam Food Service Ware
Oakland Municipal Code section 8.07

A Guide For

Oakland Food Vendors

CITY OF OAKLAND
Public Works Agency
JUNE 2007

WHAT YOU NEED TO KNOW

Effective January 1, 2007, Oakland food vendors may not use polystyrene foam (Styrofoam®) disposable foodservice ware.

In Addition, Oakland food vendors and restaurants must change to biodegradable/compostable disposable food service ware such as paper or "bioplastic", as it becomes affordable (same or lower cost).

Disposable food service ware includes all containers, bowls, plates, trays, cartons, cups, lids, straws, forks, spoons, knives and other items that are designed for one-time use that any restaurant or retail food vendor uses to serve or package food to go.

All Oakland food vendors selling prepared food, including restaurants, delis fast-food restaurants, vendors at fairs, food trucks, and all City Facilities must comply.

RESOURCES TO HELP YOU MEET CITY REQUIREMENTS

- ***Ask your current supplier about products that meet the City's new requirements for to-go containers***
- ***Visit www.oaklandgreenware.com for a list of suppliers***
- ***Call 238-SAVE with your questions about the ordinance***

FREQUENTLY ASKED QUESTIONS

What are the alternatives to polystyrene foam? *Uncoated paper, coated paper, cardboard, other plastics, aluminum foil foodservice ware, and "bio-plastics" are good alternitives.*

What are biodegradable and compostable foodservice ware products? *Uncoated paper products, coated paper products, and "bio plastics"- made from corn, potato, and other plant materials.*

Are there exceptions to these requirements? *There is no exception to the prohibition of polystyrene foam. Non-compostable and non-biodegradable products may be used if a vendor can show that no alternative exsits at the same or lower cost.*

PENALTIES

The City will investigate all reported violations. Food Vendors found in violation of the ordinance will be subject to the following fines:

1st offense = Warning
2nd offense = $100 fine
3rd offense = $200 fine
4th offense = $500 fine

OTHER TIPS

- *Allow customers to bring their own mugs when purchasing drinks.*
- *Charge a take-out fee for approved to-go containers that cost more.*
- *Use reusable dishes for dine-in customers.*

Polystyrene is made from petroleum, and it is non-renewable, non-biodegradable, and virtually non-recyclable. It ends up in land-fills, waterways and the ocean. It breaks down into smaller pieces which are often mistaken for food and ingested by marine mammals, birds and fish. The EPA, FDA and OSHA suggest that chemicals in polystyrene foam are carcinogenic and may leach into food and drink.

For questions about the ordinance, or for assistance in identifying a supplier, please call: 238-SAVE(7283) or visit www.oaklandgreenware.com

CITY OF OAKLAND

Disposable Food Service Ware
To-go containers

Frequently Asked Questions

Greenware Ordinance

STARTS JANUARY 1, 2007
Oakland Municipal Code Section 8.07

Who has to follow the Ordinance?
All Oakland food vendors selling prepared food including **restaurants**, **delis**, **fast-food establishments**, **vendors at fairs**, and **food trucks**. All **City Facilities**.

What are alternatives to polystyrene foam?
Uncoated paper, coated paper, cardboard, other plastics, aluminum foil food service ware, and "bio-plastics" are all permitted by this ordinance.

What are biodegradable and compostable food ware products?
Uncoated paper products, coated paper products, and some "bio-plastics" (made from corn, potato, and other plant materials).

What is wrong with polystyrene foam?
Made from crude oil, it is non-renewable, non-biodegradable, and virtually non-recyclable. It ends up in landfills, waterways or the ocean. It breaks down into smaller and smaller pieces which are often mistaken for food and ingested by marine mammals, birds, and fish. Medical evidence also suggests that chemicals in poly-styrene foam are carcinogenic and may leach into food or drink.

Are there exceptions to these requirements?
There is no exception to the prohibition of polystyrene foam. Non-compostable and non-biodegradable products may be used if vendor can show that no alternative exists at the same or lower cost.

What are the penalties for non-compliance?
Violations will result in fines: 1st = warning, 2nd = $100, 3rd = $200, 4th = $500
Enforcement is by the City of Oakland, not the County Health Inspector. Enforcement is complaint-driven, meaning *your customers* may notify the City of violations.

What else can my business do to reduce food service ware waste?
You can allow customers to bring their own mugs to buy drinks. In instances that food vendors wish to use a biodegradable or compostable product that is not the same or less cost than the non biodegradable or compostable alternative, a food vendor may charge a "take out fee" to cover the cost difference. You can use reusable dishes and cups instead of disposable ones for "eat-in" customers. You can use organics recycling service at your business to turn food packaging waste into compost.

How can my business get food scraps recycling?
Call the **City of Oakland Recycling Hotline** at **238-SAVE (7283)** for assistance with any of your business recycling needs.

Disposable Food Service Ware
To-go containers

CITY OF OAKLAND

WHAT YOU NEED TO KNOW

Greenware Ordinance

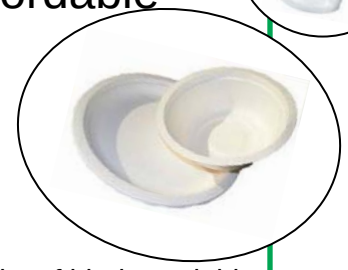
STARTS JANUARY 1, 2007
Oakland Municipal Code Section 8.07

1

Oakland food vendors/restaurants may no longer use polystyrene foam (Styrofoam®) disposable food service ware.
Violations may result in fines. (See back.)

2

Oakland food vendors and restaurants must change to biodegradable/compostable disposable food service ware such as paper or "bio-plastic", as it becomes affordable (same or less cost).



Resources to Help You Meet City Requirements:

- ✓ **Ask** your **current supplier** about products that meet the City's new requirements for food service ware.
- ✓ **Call** the **City of Oakland Recycling Hotline** at **238-SAVE (7283)** for a list of biodegradable food service ware suppliers, or for any questions related to this ordinance.
- ✓ **Visit oaklandgreenware.com** for more suppliers and information.

ZERO waste BY 2020

Para recibir más información en español llame al 238-6812.
自行車道提案提出寶貴意見。如需獲得更多中文資訊，或有任何建議，請致電：238-6812。
Để biết thm chi tiết bằng tiếng Việt ỗ để nhận ẋt gĩp î, xin gọi số **238-6812.**

Food service ware is a large contributor to litter, blight and waste throughout Oakland. In addition, many food service ware products made from plastic may be hazardous to our health. To make our city cleaner and healthier and help our community achieve zero waste, Oakland has passed a disposable food packaging ordinance. Similar ordinances are now being adopted across California.

See reverse for exceptions and more information.

Disposable Food Service Ware
To-go containers

CITY OF OAKLAND

DISTRIBUTOR LIST

Greenware Ordinance

STARTS JANUARY 1, 2007
Oakland Municipal Code Section 8.07

Food Vendors: Ask your distributor for compostable alternatives to foam and plastic!
Customers: Share this flyer with Oakland food vendors you patronize!

Local Distributors

Access Group
14470 Doolittle Drive,
San Leandro, CA
(510) 567-1000
www.accessgroupnca.com

C & J CO
105 Jackson Street
Oakland, CA
(510) 663-0188

Cash & Carry
400 Oak Street
Oakland, CA
(510) 251-9344

Costco
Richmond: 4801 Central Avenue
(510) 898-2003
San Leandro: 1900 Davis Street
(510) 562-6708

Excellent Packaging and Supply
3220 Blume Drive, Suite 111
Richmond, CA
(510) 243-9501 or (800) 317-2737
www.excellentpackaging.com

Jetro Cash n Carry
105 Embarcadero
Oakland, CA
(510) 628-0600

Smart & Final
901-933 Broadway
Oakland, CA
(510) 251-8221
1243 42nd Ave.
Oakland, CA
(510) 536-7494

SYSCO
(800) 877-7012

National Distributors

Bay Brokerage Company, Inc.
1776 Laurel Street
San Carlos, CA
(650) 595-1189

Good Humans
500 Soquel Ave. Suite F
Santa Cruz, CA
(866) 420-4208
www.goodhumans.com

Green Earth Office Supply
PO Box 719
Redwood Estates, CA
(800) 327-8449
www.greenearthofficesupply.com

GSD Packaging
1854 East Home
Fresno, CA
(559) 441-1181
West@GSDPackaging.com
www.gsdpackaging.com

Moresco Distributing
1120 Holm Road
Petaluma, California
(707) 843-0254
tomc@moresco.biz
www.moresco.biz

PAMS
3361 Pomona Blvd.
Pomona, CA
(909) 869-7267
www.pamsinc.com

Sunlight Sales
11625 Overhill Drive
Auburn, CA
(530) 308-4116
www.sunlight.com

Tree Cycle
21555 Conifer Drive
Huson, MT
(406) 626-0200
www.treecycle.com

United Natural Foods Inc
1101 Sunset Boulevard
Rocklin, CA
(916) 625-4100 or (800) 679-8735
www.unfi.com

World Centric
195 C Page Mill Rd
Palo Alto, CA
(650) 28303797
www.worldcentric.org

Internet Distributors

American Paper & Plastics
www.appinc.com

Brenmarco Retail Store Supplier
(800) 783-7759
www.brenmarco.com

Green Home
(877) 282-6400
www.greenhome.com

GreenLine
(800) 641-1117
www.greenlinepaper.com

Recycline
www.recycline.com

Shop Natural
www.shopnatural.com

Simply Biodegradable
(509) 764-0233
www.simplybiodegradable.com

US Food Service
www.usfoodservice.com

Advisory: Check with distributors for specific prices or specifications, and feasibility of products for specific applications. If you'd like to suggest additions or corrections, please email us at partnership@stopwaste.org.

	Certification Status		Material Type			
Item	**BPI-certified * Product Manufacturers**	**Other Product Manufacturers**	**PLA and/or MaterBi**	**Derived Starch (eg: potato)**	**Sugar Cane (bagasse) or other Fibre**	**GMO-free (Manufacturer claim)**
hot cups		Sinless Buying			Sinless Buying	
cold cups	Fabrikal, Cereplast, Huhtamaki	Sinless Buying	Fabrikal, Cereplast		Huhtamaki, Sinless Buying	
cutlery	Cereplast	Earthware, Spudware, Sinless Buying	Cereplast	Earthware, Spudware	Sinless Buying	Earthware (wheat), Spudware
plates	Cereplast	Earthshell, Asean, Huhtamaki, EatItWorld, Sinless Buying	Cereplast	Earthshell	Asean, Huhtamaki, EatItWorld, Sinless Buying	
bowls	Cereplast	Earthshell, Asean, Huhtamaki, EatItWorld, Sinless Buying	Cereplast	Earthshell	Asean, Huhtamaki, EatItWorld, Sinless Buying	
to-go		Earthshell, Sinless Buying		Earthshell	Sinless Buying	
straws	Cereplast		Cereplast			
trays	BioSphere	Sinless Buying		BioSphere	Sinless Buying	
cake and pie shells		NaturesPLAstic	NaturesPLAstic			
bags	BioBag, Cereplast, EcoFilm, Farmell, Heritage, BioSak, Comp-Lete		BioBag, Cereplast, BioSak, Comp-Lete			Bio-Bag
water bottles	Biota Springs Water		Biota Springs Water			

* BPI is the Biodegradable Products Institute. They are the main U.S. certification agency for compostable products. www.bpiworld.org.

OFFICE OF THE CITY ADMINISTRATOR

SF Environment

New Law Promotes Healthier San Francisco and Can Improve the Bottom-Line for Restaurants and Food Vendors

Effective June 1, 2007, food vendors and restaurants in San Francisco must use compostable or recyclable to-go containers. Polystyrene foam (Styrofoam™) disposable food service ware can no longer be used for food prepared in San Francisco.

There are many food service ware alternatives that can be composted or recycled by businesses or residents that can help reduce their trash volumes and service costs. Thousands of San Francisco restaurants and other businesses are recycling and participating in the food scrap and compostables collection program and as a result are getting discounts of up to 75% off their garbage service costs. Residents also have access to composting and recycling collection services and can put compostable or recyclable food service ware in their green or blue carts.

San Francisco Department of the Environment (SF Environment) is available to assist businesses with finding suitable food service ware and can provide on-site training and assistance to participate in the recycling and food scrap and compostables collection programs.

Examples of Acceptable Food Service Ware:

For more information or to request assistance, visit **SFEnvironment.org/foodservice** or call **(415) 355-3700,** or **City's Customer Service 3-1-1**

SFEnvironment Our home. Our city. Our planet. SF Environment is a department of the City and County of San Francisco.

Printed on 100% Post Consumer Recycled Paper

What You Need To Know About New Food Service Ware Law

What are the requirements of the new food service ware law?

- San Francisco food vendors are prohibited from using polystyrene foam, otherwise known as Styrofoam™, food service ware for food prepared and served in San Francisco, with no exceptions.
- All other disposable food service ware for food prepared and served in San Francisco, must be compostable or recyclable unless there is no suitable product that is within 15% of the cost of non-compostable or non-recyclable alternatives. (There is no cost exemption for Styrofoam™).

Who has to follow the new food service ware law?

All San Francisco food vendors selling food prepared and served in San Francisco must use compostable or recyclable food service ware. Restaurants, delis, fast food establishments, vendors at fairs, food trucks, and all City facilities and contractors must follow this law.

What are the penalties for non-compliance?

Violations may result in fines: 1st time = warning, 2nd time = $100, 3rd time = $200, 4th or more time = $500. Enforcement is by the City administrator and will be in part complaint-driven, meaning your customers may notify the City of violations, by calling **(415) 554-4851**.

What is wrong with polystyrene foam (Styrofoam™)?

Made from oil, polystyrene foam is non-renewable, non-biodegradable, and non-recyclable. Polystyrene foam food service ware ends up in landfills, waterways or the ocean. It can break into pieces, which are often mistaken for food and ingested by marine animals, birds, and fish. Medical studies suggest that chemicals in polystyrene foam can cause cancer and can leach into food or drinks.

What are approved food service ware products?

Compostable products include:

- Paper or other plant fiber, such as from sugarcane, rice, or bamboo. Polyethylene film coating on paper is currently accepted, but not any foam coating.
- Corn, soy, potato or other plant starch based bio-plastics, such as "PLA" clear plastic, that are labeled as "compostable" and meet compostability standards (ASTM D6400). These products should be marked with a green band, stripe or sticker to allow compostable identification by the compostables collector and processor.

These products are described at **SFEnvironment.org/foodservice** or call **(415) 355-3700** to request product list.

Recyclable products include:

- Aluminum foil or trays and 

, 

and 

plastic containers and lids.

Where can alternative food service ware products be purchased?

Ask your current supplier about products that meet the City's new requirements. Suppliers for compostable and recyclable products can be found at **SFEnvironment.org/foodservice** or call **(415) 355-3700** to request list of suppliers.

What can you do to reduce food service ware waste?

- Allow and encourage customers to bring their own mugs or reusable to-go containers for take-out use and offer a discount when customers bring their own food service ware.
- Charge customers a fee to cover any additional costs for disposable take-out containers.
- Use reusable service ware instead of disposable ones for eat-in customers.

San Francisco Food Service Ware Ordinance is effective June 1, 2007. Updated as of 5/8/2007

Compostable or Recyclable Food Service Ware Accepted in San Francisco under the Food Service Waste Reduction Ordinance

Product Categories*	Product Brands (Manufacturer)	Product Material/Resins (colors)	Meets ASTM-Standards for Compostability**	OK for Composting Collection	OK for Recycling Collection
Hinged Containers (one piece square or rectangular clamshell one or more compartments)	BagasseWare, BioCane, Bridgegate, Stalkmarket,	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO
	The Harvest Collection (Genpak)	Corn, soy, wheat and/or potato starch based bio-plastic (offwhite)	Resin must meet ASTM-Standards for compostability. Cereplast resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
	NaturesPLAstic & Natureworks PLA (Wilkinson), Nature Green PLA	Corn starch based "PLA" bio-plastic (clear)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
Lidded Containers (two piece square or rectangular one or more compartments or round tub single compartment)	BagasseWare, BioCane, Bridgegate, EATware, Stalkmarket,	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO
	NaturesPLAstic & Natureworks PLA (Wilkinson), Nature Green PLA	Corn starch based "PLA" bio-plastic (clear)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - with green label or sticker on each piece	NO
		Aluminum	NO	NO	YES
	FastPac (Sabert)	#2 (HDPE), #4 (LDPE), or #5 (PP) resin plastic (clear)	NO	NO	YES - with #2, #4 or #5 on each piece
Folded Containers (one piece square or rectangular single compartment)	Biopak, Bioplus, ChampPak, Micropail	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO
Plates or Trays (one or more compartments some with cup holders)	BagasseWare, BioCane, Chinet (Huhtamaki), EATware	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO
		Aluminum	NO	NO	YES
	The Harvest Collection (Genpak)	Corn, soy, wheat &/or potato starch based bio-plastic (offwhite)	Resin must meet ASTM-Standards for compostability. Cereplast resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO

* Categories not listed are exempted until added when available. No exceptions for polystyrene foam ban.

**Polyethylene film (not foam) coating on paper is currently accepted for composting and exempted from ASTM-Standards for compostability.

San Francisco Food Service Ware Ordinance is effective June 1, 2007. Updated as of 5/8/2007

Product Categories*	Product Brands (Manufacturer)	Product Material/Resins (colors)	Meets ASTM-Standards for Compostability**	OK for Composting Collection	OK for Recycling Collection
Bowls	BagasseWare,	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber/pulp accepted without ASTM tests.	YES	NO
	The Harvest Collection (Genpak)	Corn, soy, wheat &/or potato starch based bio-plastic (offwhite)	Resin must meet ASTM-Standards for compostability. Cereplast resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
Hot Cups	Ecotainer (International Paper)	Paper lined with corn starch "PLA" (white w/ green design)	Ecotainer certified by BPI to meet ASTM-Standards.	YES	NO
	Stalkmarket, (Huhtamaki)	Paper and/or plant fiber, such as sugarcane (bagasse), rice or bamboo (brown, white, offwhite)	Paper & plant fiber/pulp accepted without ASTM tests.	YES	NO
Cold Cups & Lids	Greenware (Fabrikal)	Corn starch based "PLA" bio-plastic (opaque, offwhite, green)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
	The Harvest Collection (Genpak)	Corn, soy, wheat &/or potato starch bio-plastic (offwhite)	Resin must meet ASTM-Standards for compostability. Cereplast resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
		#2 (HDPE), #4 (LDPE), or #5 (PP) resin plastic (clear)	NO	NO	YES - with #2, #4 or #5 on each piece
Cutlery	Nat-Ur (Cereplasst)	Corn starch based "PLA" bio-plastic (opaque, offwhite, green) or other corn, soy, wheat &/or potato starch bio-plastic (offwhite)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - if green or other distinct color from non-compostables	NO
Wraps		Paper, cellophane or other plant fiber	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO (If food soiled)
	Natureflex	Corn starch based bio-plastic (opaque, offwhite)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
		Aluminum foil		NO	YES
Straws or Stirrers		Paper or other plant fiber, such as wood stirrers	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO (If food soiled)
		Corn starch based "PLA" bio-plastic (clear, various colors)	Resin must meet ASTM-Standards for compostability. PLA resin has been certified (by BPI) to meet these standards.	YES - with green color label or sticker	NO
Napkins		Paper or other plant fiber	Paper & plant fiber accepted without testing for ASTM Standards.	YES	NO (If food soiled)

* Categories not listed are exempted until added when available. No exceptions for polystyrene foam ban.

**Polyethylene film (not foam) coating on paper is currently accepted for composting and exempted from ASTM-Standards for compostability.

Distributors of Compostable or Recyclable Food Ware

SF Environment
Our home. Our city. Our planet.
SFEnvironment.org • (415) 355-3700
A Department of the City and County of San Francisco

Distributors	Contact & Phone	Email	Website	deli containers, pie shells, salad bowls	to-go containers, clamshells	hot cups / lids	cold cups & lids	cutlery	plates	bowls	straws	trays	bags
Access Group	Chris Matson (510) 567-1000	CMatson@accessgroupnca.com	http://naturesplastic.wilkinsonindustries.com/	PLA	PLA		PLA		B,P	B,P		A,PLA	YES
American Paper & Plastic Inc	Larry Morris (877) 255-7198 (626) 444-0000	larry@appinc.com, info@appinc.com	www.appinc.com	A, PLA	A, PLA	P, EP	PLA	C	P,B	P, B	C	A, P	YES
Biodegradable FoodService	Kevin Duffy (541) 593-2191 (503)810-5707	kevinD@bdfs.net	www.bdfs.net	B, PLA	PLA, B	P,B, PO, BA	PLA, BA	PO, BA	B, BA	B, BA		B, PO, BA	YES
BiRite	Robert Durkin 415-656-0187 x331	durnkin@BiRite.com	www.BiRite.com	P, PLA	P, PLA	P	PLA	yes	P	P			
Cash & Carry	Mario Gavidia (415) 836-9296	cc570@smartandfinal.com	http://www.smartandfinal.com/	P, PLA	PLA, P	P			P	P		P	
Cereplast	Michael Muchin (310) 676-5000	mmuchin@cereplast.com	www.cereplast.com	C	C		C	PLA	C	C			
Costco	Shirley P. Cen (415) 626-4388	w144mbr@costco.com	www.costco.com	P	P	P	P		P	P			
Eco-Products	Luke Vernon (303) 449-1876	lvernon@ecoproducts.com	biodegradablestore.com	PLA, B	PLA, B	P, EP	PLA	PO, C	P, B,	B		B, P	YES
Excellent Packaging and Supply	Allen King (800) 317-2737	allen@excellentpackaging.com	www.excellentpackaging.com	PLA, B, P	PLA, B	B, EP	PLA	PO	B	B, EP	PLA	B	YES
Huhtamaki	Sally Chouprov (650) 344-3605	sally.chouprov@us.huhtamaki.com	www.us.huhtamaki.com	P	P	P	P		P	P		P	
Genpak	Michael Muchin (310) 676-5000	mmuchin@cereplast.com	harvestcollection.genpak.com/products.cfm	C	C		C		C	C			
Green Earth Office Supply	Andrea Wilson (800) 327-8449	andrea@greenearthofficesupply.com	greenearthofficesupply.stores.yahoo.net/furniture.html	P, B, PLA	P, B,PLA	B, EP	PLA	PO, C	P, B	B	PLA	B, PLA,	YES

PLA=clear plastic corn based, C=non-clear plastic corn, wheat or rice based, B=bagasse (sugarcane fiber), BA= bamboo fiber, PO=non-clear plastic potato based, P=paper fiber (poly-coated OK), EP= PLA coated paper cup (Ecocontainer)

Distributors	Contact & Phone	Email	Website	deli containers, pie shells, salad bowls	to-go containers, clamshells	hot cups / lids	cold cups & lids	cutlery	plates	bowls	straws	trays	bags
Green is Green, Inc	Anders (415) 215-8553	anders@greenisgreeninc.com	http://www.greenisgreeninc.com/GiG-product%20list.pdf	B, PLA	B, PLA	B	PLA	PO	B	B	C	B	YES
Maple Trade Corporation	Sam Ha (650) 296-8998	sales@mapletradecorp.com	www.mapletradecorp.com	plastic #5	plastic #5								
Pan Pacific Export & Import	Ali Akbar (510) 582-4893 (510) 582-4817	ali710412@aol.com	www.waterfromfiji.com (click Protect the Earth)	B	B		B		B	B		B	
Prime Link Solutions	Alan Ko (650) 375-1398	alan@primelinksolution.com		B	B				B	B		B	
PPT Brothers	Raymond Tam (415) 430-7030	tpm48@hotmail.com		plastic #5	plastic #5								
Rainbow Grocery	Laura Kemp (415) 863-0620		rainbowgrocery.org				B	C	B	B			YES
Restaurant Depot	(415) 920-2888	manager.045@jetrord.com	www.restaurantdepot.com	P, PLA	P, PLA	P	P		P	P			
S.F. Supply Master	(415) 642-0700	shah@sfsupplymaster.com		P	P	P, EP	PLA		P, B	P, B		P	
Simply Biodegradable	Brad Price (509)764-0233 (509)910-1430	brad@simplybiodegradable.com	www.simplybiodegradable.com	B, PLA	B, PLA	B	PLA	C	B	B		B	YES
Smart and Final	(800) 894-0511		http://www.smartandfinal.com	PLA	PLA	P	PLA		P, PO				
Sysco Food Services	Jeremy Jacobs (510) 226.3425	Jacobs.Jeremy@sfo.sysco.com	http://www.sysco.com/	C, P, PLA	B, P,PLA	P, EP, B	P, PLA	P, C, PO	P, B	P, B	PLA	P, B	YES
Three Bridges Trading	(415) 609-7362	ThreeBridgesTrading@gmail.com		B	B				B	B		B	
US Foodservice	Michael J. Cala John Herrera (925) 606-3585	michael.cala@usfood.com john.herrera@usfood.com	www.usfoodservice.com	C, B	C, B	EP	C	C	B	B			YES
WorldCentric Store	(650) 283-3797	bio@worldcentric.org	www.worldcentric.org/store	B, PLA	B, PLA	B	PLA	PO	B	B	YES	B	YES

References to any commecial business, organization, or product does not constitute nor imply endoresement. updated 5/15/07

PLA=clear plastic corn based, C=non-clear plastic corn, wheat or rice based, B=bagasse (sugarcane fiber), BA= bamboo fiber, PO=non-clear plastic potato based, P=paper fiber (poly-coated OK), EP= PLA coated paper cup (Ecocontainer)

December 2004, #4

Green News

Helping Ventura County employees make environmentally responsible choices

The New Styrofoam Ban – What It Means For You

On October 12, 2004, the Ventura County Board of Supervisors adopted a resolution establishing a ban on the use of expandable polystyrene food containers (EPS) , known by the trade name "Styrofoam". EPS product usage by vendors, franchisees, lessees, contractors and other commercial food and beverage purveyors was banned at the County Harbor, Parks, and at the Government Center. Also, EPS products are no longer usable at special events held at County facilities which are sponsored or co-sponsored by the County.

By enacting this EPS product usage ban, the Board expressed its desire to continue to exercise environmental leadership and stewardship in Ventura County by helping to reduce the amount of EPS that enters our waste stream, and thereby also helping to reduce the amount of EPS debris that enters local storm drains, watersheds, and our coastal environment.

Prohibited items include, but are not limited to, EPS food containers, bowls, plates, trays, cartons, and cups which are not intended for reuse, on or in which food or beverages are placed, and/or packages. In addition, Section 3 of the Board's resolution states, "All individuals, groups, businesses, non-governmental, and other governmental entities are strongly encouraged (emphasis added) to assist in preserving the environment by ceasing to purchase and use expandable polystyrene food service products".

The Board's adoption of this resolution has provided the Environmental and Energy Resources Division (EERD) of the Water & Sanitation Department, Public Works Agency, with a unique opportunity to identify, compare and evaluate relevant operational, performance, and financial, factors associated with the use of environmentally preferable alternatives to Styrofoam. EERD has been gathering information on product samples, pricing, and performance data regarding sustainable manufacturing processes used in the production of a variety of EPS product alternatives in order to assist the above mentioned County departments comply with the Board's recent EPS product usage ban. Our goal is to provide a list of alternative products, with appropriate performance and cost comparison information, so that vendors may choose the most environmentally preferable and economically viable product alternatives to EPS. And armed with that information, we hope that you, their customers, will encourage vendors to do so.

Many people think of paper or plastic as the only substitute for Styrofoam cups, plates and bowls, but some new and exciting products made from some rather surprising materials are becoming increasingly common in the marketplace. Here is some information to help you understand the different product options and how they affect the environment:

STYROFOAM or EPS, is commonly used as a disposable food container due to its light weight, insulating properties, and low price. EPS is a petroleum based product and will not ever biodegrade. EPS is made from crude oil, a non-renewable resource. Like all plastics, every EPS item we've ever produced still exists. It does, though, break down into small pieces, which are mistaken for food and ingested by marine animals. This causes reduced appetite and nutrient adsorption, often leading to slow starvation. According to the Alguita Research Institute, the ratio of plastics to plankton (a major food source for many marine animals) in the oceans is currently 6:1 and increasing.

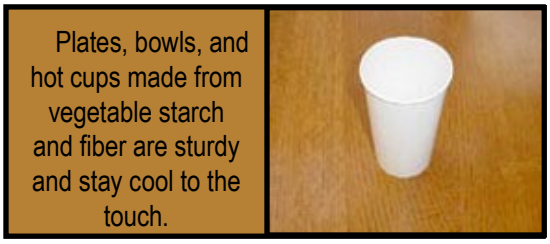
Continued on page 2

Continued from page 1

PAPER products do not have insulation properties. The majority are made from virgin paper and do not contain any recycled content. Most of the products, particularly the cups, contain a poly coating (petroleum based) for insulation and rigidity. Paper products without the coating tend to be rather droopy and, when filled with hot beverages, the cups are too hot to hold. Poly-coated products prevent the paper from breaking down or being recycled in municipal recycling programs, are not considered "recyclable" and consequently are sent to local landfills for disposal. Large amounts of water, as well as chemicals and energy are used in the production of paper products.

PLASTIC items are made from non-renewable resources: crude oil. Extraction and refining pollute the environment. Chemicals are used and produced during manufacturing. In addition, excessive water is used for cooling and large amounts of energy are consumed during manufacturing. Plastic products are not biodegradable nor compostable and do not break down. They do not have insulating properties.

BIOPRODUCTS are made from renewable natural ingredients – often byproducts of other manufacturing processes. These include products made from corn starch or from the pulp that remains after juice is extracted from sugar cane. The most promising item we've seen, in terms of price and performance, is made from a combination of bamboo, tapioca and water. These products are all completely biodegradable and can be composted. Many local schools use these in their "Zero Waste" lunch programs. The items are combined with food waste and composted for the gardens.


Plates, bowls, and hot cups made from vegetable starch and fiber are sturdy and stay cool to the touch.

EERD has developed a price sheet that will assist departments in comparing their current costs for food service items. Generally, costs for bioproducts run about the same as prices for Styrofoam and coated paper prices on most food service items. Costs for non-styrofoam hot cups tend to be higher.


Cold cups made from corn starch are quite similar to plastic cups.

The proper evaluation of the "cost-benefits" of any product only starts with its purchase price. The full "life-cycle" cost of any product includes the cost of the raw materials needed to begin producing the product, the costs associated with the production processes, the disposal cost of the item, which often becomes harmful and/or toxic to nature during its disposal, and finally, the larger socioeconomic costs of choosing non-sustainable materials for such products. Initially, the short term personal economic gain associated with the use of EPS products may appear advantageous to us, but after appropriate reflection, we hope that you consider carefully that the full life-cycle costs of selecting a non-sustainable product can continue for generations after its initial use.

While EPS or Styrofoam is the subject of the Board's recent ban, we hope that each of us will consider taking affirmative steps to reduce the use of all disposable, rigid plastic containers. This will help cut down the amount of trash that goes to our local landfills, as well as improve our local environment. Green Seal, a non-profit organization, has done some research on rigid quick serve food packaging that you may find informative and useful.

Switching from petroleum based Styrofoam or coated paper to a more environmentally friendly product may increase the price of your coffee or meal by a few pennies. But it just doesn't make sense for us to use packaging lasting hundreds of years, when its functional use is 15 minutes or less. As County employees, we hope that you become familiar with the provisions of the Board's EPS product usage ban, and do everything you can, as customers of such products, to help support the County's vendors as they take affirmative steps to transition to more environmentally preferable product alternatives.

We encourage County employees who choose to purchase coffee either at the government center, AM/PM, Starbucks or other locations to bring their own cup. Remember that Starbucks and AM/PM offer a reduced "refill" price. And, whenever possible, please try and use conventional food service ware, rather than disposable items.

We also hope that staff in all County Departments and Agency will take this opportunity to review the products they use as part of performing their daily work, or even in their own break rooms, carefully. Every department scenario is different and unique and we encourage you to call EERD for technical assistance in evaluating your situation so that we can help offer the best alternatives to meet your special needs.

Should you have any questions regarding EERD's technical assistance programs to County Agencies and Departments for this EPS product usage bin and or other aspects of our EP3 efforts, please feel free to contact Gerard Kapuscik, Manager, Resources & Information Section, EERD, directly at 289-3106, or via e-mail: "gerard.kapuscik@mail.co.ventura.ca.us."

APPENDIX B

Case Studies

CASE STUDIES
SUMMARY REPORT

Jurisdictions and Businesses in California Utilizing EPS Recycling and Alternatives to EPS Food Containers

Los Angeles County
Department of Public Works

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CASE STUDIES

Executive Summary

Many cities and Counties throughout the nation have adopted a resolution or an ordinance aimed at limiting the negative impacts of expanded or foam polystyrene in their communities. The Los Angeles County Department of Public Works Expanded Polystyrene (EPS) Staff Report Part I, released in October 2008, identified a number of cities in a summary of case studies for municipalities that adopted some form of prohibition regarding EPS food containers. This document supplements the case studies previously reported, and provides a section on retail food service industry case studies as well as information on EPS recycling operations and end-of-life disposal of alternative food container products.

Jurisdictions That Have Adopted Ordinances Limiting EPS Food Containers

Overall, at least 53 municipalities in California have adopted policies relating to EPS food containers. Of these, 43 have ordinances that apply to retail food vendors in their jurisdictions. Of those who have policies that apply to retailers, 35 have policies that apply to municipal facilities/operations as well. Those who have adopted policies applicable to retailers are highlighted in the report, since the County of Los Angeles already has a policy for its municipal facilities and operations.

Restaurants and Retail Food Vendors with Food Container Policies

Many businesses have transitioned away from EPS takeout food containers. The reasons for this include customer preference, environmental stewardship, and company image. Some businesses have reported that switching to EPS alternatives has yielded unexpected benefits, such as extra storage space, increased press coverage, and customer loyalty.

Recycling of EPS Food Containers

The ability and effectiveness of recycling of EPS food containers is dependent on a number of factors, including the proximity to a densifying machine and the volume of clean material that can be readily separated and collected. Because of the lightweight nature of the material it is difficult to effectively transport without being first densified. Obtaining uncontaminated material is challenging for many Material Recovery Facilities (MRFs), who note that the market for and the amount of quality EPS material in the waste/recycle stream does not make it economically feasible to collect and separate for recycling. A handful of MRFs have been able to separate and sell product packaging EPS, but significantly fewer food containers are sorted due to contamination and their small size. Successful EPS food container recycling examples are school cafeterias where students are able to clean their lunch trays and separately package them for bulk

pickup. By recycling their EPS lunch trays, schools report they are saving money and reducing the number of foam trays the schools must dispose.

Recycling and Composting of Alternative Food Containers

Residential and commercial recycling has been in place and available for residents in the unincorporated County areas for two decades. Recycling food containers made of material alternative to EPS, such as paper, aluminum and polyethylene terephthalate (PET), is a method to divert waste from landfills. Most cities and their haulers offer recycling as part of their curbside collection service and can accept food containers made of alternative materials that are recyclable, so long as the containers are not overly contaminated with food waste. Depending on business needs, most haulers offer a variety of bin sizes to contain recyclable material for pick-up. Some recyclers even provide clients with onsite roll-off compactors, onsite baling, and direct shipment to end-users.

Food scrap composting in conjunction with green waste collection is a recent trend that is growing rapidly in some regions where commercial composting facilities are well established. Many municipalities that accept food scraps in their green bins are also accepting uncoated paper products, which include some food service items. Other municipalities involved in residential and commercial composting are able to take anything that is compostable (ASTM D6400, ASTM D6868), including bioplastics, coated paper, etc. Through discussions with municipalities that have residential collection programs, some noted that they did not want residents to be confused about what plastic products were acceptable to compost, so they advised residents not to compost any plastics. Businesses (restaurants and food retailers) allowed collection of bioplastics since it was the business purchasing the products and they had fewer people to educate with fewer sources to control.

There are at least nine large event venues or institutions in California that have either started their own composting operations or are sending their compostable material out to commercial composters. Reported benefits include reduced waste hauling costs and reduced grounds maintenance cost.

Municipalities in Los Angeles County that Restrict EPS

Calabasas

- Prohibition Effective: March 31, 2008; July 1, 2007 (City facilities)
- Materials/Products Affected:
    - Only "Environmentally Acceptable Packaging" can be distributed by operators. This includes packaging that is
        - Returnable
        - Recyclable
        - Biodegradable
        - Degradable
    - Foam polystyrene food ware is prohibited
- Operators Affected
    - Retail food establishment
        - Retail food establishments shall report on or before March 31, 2007, and the first business day of each calendar year thereafter, a written certification that the owner/operator knows of and is in compliance with this chapter
        - Retail food establishments shall maintain written records of compliance
    - Non-profit food providers
    - City facilities
- Exemptions
    - During an emergency declared by the City Manager
    - City Manager determines there is no environmentally acceptable substitute
    - Items required to be purchased under a contract entered into prior to February 21, 2007
    - Items packaged outside the City
- Penalties for violations
    - First violation – fine not exceeding $100
    - For the second violation – fine not exceeding $200 (within a year)
    - For the third – fine not exceeding $500 (within a year)
    - For the fourth violation, regardless of the time of occurrence, shall constitute a misdemeanor and be punishable by a fine not to exceed $1,000 and/or time in County jail not to exceed six months.
    - Falsely stating compliance or failing to file reports in a timely manner shall result in a misdemeanor, with penalties described above
    - Each sale or transfer of food packaging other than environmentally acceptable food packaging shall constitute a separate violation.
- Municipal food scraps composting available as a pilot program to a limited number of businesses and residents.

Los Angeles, City of

- Restriction Effective: September 5, 1988
    - Materials/Products Prohibited: Any product made of, or with, foam polystyrene unless the product is made using a blowing agent compound that:
        - Will reduce the potential for ozone depletion by more than 95 percent compared to the ozone depletion potential of chlorofluorocarbon (CFC) CFC-12.
        - The blowing agent compound will not contribute to the formation of ozone in the lower atmosphere.
    - Operator Affected: Any manufacturing, sale, or distribution to any person in the City
    - Penalties for violations
        - First violation – fine not to exceed $50
        - Second violation within one year – fine not to exceed $100
        - Each additional violation within one year - $250
- Prohibition Effective: July 1, 2008
    - Materials/Products Prohibited: all foam polystyrene food service products
    - Operators Affected: City departments and agencies
    - City agencies are to report back to City Council with plans to replace EPS products with alternatives in all lease and concession agreements by 2010
- Prohibition Effective: July 1, 2009
    - Materials/Products Prohibited: all foam polystyrene food service products
    - Operators Affected: City-permitted events
- Residential EPS recycling is available
- Municipal Food Scrap Composting Availability: A pilot program is being run in one district of the City representing about 8,700 households as well as a program with retailers that includes over 1,000 participants

Los Angeles, County of

Public Works staff conducted an evaluation of the prohibition of EPS food containers at County operations. All affected departments were contacted, and those that have completed the transition to alternative products reported they have not experienced a significant financial or operational impact. The following table provides a summary of the status of the prohibition of EPS food containers at the remaining Departments still in the process of transitioning away from EPS (due to long term contracts):

Departments still in transition		
Department	Experience to date	Summary
Chief Executive Office	Once transition is effective there will be minimal to no cost.	New vending contracts are being held up. Spoke to Eliza Jung, she indicated that vendors already do business in other jurisdictions who restrict EPS usage, as a result, transition should not have any problems.
Community and Senior Services		CSS will include language in the contracts for the Congregate Meals and Home Delivered Meals Program executed after July 2012 about the prohibition against the use of EPS products.
Health Services	EPS is not used in the Comprehensive Health Centers or Health Centers. Antelope Valley Center has not used EPS since the initial Board Letter.	Five County hospitals are in the process of awarding new contracts for Food and Nutrition Services. RFP process was pulled in 2010 and DHS will be recommending new contracts to the Board of Supervisors, following completion of a new RFP process.
Parks & Recreation	Minimal to none.	Parks & Rec will ensure that County Counsel-approved language prohibiting the use of EPS products is added to their agreements executed after June 2011.
Probation	Minimal to none.	No problems as of yet for the 15 of the 19 facilities that have transitioned. The remained are in the process of transitioning
Sheriff	Minimal to none.	They currently use alternatives in civilian areas only due to safety concerns in inmate areas.

<u>Malibu</u>

- Prohibition Effective: October 12, 2005
- Materials/Products Affected: Foam polystyrene food ware is prohibited
- Operators Affected

    - Restaurant
    - Food packager
    - Retail food vendor
    - Vendor or Non-profit food provider
    - City facilities
    - Events sponsored or co-sponsored by the City
    - Rental of City-owned properties or facilities
- Exemptions
    - Food items packaged out the City
    - A one-year exemption may be granted upon showing that the ban causes an undue hardship
    - Coolers and ice chests
    - Food packaging required to be purchase under a contract entered into one year prior to October 12, 2005
- Penalties for violations
    - First violation – fine not exceeding $100
    - For the second violation – fine not exceeding $200 (within a year)
    - For the third and subsequent violations – fine not exceeding $500 (within a year)
    - Each day the violation occurs shall be considered a separate violation

<u>Santa Monica</u>

- Prohibition Effective
    - February 9, 2007, for City facilities
    - February 9, 2008, for retail food vendors
- Materials/Products Affected
    - Foam polystyrene prohibited food ware is prohibited
    - Non-recyclable plastic food ware is prohibited
- Operators Affected
    - Food providers
        - Store
        - Shop
        - Sales outlet
        - Restaurant
        - Grocery store
        - Supermarket
        - Delicatessen
        - Catering truck or vehicle or any other person, group or organization who provides food
    - City facilities
    - City events
- Exemption: The Director of the Environment and Public Works Management Department may exempt a food provider from the requirements of this chapter, if the food provider can show an “Undue hardship” as a result of this chapter (exemption period is one year, after which re-application is necessary)
- Penalties for violations

    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second violation and any future violations - fine not exceeding $250
        - Fines are cumulative and each day that a violation occurs shall constitute a separate violation
- Residential food scraps composting pilot program
- Commercial food scraps composting pilot program accepts paper products

<u>West Hollywood</u>

- Prohibition Effective: August 18, 2000
- Materials/Products Affected: Food packaging which utilizes any polystyrene is prohibited
- Operators Affected
    - Restaurant
    - Retail vendor – includes anywhere food or beverages are sold or conveyed to customer including where food ins prepared, mixed, or packaged
    - Food packager
    - Non-profit food provider
- Exemptions
    - Food items which are packaged outside the boundaries of the City
    - Undue hardship as a result of no available alternative (period of one year, after which re-application is necessary)
    - Coolers and ice-chests intended for reuse
    - Food packaging required to be purchased under a contract entered into one year prior to August 18, 2000
- Penalties for violations
    - First violation – written warning notice
    - After a written warning notice has been issued:
        - For the first violation – fine not exceeding $100
        - For the second violation – fine not exceeding $200
        - For the third and any future violations – fine not exceeding $500
        - Any violation shall constitute sufficient grounds for the revocation, suspension, denial or non-renewal of a business license issued by the City, held by the violator for the location at which the violation occurs
- Residential EPS recycling is available
- The City accepts EPS in their curbside recycling programs, although conversations with corresponding haulers and recyclers do not confirm that EPS is actually gathered to be sold to EPS buyers, but are instead disposed to landfills.

Other Municipalities in Southern California that Restrict EPS

Carpinteria

- Prohibition Effective: September 1, 2009
- Materials/Products Affected: disposable food service containers made entirely or in part from non-recyclable plastic (“Non-Recyclable Plastic" refers to any plastic which cannot be feasibly recycled by a municipal recycling program available in the City of Carpinteria, including foam polystyrene) is prohibited
- Operators Affected
    - Food provider
    - City facilities and users of City facilities
    - City-managed concessions
    - City-sponsored events, including but not limited to, City franchises, contractors and vendors doing business in the City
- Exemptions
    - During a locally declared emergency
    - Items packaged outside the City
    - A food provider may apply to be exempt for a one-year period, upon showing that the ordinance would cause undue hardship. Areas of consideration in determining undue hardship are:
        - No reasonable alternatives
        - Contractual obligations
- Penalties
    - Presence of non-compliance material shall constitute a rebuttable presumption that such packaging is being dispensed.
    - A written warning is issued upon the initial violation
        - $100 for next violation within 36 months
        - $200 for next violation within 36 months
        - $500 for next and subsequent violations within 36 months
    - Each and every sale or transaction of a non-compliance material will constitute a violation

Laguna Beach

- Prohibition Effective: July 1, 2008
- Materials/Products Affected: foam polystyrene or non-recyclable plastic disposable food service ware is prohibited
- Operators Affected
    - Retail food vendors
    - City facilities
    - City-managed concessions
    - City-sponsored and permitted events
    - Contractors doing business with the City
- Exemptions
    - Containers, plates, or trays for butchered meats, fish and/or poultry
    - Food vendors may apply for “undue hardship” exemptions for up to one year

- Penalties for violations
    - First violation - written warning notice
    - After a written warning notice has been issued
        - For the first violation - fine of $100
        - For the second violation - fine of $200
        - For the third and any future violations - fine of $500

Newport Beach

- Prohibition Effective: June 2009 (City since 2007)
- Materials/Products Affected: disposable food service ware made from foam polystyrene is prohibited
- Operators Affected
    - Food vendors
    - City facilities
    - City-managed concessions
    - City-sponsored and permitted events
- Exemptions
    - Prepared foods packaged outside the City
- Penalties for violations
    - For the first violation - fine not exceeding $100
    - For the second violation within one year - fine not exceeding $200
    - For the third and any future violations within one year - fine not exceeding $500
    - Each and every day a violation continues constitutes a separate offense

Municipalities in Northern California that Restrict EPS

Alameda

- Prohibition Effective: July 1, 2008
- Materials/Products Affected
    - Disposable food service ware that uses foam polystyrene is prohibited
    - Biodegradable, compostable, or recyclable disposable food service ware is required

  *Food vendors are strongly encouraged to provide reusable food service ware instead of disposable and may charge a “take-out fee” to customers to cover the difference in cost of alternatives.
- Operators Affected
    - Food vendors
    - City facilities
    - City contractors and vendors
- Exemptions
    - Prepared foods packaged outside the City
    - Foam polystyrene coolers and ice chests intended for reuse
- Penalties for violations
    - First violation – fine not exceeding $250

    - For the second violation within 3 years of the first – fine not exceeding $500
    - For the third and subsequent violations within 3 years of any previous fines – fine not exceeding $1,000
- Curbside collection of residential food waste for composting also includes paper products

Albany City

- Prohibition Effective: September 2008
- Materials/Products Affected
    - Foam polystyrene disposable food service ware is prohibited
    - Biodegradable/compostable or recyclable disposable food service ware is required
- Operators Affected
    - Food vendors
    - City facilities and contractors
- Exemptions
    - Prepared foods packaged outside the City
    - Foam polystyrene coolers and ice chests intended for reuse
- Penalties for violations
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second violation - fine not exceeding $200
        - For the third and any future violations - fine not exceeding $500
- Curbside collection of residential food waste for composting also includes paper products

Berkeley

- Prohibition Effective: January 1, 1990
- Materials/Products Affected
    - CFC-processed foam food packaging is prohibited
    - Foam polystyrene food packaging is prohibited
    - Restaurants and retail food vendors shall establish separate waste receptacles for each type of recyclable food packaging waste generated on the premises
- Operators Affected
    - Restaurants
    - Retail food vendors
    - City facilities
    - City events
    - Wholesalers located and doing business within the City
- Exemptions
    - Undue hardship as a result of no available alternative
    - Food packaging required to be purchased under a contract entered into prior to September 22, 1987

- Penalties for violations
    - First violation – fine not exceeding $100
    - For the second violation – fine not exceeding $200 (within a year)
    - For the third – fine not exceeding $500 (within a year)
    - The fourth violation within one year shall constitute a misdemeanor and be punishable by a fine not to exceed $1,000 or time in County jail not to exceed six months, or both
- Curbside collection of residential food waste for composting also includes paper products

Burlingame

- Prohibition Effective: January 1, 2012
- Materials/Products Affected
    - Any polystyrene-based disposable food service ware is prohibited
- Operators Affected: Food vendor that provides prepared food at a retail level
- Exemptions
    - Pre-packaged food
    - Polystyrene cooler and ice chests intended for reuse
    - Food vendors at the San Francisco International Airport
    - Undue hardship caused because a suitable alternative does not exist for a specific application, or no reasonably feasible available alternative exists to a specific and necessary container prohibited by this chapter
- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation
    - A fine not exceeding $500 for the third and subsequent violations
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation

Capitola

- Prohibition Effective: May 23, 2009
- Materials/Products Affected
    - Disposable food service ware made of foam polystyrene is prohibited
    - Biodegradable or compostable disposable food service ware is required

  *Food vendors may charge a “take-out fee” to cover the difference in cost of alternatives.
- Operators Affected
    - Restaurant
    - Food vendor
    - City facilities
    - City departments and agencies
    - City franchises
    - City events

    - Contractors and vendors doing business with the City
- Exemptions
    - Prepared foods prepared or packaged outside the City
    - Food vendors will be exempted from this chapter if the City Manager finds that no biodegradable or compostable alternative exists
    - Foam polystyrene coolers and ice chests
    - Disposable food service ware composed entirely of aluminum
    - In a situation deemed by the City Manager to be an emergency for the immediate preservation of the public peace, health, or safety
- Penalties for violations
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second violation - fine not exceeding $200
        - For the third and any future violations - fine not exceeding $500
- Curbside collection of residential food waste for composting also includes paper products

<u>Carmel by the Sea (Carmel)</u>

- Prohibition Effective: November 2008
- Materials/Products Affected
    - CFC-processed or foam polystyrene food packaging is prohibited
    - Restaurants, retail food vendors, City facilities, and City-sponsored events are required to have at least 50 percent by volume of packaging be degradable or recyclable (As defined in the ordinance plastic number 6 and 7 are excluded from the list of materials accepted by the special district recycling program).
    - Food vendors shall establish separate waste receptacles for each type of recyclable food packaging generated on-premises
- Operators Affected
    - Restaurants
    - Retail food vendors
    - City facilities
    - City events
    - Wholesalers located and doing business within the City
- Exemptions
    - Undue hardship as a result of no available alternative
    - Food packaging required to be purchased under a contract entered into prior to December 31, 1989
- Penalties for violations
    - First violation - written warning notice
    - After a written warning notice has been issued
        - For the first violation - fine not exceeding $100
        - For the second violation - fine not exceeding $200
        - For the third and any future violations - fine not exceeding $500

*Fines for violations in connection with special events will increase in amount depending upon the number of persons attending the event.

Del Rey Oaks

- Prohibition Effective: July 1, 2010
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited from use in all City facilities
    - Food service ware that contains foam polystyrene is prohibited
    - Biodegradable, compostable or recyclable products is required

  *A "take-out fee" may be charged to cover the difference in cost of alternatives
- Operators Affected
    - Food providers, including any vendor providing prepared food for public consumption
    - City contractors performing City contracts
    - Special events promoters
- Exemptions
    - There are no exemptions for use of foam polystyrene disposable food service ware
    - Food provider may be exempt from these requirements if this ordinance would create an undue hardship or practical difficulty not generally applicable to other persons in similar circumstances. Food providers must apply in writing for a one-year non-renewable exemption.
    - Foods prepared or package outside the City and sold inside the City

Emeryville

- Prohibition Effective: January 1, 2008
- Materials/Products Affected:
    - Disposable food service ware that contains foam polystyrene is prohibited
    - Non-ASTM-Standard compostable plastic food service ware is prohibited
- Operators Affected
    - City facilities
    - Vendors doing business or under contract with the City
    - Special events co-sponsored by the City
    - Food vendors
        - Food service vendors are also strongly encouraged to use reusable food service ware in place of disposable food service ware.
- Exemptions
    - Prepared foods prepared or packaged outside the City
    - Food vendors will be exempt from this ordinance for specific items if a suitable alternative does not exist.
    - Coolers and ice chests intended for reuse
- Penalties for violations
    - First violation - written warning notice
    - After a written warning notice has been issued

        - For the first violation - fine not exceeding $100
        - For the second violation in one year- fine not exceeding $200
        - For the third and any future violations in one year- fine not exceeding $400
- Curbside collection of residential food waste for composting also includes paper products

Fairfax

- Prohibition Effective: November 2, 1993
- Materials/Products Affected: foam polystyrene food packaging is prohibited
- Operators Affected
    - Restaurants
    - Retail food vendors
    - Town operations
    - Events using the Town's premises or facilities, and Town-sponsored
- Exemptions
    - No available alternative
    - Situations where compliance with the requirements of this chapter would deprive a person of a legally protected right.
    - Food packaging required to be purchased under contract entered prior to the effective date of this ordinance

Foster City

- Prohibition Effective: April 1, 2012
- Materials/Products Affected
    - Any polystyrene-based disposable food service ware is prohibited
- Operators Affected: Food vendor that provides prepared food at a retail level
- Exemptions
    - Pre-packaged food
    - Polystyrene cooler and ice chests intended for reuse
    - Food vendors at the San Francisco International Airport
    - Undue hardship caused because a suitable alternative does not exist for a specific application, or no reasonably feasible available alternative exists to a specific and necessary container prohibited by this chapter
- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation
    - A fine not exceeding $500 for the third and subsequent violations
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation

Fremont

- Prohibition Effective: January 2011
- Materials/Products Affected
    - Foam polystyrene food service ware is prohibited
    - Non-recyclable food service ware is prohibited

    - Non-compostable food service ware is prohibited
- Operators Affected
    - Food vendors
    - City facility users
- Exemptions
    - Foods prepackaged outside the city limits
    - Coolers and ice chests intended for reuse
    - Undue hardship
    - Emergencies supplies or services procurement

- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation within one year
    - A fine not exceeding $500 for the third and subsequent violations within one year
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation
- Curbside collection of residential food waste for composting also includes paper products

Half Moon Bay

- Prohibition Effective: August 1, 2011
- Materials/Products Affected
    - Any polystyrene-based disposable food service ware is prohibited
- Operators Affected
    - Food vendor that provides prepared food at a retail level
- Exemptions
    - Pre-packaged food
    - Polystyrene cooler and ice chests intended for reuse
    - Food vendors at the San Francisco International Airport
    - Undue hardship caused because a suitable alternative does not exist for a specific application, or no reasonably feasible available alternative exists to a specific and necessary container prohibited by this chapter
- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation
    - A fine not exceeding $500 for the third and subsequent violations
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation

Hayward

- Prohibition Effective: July 1, 2011
- Materials/Products Affected
    - Disposable food service ware made with foam polystyrene is prohibited

    - Non-recyclable food service ware is prohibited
    - Non-compostable food service ware is prohibited
- Operators Affected
    - Food vendors – including any establishment which provides prepared food or beverages for public consumption
    - City facility users
- Exemptions
    - Foods prepackaged outside the City, but the purveyors of said foods are encouraged to follow the provisions of the ban
    - Cooler and ice chests intended for reuse
    - City Manager may except a food vendor or city facility for undue hardship
    - During an emergency for the immediate preservation of the public peace, health, or safety
- Penalties
    - City Manager has primary responsibility
    - Written warning notice
    - "Each and Every sale or other transfer … shall constitute a separate violation"
    - Any violation after the issuance of the written warning is subject to civil and administrative enforcement
    - City attorney may seek legal, injunctive or other equitable relief to enforce the act
    - Remedies provided herein are cumulative and not exclusive
- Curbside collection of residential food waste for composting also includes paper products

<u>Hercules</u>

- Prohibition Effective: August 13, 2008
- Materials/Products Affected: utensils made of foam polystyrene, including containers, cups, trays, and lids is prohibited
- Operators Affected
    - Restaurants
    - Retail food vendors
    - City facilities
    - Events sponsored, co-sponsored, or approved by permit by the City
- Exemptions
    - Food items packaged outside the boundaries of the City
    - The City Manager may exempt a restaurant, retail food vendor, itinerant food-handling establishment, or nonprofit food provider for undue hardship for one year if either of the following applies:
        - No available alternatives
        - Situations where compliance would deprive a person of a legally protected right
    - Coolers and ice chests made of foam polystyrene
    - Food utensils required to be purchased under contract entered into less than one year prior to the effective date of the ordinance

- Penalties for violations
    - Penalties and remedies are cumulative (not exclusive) for each day that a violation occurs shall constitute a separate violation
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second and any future violations - fine not exceeding $250

Livermore

- Prohibition Effective: July 1, 2011
- Materials/Products Affected
    - Non-recyclable food service ware is prohibited
    - Non-compostable food ware is prohibited
    - Operators are required to offer recyclable or compostable food service ware (if they provide disposable food service ware). "Recyclable" is defined earlier as any material that Livermore accepts in their recycling program, for which foam polystyrene is not.
- Operators Affected
    - Food vendors, including any establishment which provides prepared food or beverage for public consumption
- Exemptions
    - During an emergency for the immediate preservation of the public peace, health, or safety
    - Foods prepackaged outside the City, but purveyors of said foods are encouraged to follow the provisions of the ban
    - The Environment and Energy Committee may grant a waiver if a food vendor can show undue hardship as a result of the ordinance.
- Penalties:
    - Public Works Director has primary responsibility
    - First violation includes a written warning
    - Violations after the written warning
        - 1st violation after warning – fine of $100
        - 2nd violation within six months – fine of $200
        - 3rd and subsequent violations – fine of $500
        - In addition, penalties for administrative costs, late payment changes, compliance re-inspections, and collection costs may be assessed.

Marin County

- Prohibition Effective: January 2010
- Materials/Products Affected
    - Disposable food packaging which includes foam polystyrene is prohibited
    - Non-compostable disposable food service ware is prohibited
- Operators Affected
    - Food providers
    - Restaurants

    - County facilities
    - County-managed concessions
    - County-sponsored and permitted events
    - County facilities, retail food vendors, and restaurants are encouraged to use durable food service items. If not feasible, they are required to use compostable disposable food service ware and packaging.
- Exemptions: Foam polystyrene coolers and ice chests intended for reuse

Millbrae

- Prohibition Effective: January 2008
- Materials/Products Affected
    - Polystyrene disposable food service ware is prohibited
    - All disposable food service ware is required to be biodegradable, compostable, reusable, or recyclable
- Operators Affected
    - Food vendors
    - City facilities
    - Individuals, entities, or organizations using City facilities
- Exemptions
    - Prepared foods prepared or packaged outside the City
    - Coolers and ice chests intended for reuse
- Penalties for violations
    - First violation - written warning notice
    - Second violation - fine of $100
    - Third violation - fine of $200
    - Forth and further violations - fine of $500

Monterey, City of

- Prohibition Effective: September 2009
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited
    - It is required that biodegradable, compostable or recyclable disposable food service ware be used.
- Operators Affected
    - Food providers
    - City facilities
    - Promoters and participants of special events
- Exemptions: Prepared foods packaged outside the City, except for those foods prepared or packaged in connection with a special event held within the City.
- Penalties
    - First violation - written warning notice
    - The fine amount shall be set by the City, after a written warning notice has been issued and failed to correct the violation. In lieu of that, violator has to submit receipts demonstrating the purchase of at least $100 worth of biodegradable, compostable or recyclable products.

- Fines for violations in connection with special events will increase in amount depending upon the number of persons attending the event.

Monterey County

- Prohibition Effective: November 2010
- Materials/Products Affected: disposable food service ware that contains foam polystyrene is prohibited
- Operators Affected
  - Food providers within the unincorporated area
- Exemptions
  - Prepared food made or packaged outside the unincorporated area but sold in the unincorporated area, however the County shall promote and encourage the elimination of foam polystyrene.
  - Foam polystyrene coolers and ice chests intended for reuse
  - During an emergency for the immediate preservation of the public peace, health, or safety
- Penalties:
  - Director of Health shall be primarily responsible for implementation and enforcement
  - County is allowed to take action in its discretion
  - A food provider is allowed one warning prior to the first citation

Oakland

- Prohibition Effective: January 1, 2007
- Materials/Products Affected
  - Disposable food service ware that uses foam polystyrene is prohibited
  - Biodegradable or compostable disposable food service ware is required

  *Food vendors may charge a “take-out fee” to cover the difference in cost of alternatives
- Operators Affected
  - Restaurant
  - Food vendor
  - City facilities
  - City departments and agencies
  - City franchises
  - City events
  - Contractors and vendors doing business with the City
- Exemptions
  - Prepared foods prepared or packaged outside the City
  - Food vendors will be exempt for specific items or types of disposable food service ware if the City Administrator finds there is no suitable available alternative
  - Foam polystyrene coolers and ice chests
  - Disposable food service ware compose entirely of aluminum
  - In a situation deemed by the City Manager to be an emergency for the immediate preservation of the public peace, health, or safety

- Penalties
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second violation - fine of $200
        - For the third and any future violations - fine of $500
- Curbside collection of residential food waste for composting also includes paper products

Pacifica

- Prohibition Effective: January 2010
- Materials/Products Affected
    - Polystyrene disposable food service ware is prohibited
    - It is required that biodegradable, compostable, reusable or recyclable food service ware be used.

  *Food providers may charge a "take-out fee" to cover the difference in cost of alternatives
- Operators Affected
    - Food vendors
    - City facilities
    - City departments or agencies
    - All individuals, entities, or organizations using City facilities, for public of private events
- Exemptions
    - Prepared foods packaged outside the City
    - Foam polystyrene coolers and ice chests intended for reuse

Pacific Grove

- Prohibition Effective: June 2008
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited
    - It is required that biodegradable, compostable or recyclable disposable food service ware be used.

  *Food providers may charge a "take-out fee" to cover the difference in cost of alternatives.
- Operators Affected
    - Food providers
    - City facilities
    - City contractors
- Exemptions
    - Prepared foods packaged outside the City
    - Foam polystyrene coolers and ice chests intended for reuse
- Penalties for violations
    - First violation - a written warning notice
    - After a written warning notice has been issued
        - For the first violation - fine of $100

- For the second violation - fine of $200
- For the third and any future violations - fine of $500

*Fines for violations in connection with special events will increase in amount depending upon the number of persons attending the event.

Palo Alto

- Prohibition Effective: April 22, 2010
- Materials/Products Affected
    - Food vendorsDisposable food service containers made from foam polystyrene or non-recyclable plastic is prohibited

  *Food providers may charge a “take-out fee” to cover the difference in cost of alternatives
- Operators Affected
    - Food vendors
    - City facilities
    - City-managed concessions
    - City-sponsored or permitted events
- Exemptions
    - Prepared foods packaged outside the City
    - Foam polystyrene coolers and ice chests intended for reuse

Pittsburg

- Restriction Effective: January 1, 1993
- Materials/Products Affected: CFC-processed foam polystyrene take-out food packaging is prohibited
- Operators Affected: Retail food establishments
- Affected establishments are required to have at least 50 percent by volume of their packaging be returnable or recyclable.
- Exemptions
    - Food packaging purchased prior to the effective date
    - Food retailers showing undue hardship

Richmond

- Prohibition Effective: July 2010
- Materials/Products Affected
    - All food providers using any disposable food ware (not including straws and lids) for providing prepared food to customers will use compostable disposable food ware is prohibited
    - Reusable food ware is strongly encouraged in place of disposable where practicable

  *A "take-out fee" could be charged to customers to cover the difference in cost of alternatives
- Operators Affected
    - Food providers
    - City franchisees, contractors and vendors

    - City facilities
    - Operators are encouraged to use reusable food ware instead of disposable food ware whenever possible.
- Exemptions
    - Prepared foods packaged outside the City and packaged in the City for use outside of the City.
    - Foam polystyrene coolers and ice chests intended for reuse
    - Disposable food ware composed entirely of aluminum
    - An emergency for the immediate preservation of the public peace, health or safety
    - Disposable Food Ware for which there is not suitable alternative is exempt
- Penalties
    - Any person who does not correct the violation within 30 days after the warning notice is mailed shall be guilty of a misdemeanor
    - Violations are subject to first tier administrative fines and appeals
        - For the first violation - fine of $250
        - For the second violation within 24 months - fine of $500
        - For the third and any future violations within 24 months - fine of $1,000
- Curbside collection of residential food waste for composting also includes paper products

<u>San Bruno</u>

- Prohibition Effective: April 1, 2010
- Materials/Products Affected
    - Disposable food service ware made from polystyrene is prohibited
    - Biodegradable, compostable or recyclable disposable food service ware is required.

  *Food providers may charge a “take-out fee” to cover the difference in cost of alternatives.
- Operators Affected
    - Food providers
    - City departments and agencies
    - City contractors
- Exemptions
    - Prepared foods packaged outside the City
    - Food vendor will be exempted if the requirements cause undue hardship
    - Foam polystyrene coolers and ice chests intended for reuse
    - City facilities, City-managed concessions, and City-sponsored events may exhaust existing stocks and must use biodegradable, compostable, reusable or recyclable food service ware unless a non-polystyrene alternative is not available for a specific application.
- Penalties
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine of $100

        - For the second violation - fine of $200
        - For the third and any future violations - fine of $500

San Francisco City/County

- Prohibition Effective: June 1, 2007
- Materials/Products Affected
    - Disposable food service ware made of foam polystyrene is prohibited
    - Biodegradable or compostable disposable food service ware is required
- Operators Affected
    - Restaurants
    - Retail food vendors
    - City facilities
    - City departments and agencies
    - City franchises
    - City events
    - Contractors and vendors doing business with the City/County
- Exemption: Any person may seek a one-year waiver upon demonstrating that strict application of the ordinance would create and undue hardship or practical difficulty not generally applicable to others in similar circumstances
- Penalties
    - First violation - written warning notice
    - After a written warning notice has been issued:
        - For the first violation - fine not exceeding $100
        - For the second violation within a year - fine of $200
        - For the third and any future violations within a year- fine of $500
        - City administrator may also issue administrative civil liability citation:
            - For the first violation - fine not exceeding $100
            - For the second violation within a year - fine of $200
            - For the third and any future violations within a year- fine of $250 or $500
- Curbside collection of residential food waste for composting also includes paper and bioplastic products

San Leandro

- Prohibition Effective: November 1, 2012
- Materials/Products Affected
    - Any polystyrene-based disposable food service ware is prohibited
- Operators Affected: Food vendor that provides prepared food at a retail level
- Exemptions
    - Pre-packaged food
    - Polystyrene cooler and ice chests intended for reuse
    - Food vendors at the San Francisco International Airport
    - Undue hardship caused because a suitable alternative does not exist for a specific application, or no reasonably feasible available alternative exists to a specific and necessary container prohibited by this chapter

- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation
    - A fine not exceeding $500 for the third and subsequent violations
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation

San Mateo County

- Prohibition Effective: July 1, 2011
- Materials/Products Affected
    - Any polystyrene-based disposable food service ware is prohibited
- Operators Affected: Food vendor that provides prepared food at a retail level
- Exemptions
    - Pre-packaged food
    - Polystyrene cooler and ice chests intended for reuse
    - Food vendors at the San Francisco International Airport
    - Undue hardship caused because a suitable alternative does not exist for a specific application, or no reasonably feasible available alternative exists to a specific and necessary container prohibited by this chapter
- Penalties
    - A fine not exceeding $100 for a first violation
    - A fine not exceeding $200 for a second violation
    - A fine not exceeding $500 for the third and subsequent violations
    - Each day that a food vendor uses polystyrene-based disposable food service ware shall be a separate violation

  *Note: San Mateo County has urged cities within the County to pass similar bans or enact the ordinance as written. San Mateo County has offered to enforce the ordinance during their Health

Santa Cruz, City of

- Prohibition Effective: August 12, 2008
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited
    - Biodegradable, compostable, or recyclable disposable food service ware is required.
- Operators Affected
    - Food providers
    - Vendor business, organization, entity, group or individual
    - Retail food establishments
    - City facilities
    - Contractors performing City contracts
    - Special events promoters
- Exemptions
    - There are no exemptions for the use of disposable EPS food ware. All exemptions pertain to the purchasing of biodegradable, compostable, or recyclable disposable food service ware.

    - Director of Public Works may grant an exemption for one year based on the purchase of biodegradable, compostable, or recyclable items resulting in an undue hardship upon the retailer or practical difficulty not generally applicable to other persons in similar circumstances
    - Foods prepared or packaged outside the City
    - Until the City provides a municipal food scrap collection program, a blanket exemption on plastic cutlery and lids is granted
- Penalties
    - 1st violation - written warning (food vendor has 30 days to comply)
    - 2nd violation - fine of not more than $100, where the violator can provide receipts of qualifying alternatives of $100 or more that replace the products that were cited
    - 3rd violation - fine of not more than $200 after 60 days from the warning
    - 4th and subsequent violations - fine not exceeding $500 after 90 days from the warning and for each additional 30 day period for which the food provider is not in compliance
- Penalties for Special events
    - 1 – 200 persons – fine of not more than $200
    - 201 – 400 persons – fine of not more than $400
    - 401 – 600 persons – fine of not more than $600
    - 601 and more persons – fine of not more than $1,000

<u>Santa Cruz County</u>

- Prohibition Effective: August 2008
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited
    - Biodegradable, compostable or recyclable disposable food service is required
- Operators Affected
    - Food vendors
    - County departments
- Penalties
    - First violation - a written warning notice
    - After a written warning notice has been issued
        - For the first violation - fine not exceeding $100
        - For the second violation - fine not exceeding $200
        - For the third and any future violations - fine not exceeding $500

<u>Scotts Valley</u>

- Prohibition Effective: June 2009
- Materials/Products Affected
    - Disposable food service ware that contains foam polystyrene is prohibited
    - Biodegradable, compostable or recyclable disposable food service ware is required
- Operators Affected
    - Food providers

- City facilities
- Contractors and anyone renting a City facility

- Penalties for violations
  - First violation - written warning notice
  - After a written warning notice has been issued:
    - For the first violation - fine not exceeding $100
    - For the second violation - fine not exceeding $200
    - For the third and any future violations - fine not exceeding $500

  *Fines for violations in connection with special events will increase in amount depending upon the number of persons attending the event.

<u>Seaside</u>

- Prohibition Effective: August 3, 2010
- Materials/Products Affected: disposable food service ware that contains foam polystyrene is prohibited
  *Food providers may charge a "take-out fee" to customers to cover the difference in cost of alternatives
- Operators Affected
  - Food vendors
    - Food vendors are required to use biodegradable, compostable or recyclable disposable food service ware, unless there is no affordable alternative (15 percent cost difference).
  - City facilities
  - Contractors (performing work for City contracts or under permits)
    - City facilities, including contracts stated above, must use biodegradable, compostable or recyclable disposable food service ware.
- Exemptions
  - Prepared foods packaged outside the City
  - City may grant non-renewable one-year exemption based on an undue hardship
- Penalties
  - City Code Enforcement Officer shall be in charge of enforcing ordinance
  - 1st violation - written warning (food vendor has 30 days to comply)
  - 2nd violation - fine of not more than $100, where the violator can provide receipts of qualifying alternatives of $100 or more that replace the products that were cited
  - 3rd violation - fine of not more than $200 after 60 days from the warning
  - 4th and subsequent violations - fine not exceeding $500 after 90 days from the warning and for each additional 30 day period for which the food provider is not in compliance
- Penalties for Special events
  - 1 – 200 persons – fine of not more than $200
  - 201 – 400 persons – fine of not more than $400
  - 401 – 600 persons – fine of not more than $600
  - 601 and more persons – fine of not more than $1,000

South San Francisco

- Prohibition Effective: October 1, 2008
- Materials/Products Affected
    - Disposable food service ware made from polystyrene is prohibited
    - Food vendors will use biodegradable, compostable, reusable (emphasis given to reusable for all in-store consumption), or recyclable food service ware.
    - Food vendors shall also allow customers to bring their own food service ware.
    - Events and facilities in conjunction with the City will use biodegradable, compostable, reusable, or recyclable food service ware.
- Operators Affected
    - Food vendors
    - City facilities
    - City-sponsored events
    - City permitted events
    - City departments and agencies
    - City franchises, contractors and vendors
    - Organizations using City offices or property (e.g. street closure permits, events at City facilities) and while on City premises
- Exemptions
    - Food packaged outside the City
    - Undue hardship and no alternative for the specific application
    - Exemption intervals are for one year, and applicants must re-apply prior to the expiration of the previous exemption
    - Coolers and ice chests
- Penalties
    - Initial violation – written warning
      Thereafter:
    - 1st violation - $100
    - 2nd and consequent violations - $200
    - Fines are cumulative and each day that a violation occurs shall constitute a separate violation

Watsonville

- Prohibition Effective: May 14, 2009
- Materials/Products Affected
    - Foam polystyrene food service ware is prohibited
    - Biodegradable, Compostable, or Recyclable Disposable food service ware is required.
- Operators Affected
    - Food providers
        - Food providers shall use biodegradable, compostable, or recyclable products unless there is no affordable alternative and may charge customers a take-out fee.

    - City facilities
        - City facilities shall use biodegradable, compostable, or recyclable products.
    - Contractors performing work on City contracts
    - Special events promoters and vendors
        - Contractors performing work on City contracts and special events promoters and vendors shall use biodegradable, compostable, or recyclable products while under City permit.
- Exemptions
    - There are none that allow for the use of foam polystyrene disposable food service ware. All exemptions pertain to the purchase of biodegradable, compostable, or recyclable disposable food service ware by food providers.
    - Director of Public Works may grant an exemption for one year based on the purchase of biodegradable, compostable, or recyclable items resulting in an undue hardship upon the food provider or practical difficulty not generally applicable to other persons in similar circumstances
    - Foods prepared or packaged outside the City
- Penalties
    - The first infraction shall be punished with a fine of not more than $500
    - For the second infraction within six months of any previous infraction, $1,000 or 6 months in jail, or both
    - Each day the infraction occurs is considered a separate infraction of the code

Restaurants and Retail Food Vendors with Food Container Policies

The restaurants and retail food vendors listed below were contacted since it was known that these retailers did not use EPS. This is not a comprehensive listing nor did time permit to outreach to every food retailer in Los Angeles County.

The Cheesecake Factory

- Phased out EPS containers for left-over meals; Aluminum and Clear plastic containers for to-go orders.
- In 2006, switched to polyethylene and polypropylene rigid plastic for hot foods

Cold Stone Creamery

- Switched to paper cups in 2008 at all franchise locations
- Through contacts with other stakeholders and personal visits we have determined that this company no longer uses EPS and has transitioned to paper products. However, we have been unable to speak with a corporate representative to verify this information.

Dairy Queen / Orange Julius

- Switched to paper cups in 2010 at all franchise locations

Darden Restaurants

- Material Affected: foam polystyrene to-go containers and polystyrene plastic utensils prohibited
- Material phase out dates: February 2010 to August 2011
- Affected restaurants
    - Olive Garden (722 locations)
    - Red Lobster (695 locations)
    - LongHorn Steakhouse (335 locations)
    - The Capital Grille (41 locations)
    - Bahama Breeze (25 locations)
    - Season 52 (11 locations)

DineEquity

- Material Affected: Removed 95 percent of all polystyrene packaging products used in "to go" orders. Replaced with 100 percent recyclable packaging
- Affected restaurants (more than 3,300 total)
    - Applebee's
    - IHOP Restaurant

Einstein Bros. Bagels and Noah's Bagels

- Foam polystyrene cups and food containers prohibited at all franchise locations
- Through contacts with other stakeholders and personal visits we have determined that this company no longer uses EPS and has transitioned to paper products. However, we have been unable to speak with a corporate representative to verify this information.

Jack in the Box

- Switched to paper wrapping of the Breakfast Jack Sandwich in the early 1990s at all franchise locations

KFC

- Switched small order side dish container to rigid plastic in 2011 at all franchise locations
- Corporate/local compliance efforts: Conducted LCA and consumer preference and practice surveys

McDonald's

- Switched sandwich containers from foam polystyrene clamshells to paper-based packaging in the early 1990s at all franchise locations
- EPS still makes up a small percentage of their packaging for limited products based on functionality.

Panera Bread Company

- Does not use foam polystyrene for carryout orders and uses reusable plates for sit-down dining at all franchise locations

Subway

- Switched to paperboard soup bowls in 2008-2009 at all franchise locations

Starbucks Coffee Corp.

- Uses poly-coated paper for all to-go hot beverages, and clear polypropylene plastic cups for all to-go cold beverages
- 5 percent of company-owned stores in U.S. and Canada have front-of-store recycling; Goal is 100 percent by 2015
- 1.8 percent of beverages worldwide are served in reusable mugs; Goal is 25 percent by 2015

Wendy's

- Switched to poly-coated paper cups and poly-coated paper plates and rigid clear plastic lids for baked potato in 2009-2010 at all franchise locations

Recycling of EPS Food Containers

A number of companies have developed products that can incorporate collected and recycled EPS material, including food container EPS, such as Timbron who uses up to 50 percent post-consumer plastics to create decorative molding. NEPCO, located in Chino, is another company that uses recycled EPS, to manufacture goods. This company makes picture frames. There are two primary mechanisms for collecting EPS materials for recycling: curbside or drop off facilities, and large venues or institutions that recycle EPS. They are described in further detail below.

The California Restaurant Association and the Plastic Foodservice Packaging Group has developed a voluntary program where restaurants in the cities of Pasadena and Los Angeles are directly engaging and educating their customers on the proper disposal of EPS food containers through flyers and posters displayed at restaurant doors and near cash registers. The restaurants listed include 92 in Pasadena and 607 in the City of Los Angeles. It is feasible that this list is growing due to continued outreach. It is at the discretion of the restaurant to display the poster and distribute the stickers and flyers.

Curbside and Drop-Off Recycling

Some cities in California have amended the list of recyclables they accept in their curbside recycling programs. The following 32 cities in Los Angeles County allow EPS (including food containers) to be deposited in the recycling bin:

- Alhambra
- Cerritos
- Commerce
- Covina
- Diamond Bar
- Downey
- Duarte
- El Segundo
- Glendale
- Hawthorne
- Irwindale
- La Cañada-Flintridge
- Lomita
- Long Beach
- Los Angeles, City of
- Manhattan Beach
- Monrovia
- Norwalk
- Paramount
- Pasadena

- Pico Rivera
- Pomona
- Redondo Beach
- Rolling Hills Estates
- San Dimas
- San Marino
- Santa Clarita
- Santa Fe Springs
- South Gate
- Torrance
- Walnut
- West Hollywood

According to the State of California (CalRecycle) there are 49 active medium and large volume transfer and processing facilities, more commonly known in the industry as materials recovery facilities or MRFs, in Los Angeles County. These are the facilities that accept and process curbside recyclables from municipalities, to extract materials with market value for further processing. Through research and contacts with waste haulers, MRFs, recyclers, and city representatives, we have found that of the 32 cities that allow their residents to deposit EPS food containers in their recycle bins, EPS material from 17 of the cities eventually go to recyclers that do not separate them and is landfilled. The EPS material from the remaining 15 cities go to the following eight recyclers that process EPS, but reportedly very little of food containers are being separated and recycled at this time due to a number of factors discussed further below:

- Allan Company
- Bestway Recycling
- CalMet
- Mission Recycling
- Potential Industries
- RockTenn
- Serv-Wel
- Sun Valley Paper Stock

Other recyclers in Southern California who are working to separate EPS include:

- Burrtec
- Dart Container Corp.
- Downey Area Recycling and Transfer Station
- EDCO
- Foam Zone
- FP International
- NEPCO
- Rainbow Disposal

Of the EPS material collected at these recycling facilities, most is made up of large packaging EPS, which is typically made up of large white blocks that are easy to distinguish and separate from other recyclables. As a result, curbside collection has resulted in very minimal quantities of EPS food containers being collected for recycling. This is due to a number of factors, including:

- High cost to separate EPS food containers since they are difficult and labor intensive to quickly separate
- The material is often contaminated with food residue
- The material is very lightweight and therefore requires a large volume in order to aggregate sufficient quantities to market
- A small percentage of the recycling stream contains EPS food containers
- Special equipment is required to compact it for storage and shipping.

In an effort to more readily identify and separate EPS food containers, one of the cities offering curbside recycling is encouraging their residents to clean out excess food and place the EPS food containers into clear plastic bags before placing them into the recycle bin. This would facilitate an increase in the quantity of materials collected, however presents a challenge to encourage participation by residents due to the additional steps involved. Studies of MRF sorting lines that separate EPS would be needed to determine how much of the EPS food container waste is being separated and if there are ways of increasing its diversion. Packaging EPS is often the primary material recycled since it is solid EPS which results in greater weight and density, when compared to food containers which are designed to contain food or beverages.

DART Container Corp has provided a drop off location for EPS materials for many years at their Corona facility in San Bernardino County. With the recent installation of a wash line, they are also able to accept EPS food containers with some food contamination, however as with most facilities they request EPS food containers be pre-rinsed and placed in clear plastic bags. NEPCO has a public drop off station located at their Chino facility, also in San Bernardino County. The City of Glendale also has an EPS drop-off bin for City residents at their Recycling Center, though it is primarily designed for EPS packaging. Due to their lightweight nature, drop off facilities are less effective in collecting significant quantities of EPS materials.

<u>Large Venue and Institutional Recycling</u>

Large venues and institutions, such as school cafeterias, have had greater success in implementing EPS recycling programs, including programs focused on EPS food containers. There are several reasons why such recycling programs can be highly successful:

- There are typically larger quantities of EPS materials, making collection more economical
- Stations can be organized to facilitate separate collection of EPS materials, and to facilitate cleaning of the EPS food containers if needed
- The cost of a densifier can be more readily justified due to the larger volumes

- Improper disposal of EPS can be greatly minimized, especially in institutional settings, since EPS food containers may only be available for eating on the premises vs. “take out” situations
- In the case of schools, children can be taught to properly clean and place EPS food containers in specified collection areas. Similar situations may be the case in other institutions.
- In the case of a school district, a central warehouse can be utilized to facilitate collection of EPS materials. Similar situations may be the case in other institutions.

The following Unified School Districts have implemented EPS lunch tray recycling programs and reported saving money:

- Chula Vista
- Culver City
- El Segundo
- Fontana
- Long Beach (also uses paperboard food containers)
- Los Alamitos
- Monrovia
- Pasadena
- Santee
- Torrance

Composting Programs

AGENCIES / RETAILERS

Alameda City
- EPS Prohibition Effective: July 1, 2008
- Curbside collection of residential food waste for composting also includes paper products
  *Food vendors are strongly encouraged to provide reusable food service ware instead of disposable and may charge a “take out fee” to customers, to cover cost difference.

Alameda County (unincorporated Castro Valley and Oro Loma areas)
- Curbside collection of residential food waste for composting also includes coated and uncoated paper products, as well as compostable plastics

Albany
- EPS Prohibition Effective: September 2008
- Curbside collection of residential food waste for composting also includes paper products

Aliso Viejo
- Pilot program with restaurants for food waste and paper composting collection

Avalon
- Commercial food waste composting can receive paper and bioplastic materials; and this is available to residential drop off as well

Berkeley
- EPS Prohibition Effective: January 1, 1990
- Curbside collection of residential food waste for composting also includes paper products

Beverly Hills
- Food scraps accepted in green waste bin

Burbank
- Food scraps accepted in green waste bin

Calabasas
- EPS Prohibition Effective: March 31, 2008
- Pilot composting program, with 10 businesses and 500 residents involved

Capitola

- EPS Prohibition Effective: May 23, 2009
- Curbside collection of residential food waste for composting also includes paper products

Covina

- Pilot program started with restaurants.

Emeryville

- EPS Prohibition Effective January 1, 2008
- Curbside collection of residential food waste for composting also includes paper products

Dana Point

- Pilot program with restaurants for food waste and paper composting collection

Dublin

- Curbside collection of residential food waste for composting also includes paper products

Fremont

- EPS Prohibition Effective: January 2011
- Curbside collection of residential food waste for composting also includes paper products

Hayward

- EPS Prohibition Effective: July 1, 2011
- Curbside collection of residential food waste for composting also includes coated and uncoated paper products

Laguna Hills

- Pilot program with restaurants for food waste and paper composting collection

Laguna Niguel

- Pilot program with restaurants for food waste and paper composting collection

Los Angeles, City of

- EPS Restriction Effective: September 5, 1988
- EPS Prohibition Effective: City Facilities: July 1, 2008/2009
- Municipal Food Scrap Composting Availability: A pilot program is being run in one district of the City representing about 8,700 households as well as a program with retailers that includes over 1,000 participants

Livermore

- Curbside collection of residential food waste for composting also includes coated and uncoated paper products

Manhattan Beach

- City offers a municipal food scrap composting for residents

Newark

- Curbside collection of residential food waste for composting also includes coated and uncoated paper products

Oakland

- EPS Prohibition Effective: January 1, 2007
- Curbside collection of residential compostable materials include paper products; residents are discouraged from including compostable plastics

Piedmont

- Curbside collection of residential food waste for composting also includes paper products

Pleasanton

- Curbside collection of residential food waste for composting also includes coated and uncoated paper products

Rancho Santa Margarita

- Pilot program with restaurants for food waste and paper composting collection

Redondo Beach

- Residential composting program includes food scraps and soiled paper

Richmond

- EPS Prohibition Effective: July 2010
- Curbside collection of residential food waste for composting also includes paper products

San Clemente

- Pilot program with restaurants for food waste and paper composting collection

San Francisco, City/County

- EPS Prohibition Effective: June 1, 2007
- Curbside collection of residential compostable materials including paper products, and marked compostable plastic products

San Juan Capistrano

- Pilot program with restaurants for food waste and paper composting collection

San Leandro

- Curbside collection of residential food waste for composting also includes coated and uncoated paper products

Santa Monica

- EPS Prohibition Effective: February 9, 2008
- Curbside collection of residential food waste compostable materials
- Commercial composting of food scraps includes paper products, but not compostable plastic

Stater Bros. Markets

- Compostable items are shipped to their centralized distribution center and picked up by Community Recycling for composting.
- Diverted items include: produce trim and cull, waxed cardboard, wooden crates and paper
- All 166 store locations are participating in composting program

Tustin

- Pilot program with restaurants for food waste and paper composting collection

Union City

- Curbside collection of residential food waste for composting also includes paper products

LARGE VENUES / INSTITUTIONS

AT&T Park (Formerly SBC Park)

- Activities/Users: San Francisco Giants (MLB)
- Capacity: About 42,000
- Policies: Materials are separated by concession staff for collection into the following categories: 1) Mixed garbage into rolling carts that are dumped via automated lift into a compactor; 2) Clean cardboard into a downstroke baler; 3) Bottles and cans into four cubic yard dumpsters marked with blue; and 4) Food scraps and paper into three cubic yard dumpsters marked with green.

Oakland Coliseum Complex

- Activities/Users: Oakland Athletics (MLB), Oakland Raiders (NFL), Golden State Warriors (NBA), Concerts and other large events
- Capacity: McAfee Coliseum (62,000 people), Oracle Arena (19,000 people)
- Policies: Using compostable plastic cups in place of traditional beer cups Separating and sending compostable cups as well as food waste and green waste to composting facility

Occidental College

- Materials collected: Food scraps, paper items, cloth items, and starch based containers and flatware (compostables)

- Collection Method: onsite collection from kitchen staff
- Campus locations involved: Johnson Student Center, including the Marketplace, Green Bean, conference rooms, etc

PETCO Park
- Location: San Diego, California
- Events: San Diego Padres (MLB)
- Food waste composting is brought to Miramar Greenery

Sony Pictures Entertainment (Culver City)
- Materials collected: leftover, non-recyclable waste, including food, food containers, cutlery, and paper that was inadvertently thrown in the trash
- Collection Method: on site collection, 90 percent diversion of materials, partnered with Culver City for their composting diversion
- Campus locations involved: Sony Pictures Entertainment Studio lot (44.5 acres), Sony Pictures Plaza, and ImageWorks

University of California at Los Angeles
- Materials collected: Food Scraps and napkins
- in one boutique, almost all of the materials are compostable (cutlery, plates, etc.), only straws and lids are not, so almost everything from this location is composted
- Collection Method: Pre and post consumer food waste is collected
- Campus locations involved: 4 campus restaurants as well as boutique operations

University of California at Riverside
- Materials collected: food scraps (possible other compostable material as well)
- Collection Method: Workers at dining facilities will separate compostable materials and fill containers
- Campus locations involved: Food Court in Highlander Union Building, residential hall dining areas, the Barn and kiosk-style food service locations on campus

University of California at Santa Cruz
- Turned their trash compactors into compost bins and collect all food scraps, before and after service, for composting at all 5 of their dining halls.
- On-campus café at Banana Joe's has storefront composting bins for students and patrons
- In 2010, they composted about 500 tons of organic material

University of Southern California
- Materials collected: food scraps (possible paper material)
- Collection Method: onsite collection
- Campus locations involved: Most on-campus eating facilities, including: dining commons, restaurants, and cafes

APPENDIX C

Stakeholder Letters

From: Samantha Martinez [mailto:SMartinez@KindelGagan.com]
Sent: Tuesday, April 05, 2011 10:05 PM

Nilda, Suk and Luke,
Thank you for the opportunity to provide you with these case studies. I will send these in several emails as the attachments are large. Please confirm that you've received them
Thanks, Sam

Samantha Martinez
Kindel Gagan
550 S. Hope Street, Suite 530
Los Angeles, CA 90071
213-624-1550 (office)
213-688-1550 (fax)
213-280-8537 (cell)
smartinez@kindelgagan.com

Case Studies for Los Angeles County Working Group

Addressing marine debris, litter and increasing recycling is of great importance to the members of the Plastic Foodservice Packaging Group. We appreciate the opportunity to share some relevant case studies to be included in the report from the EPS Food Container Litter Reduction working group to the Los Angeles County Board of Supervisors. Our case studies submission includes the following categories:

1) Bans lead to unintended consequences
    - Santa Barbara Staff Report
    - San Francisco 2008 Litter Audit and Dart Fact Sheet
    - Life Cycle Inventory of Foodservice Products
    - Portland Cascade Study

2) Examples of Cities with residential recycling of EPS
    - Cities in Los Angeles County with Access to Curbside Foam Recycling
    - Additional Cities with Curbside Foam Recycling
    - Rancho Cucamonga CityNews Story

3) Other non-residential recycling programs
    - School Lunch Tray Recycling Program
    - Dart Drop Off Program
    - Foam Zone
    - NEPCO

4) Cost differential of products
    - Pactiv Product Pricing Comparison
    - Price comparison from local Restaurant Supply Stores
    - *U.S. Restaurants Starved for Business* – LA Times Piece 8/21/10
    - *Thompson School District finds Green Alternatives to Plastic Foam Lunch Trays too Costly* – Reporter Herald 4/8/10

5) Restaurants participating in a voluntary EPS recycling education program
    - Restaurant Education Program Joint Letter from CRA and PFPG
    - Poster of Los Angeles Restaurants
    - Poster for Pasadena Restaurants
    - Restaurants Participating in Foam Recycling Education Program

Bans Lead to Unintended Consequences

1. City of Santa Barbara Staff Report

In 2008 Santa Barbara staff prepared a thorough analysis of all food service ware products that would replace EPS if a ban was enacted. Based on their analysis, staff concluded that alternatives to EPS had comparable and equally significant environmental impacts when considering the resources required for extracting and manufacturing them as well as their end of life disposal. Staff found that food service ware made from compostable materials would have less overall impact to the environment only if a citywide organics collection and composting program was put in place prior to their use. (Addendum A))

2. City of San Francisco Litter Study

In 2008 the City of San Francisco completed a litter audit that shows that eliminating all food related polystyrene does not reduce litter, but simply changes the type of litter found on streets and waterways. After a ban on EPS, the amount of EPS cups in the litter stream fell from 1.13% in 2007 to .78% in 2008 but paper cups increased from 1.82% to 2.41% over the same time period, showing that product bans do not reduce litter. (Addendum B))

3. 2011 Foodservice Life Cycle Study

A 2011 peer reviewed study done by Franklin Associates found that commonly used EPS food service products use significantly less energy and water to make and create significantly less solid waste by weight than paperboard and PLA products. EPS products use half as much energy as wax-coated paperboard cups and one-third as much as PLA clamshells. The comparisons for creation of solid waste and greenhouse gases vary widely between the products and depend upon end of live disposal. Overall the authors found that lower weight products with similar functionality- such as EPS products composed of more than 90% air - generally produce smaller environmental burdens. (Addendum C)

4. Portland Cascade Study

The Cascade Policy Institute prepared a white paper which examined the City of Portland's 1990 ban of EPS. They found that the alternative products have more environmental impacts, drive up costs to businesses and consumers and the ban negatively affects the business environment in Portland. (Addendum D)

Cities that Include EPS in their Residential Recycling Program

The Board of Supervisors instructed staff to look at the availability and future feasibility of developing recycling and composting infrastructure for all foodservice products. This section looks at the current availability of residential recycling of EPS for residents within Los Angeles County. Over 50% of the residents that live within LA County have the ability to place EPS materials in their residential recycling bin. (Addendum E) Access to recycling or composting for alternative foodservice products is significantly more limited throughout Los Angeles County.

1. Within Los Angeles County the following Cities include EPS in their residential recycling programs. The population totals are taken from the LA County website based on the California Department of Finance, January 2010:

Alhambra	89,501
Cerritos	54,946
Commerce	13,581
Covina	49,622
Cudahy	26,029
Diamond Bar	61,019
Downey	113,715
El Segundo	17,049
Hawthorne	90,145
Lomita	21,015
Long Beach	494,709
Los Angeles	4,094,764
Manhattan Beach	36,773
Norwalk	109,817
Paramount	57,989
Pasadena	151,576
Redondo Beach	68,105
Rolling Hills Estates	8,157
Santa Clarita	177,641
Santa Fe Springs	17,929
South Gate	101,914
Torrance	149,717
Total	6,005,713

Total population of Cities in Los Angeles County that accepting EPS in their residential recycling bin	6,005,713
Total population of Los Angeles County	10,441,080
Percentage of Los Angeles County residents with access to recycle EPS curbside	57.5%

*Also not included in these numbers, City of Glendale accepts EPS via a drop off program

2. In addition many Cities outside of LA County accept EPS in their residential recycling programs, these are just a few examples:

    Crestline
    Fontana
    Fountain Valley
    Huntington Beach
    Montclair
    Rancho Cucamonga
    Rialto
    Riverside, City and County (partial)
    San Bernardino, City and County (partial)
    Tracy

3. City of Rancho Cucamonga

The City Council of Rancho Cucamonga adopted a ban on EPS at city facilities and city-sponsored event in 2007. However, when informed of the growing implementation of foam recycling programs across the state, the City elected to try recycling as a productive alternative while it weighed future policies toward foam. Though full data is not yet available from the city's first year of curbside recycling, staff indicated that a repeal of the ban is possible should the recycling program be successful. (Addendum F)

Other Non-residential EPS Recycling Programs

Besides residential curbside recycling opportunities for EPS, there are also private recycling programs that occur within and around Los Angeles County. These programs are driven by the demand for recycled EPS material throughout California and beyond. Some examples of these private recycling programs include:

1. School Lunch Tray Recycling

   The following school districts recycle their EPS lunch trays via a private take-back program. The districts purchase the trays from a distributor, P & R Products, who then picks up the used EPS lunch trays and takes them to one of two Dart locations in California. The trays are densified and all the material is sold to commercial recyclers.

   - Torrance Unified School District – student population of approximately 25,000
   - Manhattan Beach Unified School District – student population of approximately 6500
   - Culver City Unified School District – student population of approximately 6500
   - Monrovia Unified School District – student population of approximately 5800
   - Long Beach Unified School District – student population of approximately 86,000
   - National City Unified School District – student population of approximately 5797

2. Dart Container Corporation's Corona, CA Drop-off Program

   Since it' s ribbon cutting in October, 2008, Dart's Public Foam Collection Center has seen tremendous growth. The facility is now receiving more than 1 million post consumer school lunch trays per month. In addition to schools, Southern California businesses and residents are now depositing their foam at the facility on a regular basis. In 2010, the facility processed 213,690 lbs of food service foam and an additional 25,356 lbs of protective packaging foam for a total of 239,046 lbs! The public has proven that they will take advantage of drop-off programs if they have access to them. Not only does this reduce waste hauling expenses for business, it helps divert foam from local landfills.

3. Foam Zone

   Foam Zone Inc. is a private company that collects and recycles EPS and Styrofoam throughout Southern California. Foam Zone began operations in 1995 and recycles an average of three million cubic feet of foam per year. Foam Zone’s focus is collecting and recycling foam from commercial companies that would otherwise be landfilled. The

company will also take foam from municipal drop off programs. Foam Zone accepts clean foam cups, packaging foam, egg cartons, etc. (Addendum G)

4. NEPCO

   NEPCO Industrial Co. Ltd located in Chino, CA produces high-end picture frame moldings from recycled EPS. They process about 350,000 lbs of post consumer EPS per month. They receive EPS from a variety of sources including furniture distribution centers, packaging companies, MRFs as well as drop off collection and other sources. NEPCO has more demand for their finished product than they can meet, the only limitation is having enough supply of post consumer foam. (Addendum H)

Cost differential of Products

EPS foodservice products are more economical – wholesale costs can be two, three, four, up to five times less than the alternatives. EPS foodservice packaging helps keep costs down, from mom-and-pop diners to our kids' schools. More than ever, in these tight economic times, keeping costs low is on everybody's minds.

1. Pactiv Product Pricing Comparison

   As the charts show, EPS products are the least expensive material across all food service types including hinged lid containers, cold cups, hot cups and cutlery. (Addendum I)

2. Price Comparison Chart based on multiple material products purchased at Los Angeles restaurant supply stores (Addendum J)

   Cold and hot cups, hinged lid containers and plates of various materials were purchased from Sam's Club, Smart and Final and Costco, all stores that small restaurants commonly purchase supplies. Foam products were the least expensive in each category by a range of 9.6% to over 300%

3. Restaurants are struggling

   "Nationwide, the number of restaurants dropped in 2010 for the first time in more than a decade, according to NPD, falling 5,202 to 579,416.
   California accounted for nearly a third of that drop, Riggs said. Including fast food, there were about 73,800 restaurants in the state in March, down about 1,500 from a year earlier. Most of the decline was in the five-county Southern California area."
   "*U.S. Restaurants Starved for Business"* – LA Times 8/21/10 (Addendum K)

4. Cost to Replace Foam is significant

   The Nutrition Services Department of Thompson School District looked into replacing EPS trays for their meal service. EPS trays cost the District $21,000 a year, to replace the trays with a paper-based or corn-based alternative would cost $146,000 or reusable containers would cost $329,000 for the first year and $100,000 to $150,000 each year thereafter. "*Thompson School District finds Green Alternatives to Plastic Foam Lunch Trays too Costly"* Reporter Herald 4/8/10 (Addendum L)

Restaurant Program

Restaurants throughout Los Angeles County use EPS products to serve their customers. They use EPS for a variety of reasons including functionality, cost, and performance. EPS keeps food at the right temperatures. It does not leak or break like other products do. EPS costs two to five times less than alternative products. And it is recyclable in many cities.

Therefore, PFPG and the California Restaurant Association developed a voluntary program for restaurants to use to educate their customers that they can rinse and recycle their EPS foodservice products at home in their residential recycling program in select cities. The program was kicked off in Pasadena and expanded to the City of Los Angeles. So far over 750 restaurants have joined the program.

Attached is a sample of the education piece that restaurants have at their store as well as a list of the restaurants that are already participating in the program. (Addendum M)

From: Laura Garrett [purplecow@jps.net]
Sent: Tuesday, April 26, 2011 2:58 PM
To: Gemeniano, Nilda; GEORGE, Garry; Dave Weeshoff
Subject: EPS letter
Attachments: letter to LACo regarding styrofoam ban.doc

Hello Ms. Gemeniano--Attached please find a letter from the Pasadena Audubon Society regarding the possibility of banning polystyrene take-out containers.

Thank you,
Laura Garrett
Pasadena Audubon Society

PASADENA AUDUBON SOCIETY
Founded April 1904
1750 N. Altadena Drive
Pasadena, CA 91107
WWW.PASADENAAUDUBON.ORG

County of Los Angeles Department of Public Works
ATTN: Environmental Programs Division - Nilda Gemeniano
P.O. Box 1460
Alhambra, CA 91802-1460

Dear Ms. Gemeniano,

On behalf of the 1300 members of the Pasadena Audubon Society, I would like to commend Los Angeles County for banning single-use plastic bags last year. It is our hope that the County will make the same decision regarding polystyrene take-out containers.

Polystyrene presents many problems that warrant it being banned. Polystyrene containers account for much of the trash that the County spends a great deal of money to clean up. Unlike paper products, they never biodegrade, and they present a significant danger to our river, land, and ocean ecosystems. Every year, millions of marine animals die due to plastics and polystyrene which make their way from land to the ocean. Though banning polystyrene take-out containers would not eliminate all polystyrene trash from Los Angeles County and its beaches and rivers, it is a step in the right direction.

Some may argue that polystyrene is cheaper than paper substitutes, but I dispute that claim. While polystyrene might be cheaper for the purchaser, it is not cheaper for the County or the people who live here. The costs are simply hidden because we do not see the environmental or governmental costs as easily as we see the costs of purchasing polystyrene in the store. Some might argue that restaurant owners may balk at having to switch to a more expensive product. In fact, these bans have gone into effect quite smoothly in several cities in Southern California.

We ask the County to provide leadership on this issue as it did with single-use plastic bags. Please ban the use of polystyrene take-out containers. Thank you for your time.

Sincerely,

(signed) Laura S. Garrett
Conservation Chair
Pasadena Audubon Society

From: Dave Weeshoff [weeshoff@sbcglobal.net]
Sent: Thursday, April 28, 2011 4:27 PM
To: Gemeniano, Nilda
Cc: Kris Ohlenkamp; Laura Garrett; Sarah Sikich
Subject: "Styrofoam" Ban

Nilda Gemeina, County of LA Public Works, Environmental Programs Division:

I wholeheartedly endorse your focus on eliminating single-use Extruded Polystyrene Foam (XPS, or Styrofoam) take-out containers in Los Angeles County.

As a resident of unincorporated L.A. County, I am appalled by the amount of XPS in our local environment, the entire Southern California watershed, and offshore waters due to the increasing use of XPS containers.

As you know, XPS does not biodegrade and therefore is virtually forever - in landfills, oceans and all other habitats of birds, fish, and mammals (including humans) to the detriment of all. XPS take-out containers transport bacteria and Persistent Organic Pollutants from food sources to and within the waterways and marine environments, threatening illness and adverse health effects to many diverse species (including humans), either through direct ingestion or by bio-accumulation through the food web. Consumer XPS products are rarely recycled.

I applaud your efforts to investigate this important issue, and enthusiastically support a ban on Styrofoam and similar take-out containers.

Dave Weeshoff
Cell phone 818-618-1652
5131 Briggs Ave. LaCrescenta, CA 91214

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

June 10, 2011

Ms. Nilda Gemeniano
Los Angeles County Department of Public Works
Via email: ngemenia@dpw.lacounty.gov

Re: Potential Draft Elements on Expanded Polystyrene Food Packaging

Dear Ms. Gemeniano:

Thank you for the opportunity to comment on the handout entitled "Potential Draft Elements: Board of Supervisors Recommendation Regarding Expanded Polystyrene (EPS) Food Packaging" distributed to the EPS Working Group. Unfortunately Heal the Bay has been unable to participate regularly in the EPS Working Group due to resource constraints. However the reduction of EPS pollution is an issue of the upmost importance, and our organization has extensive experience on effective policy solutions.

The County of Los Angeles must focus on the first element in the handout -- expand the current EPS prohibition -- in order to effectively address the issue of EPS in the environment. EPS recycling is not a viable option.

EPS Impacts the Environment, Economy and Public Health

Expanded Polystyrene (also known as Styrofoam™) takeout food and beverage containers are used once for a short time before they become waste, and often litter. The impacts are long term. Polystyrene packaging is light weight, floats, and breaks easily into small pieces. When littered, polystyrene is carried from streets and through storm drains out to the ocean. Polystyrene is the second most abundant form of debris on California beaches. Marine life from the very bottom to the top of the food chain mistake foam pieces for food.

Polystyrene comprises 15% of street litter and storm drain litter, according to several cities and counties in California. Local jurisdictions currently spend millions of taxpayer dollars each year cleaning litter from streets and storm drains.

Polystyrene food containers are harmful to human health. The styrene in food containers leaches into the food when heated, or in the presence of acids, oils or alcohol. US EPA scientists found styrene in 100 percent of all human fat tissue samples in a 1986 study. Styrene poses an increased risk of leukemia and lymphoma and neurological problems such as loss of hearing, balance, and special orientation.

Disposal and Recycling Options are Limited for EPS

Although the technology exists to recycle polystyrene, very little food-contaminated packaging is actually recycled due to its low value and difficulty with recycling. Recycling is not

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

economically feasible. Once foam packaging is contaminated with food it has to be washed, which makes recycling very expensive for such a cheap disposable material. Anecdotal evidence suggests that used food packaging is typically discarded by the recycler if it is not in pristine condition. Thus, municipal collection of EPS food packaging costs taxpayer money and provides no benefit. Further, recycling certainly doesn't prevent foam food ware from being littered or escaping from open landfills and dumpsters and being carried by the wind. Thus, the County should not pursue recycling of EPS as a policy solution.

***

To date, 48 California jurisdictions have banned polystyrene takeout food containers. Of these none have reported that any local businesses have gone out of business. Most local ordinances have options for local businesses to make a claim of economic hardship, yet to our knowledge none have exercised this option. In San Francisco, two years after the passage of the polystyrene food-ware ban, a litter study showed a 36% decrease in polystyrene litter.

We urge Los Angeles County to move forward in prohibiting food vendors from distributing EPS food containers. The deadly effects of polystyrene litter on our aquatic environment and the human health impacts associated with using EPS cannot be ignored. Continuing the use of polystyrene only adds to the litter problem, costing public agencies--and ultimately taxpayers—millions of dollars every year to manage this waste. Of note under the Santa Monica Bay Trash TMDL, the County could receive a three year compliance extension if they voluntarily adopt local ordinances to ban plastic bags, smoking in public places and single use expanded polystyrene food packaging. This is a big incentive for the County to act expeditiously to ban the distribution of EPS food packaging.

Thank you for your consideration of these comments. Please let me know if you have any questions.

Sincerely,

Kirsten James

Kirsten James
Water Quality Director

June 24, 2011

Suk Chong
Los Angeles County EPS Working Group
County of Los Angeles Department of Public Works
900 S Fremont Avenue
Alhambra, CA 91803

Dear Mr. Chong,

At its May 24 Working Group meeting, County Public Works staff distributed draft potential elements for its recommendation to the Board of Supervisors. These elements range from expanded recycling, litter abatement and educational efforts to an expansion of the County facility ban to certain retailers and fees on food containers. This framework certainly represents the spectrum of approaches to confronting litter.

On behalf of the Plastic Foodservice Packaging Group, the California Restaurant Association, the Valley Industry and Commerce Association, the Greater Los Angeles Area Chamber of Commerce, Central City Association, Los Angeles County Business Federation, DART Container Corp., Pactiv, and many small, medium and large restaurants, we believe that a combination of the proposed recycling, composting, education, disposal, litter maintenance and conversion technologies elements will more successfully address litter and waste than any expanded ban or fees. As we will outline in this memo, we support these alternatives as they are both more economically friendly and more certain to positively impact our environment and our local communities than a ban or fees without unnecessarily hurting businesses.

We believe that the Working Group has a tremendous opportunity to leverage this process into a broader environmental and waste diversion initiative in Los Angeles County. Many of the elements will in fact benefit other important efforts already underway at the county – including efforts to increase and expand recycling of materials throughout County unincorporated areas, enhance conversion technology efforts, and develop composting in the region.

TO: **Suk Chong, Los Angeles County Public Works Environmental Services Division**

FR: **Samantha Martinez on behalf of PFPG, CRA, Dart, Pactiv, VICA, et al**

RE: **Draft Evaluation of Potential Elements Regarding Expanded Polystyrene Food Packaging**

DT: **7/11/2011**

We reviewed the draft document "Evaluation of Potential Elements: Board of Supervisors Recommendation Regarding Expanded Polystyrene Food Packaging. We once again express our concern that this document was prepared without consideration of our comments to the "draft potential elements" document. We look forward to better communication and input in future draft documents prepared based on the working group effort. Our comments below and in the attached chart are in italics.

On September 21, 2010, following over 4 years of extensive study and stakeholder discussion, the Los Angeles County Board of Supervisors adopted a prohibition on the purchase and use of EPS food containers at all County operations *within 60 days*. The Board of Supervisors also directed the Department of Public Works and County Counsel to report back, within 12 months of implementing the *County operation* prohibition, on the feasibility of restricting the use of EPS food containers at food service establishments and retail stores in the County unincorporated areas, including potential recommended changes to the County Code*. In addition, the Board instructed Public Works to look at the infrastructure necessary to handle alternative materials as part of its feasibility study. While it is clear staff is conducting research, regarding the feasibility of an expanded EPS ban it is not clear that they are considering the feasibility of having sufficient infrastructure to handle the end of life for alternative materials. The importance of this task was emphasized by the Supervisors at the hearing. When proposing the motion, Supervisor Knabe said "The appropriate infrastructure needs to be in place to handle these (alternative) materials before a Countywide ban is even considered."*

The County's objective is to evaluate options to eliminate the negative economic and environmental impacts of EPS litter and blight and also to identify the impacts that alternative products might have on the economy and the environment and how to address all of these impacts. As part of the stakeholder driven process, the following elements have been discussed as potential aspects of a comprehensive recommendation that may be submitted by Public Works to the Board of Supervisors in response to their request.

The stakeholder group has taken the Board's request seriously and is committed to recommending elements that will truly address the Board's goal of eliminating the negative economic and environmental impacts of all types of food service material and compliment the County's efforts to reduce all marine debris, litter and blight and the costs and impacts associated.

If the County's real objective in proceeding with this evaluation is "to eliminate, to the extend feasible, the negative economic and environmental impacts of EPS food packaging litter, such as blight, wildlife

impacts, and costs associated with litter cleanups" - their single focus on EPS foodservice without addressing all of the littered items - including all foodservice packaging, is definitely short-sighted and ignores the major components of litter over and above EPS's small contribution. The County will be much better served by implementing elements that address all components of litter and blight.

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

September 20, 2010

Los Angeles County Supervisors
Kenneth Hahn Hall of Administration
Via email: Sachi Hamai, Executive Officer (shamai@bos.lacounty.gov)

Dear Los Angeles County Supervisors:

Heal the Bay, a non-profit environmental group dedicated to making California coastal waters safe, healthy, and clean, strongly supports municipal actions that restrict the distribution of expanded polystyrene ("EPS") food packaging. We applaud the County for considering a ban of EPS food packaging at County facilities and events with the intention of looking towards a broader application to restaurants and retailers in unincorporated areas.

Heal the Bay believes it is imperative to desist in the use of EPS and transition to alternatives in order to protect aquatic health and avoid negative economic impacts from plastic litter. Thus, we urge the County move forward with the proposed prohibition on the purchase and use of expanded polystyrene food containers at County facilities and events. In addition, we believe that it is a critical next step to restrict the use of expanded polystyrene food containers at food service establishments and retail stores. As the original motion for this effort was made in May 2007, we have already waited far too long to see both phases of this Ordinance move forward. Thus we ask that the Board to adopt this proposal and move expeditiously towards the next phase.

Expanded Polystyrene Detrimentally Impacts the Marine Environment and Aquatic Life

Roughly 80% of marine debris originates from land-based sources, and plastics make up 90% of floating marine debris. Plastic debris consistently threatens marine life, killing wildlife through ingestion and entanglement. Some areas of the Pacific have six times as much plastic debris as zooplankton by mass (Moore, C et al., 2001. "The comparison of plastic & plankton in the North Pacific central gyre." *Marine Pollution Bulletin* 42:129.)

EPS food packaging is designed for a useful life that can be measured in minutes or hours, yet because it is a non-biodegradable product it persists in the environment for hundreds and possibly thousands of years. Numerous studies have documented the prevalence of polystyrene debris in the environment. At Heal the Bay's over 400 beach and creek clean-ups each year including Coastal Clean-up Day, EPS is consistently one of the top trash items found.

The time required for plastic to break down in aquatic systems is unknown, and these items may never fully decompose. Rather, plastic breaks into small pieces; a trash characterization study by the City of Oxnard (2005) citing EPS plastic as the second most ubiquitous type of trash, found that 88% of foamed plastics was in pieces. Small pieces closely resemble the prey items of many species which ingest the debris and can subsequently suffer from starvation and poisoning from the associated toxins.

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

Expanded Polystyrene Litter is Not Easily Controlled

As demonstrated above, expanded polystyrene is a predominant part of the waste stream. Litter abatement is a difficult task for municipalities struggling to meet the regional trash TMDLs and other regulatory requirements, but EPS in particular presents compliance difficulties for municipalities, because it is persistent, because it breaks into pieces and because it is easily distributed.

Information provided by plastic industry groups often suggests that litter is not caused by the discarded product, but instead by "illegal human behavior." While it is generally agreed that much of the food service expanded polystyrene litter is the result of thoughtless human actions, some food service polystyrene litter is actually a result of wind or water drift from waste bins, waste haulers, and other litter sources. Since EPS material is so light, it floats in water and is easily carried by the wind, even when disposed of properly.

Polystyrene is Not Easily Recycled

Although the technology exists to "recycle" (actually down-cycle) polystyrene, very little is actually recycled due to economic and logistical constraints. In 2002, the polystyrene industry reported that of the 869 million pounds of EPS produced in the U.S. only 26.2 million pounds of post consumer EPS packaging (3% of the total) was recycled. Of that 3%, almost none of the material recycled was food packaging. Most of what is recycled consists of foam block packaging material that is reground and remolded into similar products at a small scale by individual polystyrene manufacturing companies. Further, polystyrene food packaging is typically not "clean" enough to be recycled. Anecdotal evidence suggests that used food packaging is typically discarded if it is not in pristine condition. Thus, municipal collection of polystyrene costs taxpayer money and provides no benefit.

***

Ultimately, protection of natural resources also makes economic sense. A clean and healthy environment equals a good economy. Accordingly, we strongly urge the Los Angeles County Supervisors to prohibit EPS food packaging at County facilities and events and restrict the use of expanded polystyrene food containers at food service establishments and retail stores in the County unincorporated areas in the very near future.

Sincerely,

Kirsten James
Director of Water Quality

LOS ANGELES METROPOLITAN HISPANIC CHAMBERS OF COMMERCE

Oxnard, Inland Empire, Orange, and Los Angeles Counties

3435 Wilshire Blvd., Suite2700-14., Los Angeles, CA 90010
Tel 213-739-7016 Fax 213-389-5775
www.businessinlosangeles.com, www.chamberla.org, chamber@chamberla.org

October 4, 2011

The Honorable Michael Antonovich
Mayor, Los Angeles County Board of Supervisors
500 West Temple Street, Room 869
Los Angeles, CA 90012

OPPOSE: POLYSTYRENE FOOD SERVICE BAN

Dear Mayor Antonovich:

The California Hispanic Chamber of Commerce (CAHCC) is opposed to any proposed local ordinance that prohibits restaurants or other food vendors from using polystyrene foam take out containers. As you may know, the CAHCC represents the interest of over 700,000 Hispanic business owners in California. The CAHCC is the premier and largest regional ethnic business organization in the nation that promotes the economic growth and development of Hispanic entrepreneurs and California's emerging businesses.

In our view, a ban on polystyrene containers would negatively impact the local economy by increasing costs for small "mom and pop" restaurants and put several hundred southern California manufacturing jobs at risk. In many cases, food vendors use these types of products because they are economical and functional. Alternative containers are sometimes 2-3 times more expensive. It will be difficult for many to absorb these higher costs or attempt to pass along these cost increases to their customers.

Doing business in California is tough and our economy is struggling. Our members have chosen to work for themselves because they believe in the American dream of owning their own business and making decisions in the best interest of their companies and employees. They employ thousands of Californians and they serve their communities with pride. It is unfathomable that our elected representatives are contemplating a policy that would result in higher costs of doing business in an already difficult economic climate.

The CAHCC and its members urge the Los Angeles County Board of Supervisors to reject an ordinance to ban polystyrene food containers.

Sincerely,

Maria Luisa Vela, PRESIDENT
L.A. Metropolitan Hispanic Chambers of Commerce

cc: Members, Los Angeles County Board of Supervisors
Sincerely,

Latin Net

a California Corporation
2757 W. 8th Street., Suite # 007
Los Angeles, CA 90005
213-380-7855 Fax: 213-487-1164
Mlvela@sbcglobal.net

October 4, 2011

The Honorable Michael Antonovich
Mayor, Los Angeles County Board of Supervisors
500 West Temple Street, Room 869
Los Angeles, CA 90012

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The CAHCC and its members urge the Los Angeles County Board of Supervisors to reject an ordinance to ban polystyrene food containers.

Sincerely,

Maria Luisa Vela, PRESIDENT
LATIN NET

cc: Members, Los Angeles County Board of Supervisors
Sincerely,

CALIFORNIA RESTAURANT ASSOCIATION

Plastic Foodservice Packaging Group

October 5, 2011

Mr. Suk Chong
Los Angeles County Public Works Environmental Services Division
Alhambra, CA

Dear Mr. Chong,

We have reviewed the Draft Case Studies Summary Report on EPS prepared by Los Angeles County Department of Public Works and appreciate the opportunity to provide our comments to this draft. The report is quite thorough in its review of EPS bans and policies to eliminate EPS usage. However, the report is quite limited in its study of non-ban policy options. In addition, the report does not provide information on how to handle alternative materials as requested by the Board of Supervisors. As members of the stakeholder group we are committed to developing policy recommendations that will truly address the goal of eliminating the negative impacts of all food service litter, regardless of material type, and will reduce marine debris, litter and blight of all types – not just the small portion of litter that is EPS.

The section "Municipalities in Los Angeles County that Restrict EPS" (pages 7-29) only tells part of the story. These jurisdictions amount to less than 10% of the population of State of California. That means that this section does not include the policies that cover over 90% of the population of the State of California, nor does it include jurisdictions that have discussed the option of a ban but have not decided to implement such a policy. Many of these jurisdictions focus on anti-litter programs, recycling of EPS foam, reduction of litter as a whole, or policies related to materials that are a larger part of the waste stream. To dedicate 22 pages of a 38 page report to a policy that covers less than 10% of the population and only one of seven policy options discussed in our year-long working group seems exclusionary.

The section "Restaurants and Retail Food Vendors with Food Container Policies" (page 31-32) similarly leaves out a large part of the story. As we shared with staff, over 750 restaurants in

Los Angeles alone joined in a voluntary program sponsored by the California Restaurant Association, the Plastic Foodservice Packaging Group and Dart Container Corporation. These restaurants voluntarily decided to join in educating their customers about the fact that EPS foam is recyclable and encourage their customers to "Rinse and Recycle your Foam at Home". This pilot voluntary program was rolled out over a 3 month period and in this short timeframe the response from restaurants was remarkable. The Supervisors should be aware of this program as a policy option to consider as they look to reduce litter. We've attached the list again for your review.

The section "Recycling of EPS Food Containers" (page 33) lists out the cities in California that accept EPS in their residential recycling bins. What this section does not say is that in total these cities make up over 57% of the population of Los Angeles County, which is very significant. With the exception of one small city, these jurisdictions don't restrict EPS – but instead recycle EPS. The report states that some of the MRFs don't separate EPS, however it does not go into detail about how this is being handled or what is being done to make this process better, the logistics of which have been discussed at length in working group meetings. It also does not contemplate options that some MRFs may include EPS in mixed plastic bales if they are not separating EPS completely. If done properly, foodservice EPS can be recycled, and the photo below shows baled foodservice EPS at the NEPCO facility, a photo taken during the County Staff's tour of their Chino facility.

In this same section "Recycling of EPS Food Containers" (page 34) the report leaves out several additional MRFs that recycle EPS– some of these include Bestway and Rainbow Recycling as well as Allied and Recology which are not in the Los Angeles area.

In the section "Composting Programs" (page 36-37) there is no explanation that the actual composting of foodscraps and foodservice is limited at best in LA County. In the "Executive Summary" (page 5-6) there is no discussion about the limitations to the recycling or composting

of foodservice made from various materials. In fact, the limitations on recycling are not unique to EPS, but all foodservice have similar challenges of contamination and low rates of recycling. It needs to be addressed that a ban on one does not solve the problem of litter, recycling or composting. But solutions to address litter will cover all materials and benefit the County.

We are concerned that the Case Study Document is full of information on bans, but very slight on information about alternative methods of addressing EPS and other material in the litter stream. We continue to provide a lot of information about non-ban solutions, much of which is not reflected in this document. We request that County Staff review these comments and update the document accordingly. As you finalize the case studies and the draft report we hope that staff includes more of the elements the stakeholder group has been discussing for the last ten months, recycling, composting, education, disposal and litter maintenance, and conversion technologies as a comprehensive solution to address litter and waste.

Sincerely,

Lara Diaz Dunbar
Senior Vice President Government Affairs
California Restaurant Association

Mike Levy
Director
Plastic Foodservice Packaging Group

San Gabriel Valley Legislative Coalition of Chambers

Representing the businesses of:

Arcadia

Azusa

Covina

Duarte

El Monte / South El Monte

Irwindale

La Cañada Flintridge

La Verne

Monrovia

Regional – San Gabriel Valley
- Diamond Bar
- Hacienda Heights
- La Puente
- Rowland Heights
- Walnut
- Valinda

Rosemead

San Dimas

Sierra Madre

Temple City

October 17, 2011

Suk Chong
Los Angeles County EPS Working Group
County of Los Angeles Department of Public Works
900 S Fremont Avenue
Alhambra, CA 91803

Dear Mr. Suk Chong,

The business community in Los Angeles County should not be exposed to the uncertainty created by bans or other imposed proscriptive measures. California – Los Angeles County and in particular the San Gabriel Valley – continue to suffer from high unemployment rates. When our local economy is fragile and jobs are in jeopardy, government must be mindful of the detrimental impact that bans have on small businesses and workers.

The San Gabriel Valley Legislative Coalition of Chambers, a consortium of regional and local chambers of commerce advocating for the small business community, urge the EPS Food Container Litter Working Group and County Board of Supervisors to **refrain from imposing a ban on foam containers/products and protect local businesses and workers.**

Our region's businesses, employers, and workers will not prosper if companies in unincorporated regions of the county face an uncertain and uneven set of rules through the implementation of this ban. A ban would surely choke off investment and stifle job creation. Higher costs and uncertainty for local businesses would merely delay capital investment and burden businesses that are already struggling. The local economy stands to lose if a business environment in which uneven regulations and an unequal playing field are created for restaurants and small businesses.

In closing, on behalf of the San Gabriel Valley Legislative Coalition of Chambers I urge the EPS Food Container Litter Working Group and Board of Supervisors to protect local businesses and workers and **refrain from imposing a ban on foam containers/products.**

Sincerely,

Arun D. Tolia, Chair
San Gabriel Valley Legislative Coalition of Chambers

cc: Supervisor Gloria Molina
Supervisor Mark Ridley Thomas
Supervisor Zev Yaroslavsky
Supervisor Don Knabe
Supervisor Mike Antonovich

c/o Irwindale Chamber of Commerce
P.O. Box 2307 - 16102 Arrow Highway, Irwindale CA 91706

CALIFORNIA RESTAURANT ASSOCIATION

Plastic Foodservice Packaging Group

October 24, 2011

Mr. Suk Chong
Los Angeles County Public Works
Environmental Programs Division
900 South Fremont Avenue, Annex
Alhambra, CA 91803

Dear Mr. Chong:

Thank you for the opportunity to review the draft key findings and potential recommendations document. We agree with the County's key findings:

- That a comprehensive approach will be most effective in reducing the negative impacts of EPS litter as well as other forms of litter.
- While an EPS ban could result in a reduction in the amount of EPS in the litter stream, it will also result in an equal or additional amount of replacement products in the litter stream.
- Los Angeles County residents and businesses have very limited access to composting programs while curbside recycling is nearly universal throughout the County.
- Curbside recycling of EPS food containers is available to a majority of LA County residents but more work can be done to increase availability as well as handling once at the MRFs.
- Additional funding is not currently available to the County for enhanced litter mitigation measures.
- A comprehensive program that incorporates multiple elements will be more effective in reducing EPS litter as well as all litter material than just a ban on EPS foodservice.

Additionally, we request that the following information be incorporated into the County's key findings:

- Restaurant jobs represent 10 percent of employment in California.
- Every $1 spent in California's restaurants generated an additional $1.34 in sales for the state economy.
- The restaurant industry keeps less than a nickel in profits for every dollar generated in sales.
- Polystyrene packaging is an economical option that performs extremely well, especially for take-out services.

As participants of the working group since it began we believe that a majority (if not all) of the working group members agree with the above and agree that the following elements must be part of any recommendation to reduce EPS and other litter moving forward:

- Education (via restaurants; media and advertising; NGOs such as chambers, environmental groups and community organizations; County programs; etc)
- Litter Collection and Management (lidded collection devices, clean-up events, street sweeping, screens, etc)
- EPS Recycling (as well as recycling of other materials)
- Composting infrastructure
- Waste Conversion Technologies
- Enforcement

We would like to be partners with the County in this effort. We will provide resources –monetary, technical and in kind assistance to ensure that a comprehensive program is successful.

We would define success as:

- Reduction of all forms of food container litter
- Reduction of total litter
- Increased diversion of EPS and other food containers
- Increased access to recycling of EPS to all LA County unincorporated residents
- Additional litter management infrastructure
- Increased public education for recycling of EPS and anti litter messages via restaurants, community organizations, media and other sources
- Measurable outreach to develop awareness and participation throughout LA County unincorporated
- Increase in private sector foam collection and recycling programs and locations

In order to provide an accurate way to judge the effectiveness of this program, it will be important to clearly define how to measure success of all of the above. We look forward to working together to develop a clear matrix for success. Thank you again for the opportunity to provide these comments. We look forward to working together to reduce litter and disposal.

Sincerely,

Lara Diaz Dunbar
Senior Vice President Government Affairs
California Restaurant Association

Mike Levy
Director
Plastic Foodservice Packaging Group

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

October 25, 2011

Mr. Suk Chong and Mr. Coby Skye
L.A. County Department of Public Works
Via email: SCHONG@dpw.lacounty.gov;
Cskye@dpw.lacounty.gov

Dear Mr. Chong and Mr. Skye:

On behalf of County EPS Stakeholder Group Members Heal the Bay, Seventh Generation Advisors, Surfrider Foundation, and San Fernando Valley Audubon Society we submit the following comments on the Draft Elements and Options for Mitigating EPS Litter Impacts ("Draft Document") dated October 19, 2011. We appreciate the opportunity to comment.

After over a year of participating in meetings and educational sessions related to mitigating the negative impacts of expanded polystyrene ("EPS"), we are extremely disappointed with the Draft Document as it outlines a proposal that simply maintains that status quo. Our organizations have the ultimate goal of eliminating EPS litter in the environment. Based on the information presented and researched over the last year during the EPS Stakeholder group process, we have reached the conclusion that a ban on EPS food containers (sample policy attached) is the only option that will reach this goal. (Of note, this should be stated in the Draft Document). We believe that the alternate path forward specified in the Draft Document will simply waste valuable time and resources and will ultimately lead to this same conclusion. As the County is well aware, the price of voluntary programs (like the attempted County bag recycling program) greatly exceeds the cost of a ban.

The Draft Document appropriately acknowledges that a ban on EPS is feasible and the most effective solution, speaks to the effectiveness of bans in other jurisdictions, and recognizes that "recycled" EPS is typically landfilled. However despite these findings, the County inexplicably reaches the conclusion that an alternate "Comprehensive Program" consisting of the elements of education, recycling, litter collection, waste conversion, alternate products and a container fee is the preferred path forward. This conclusion is not a logical outgrowth of the Draft Document findings or the EPS Stakeholder process. The 2007 unanimously adopted motion was very clear in its charge to Public Works and County Counsel about reporting on the <u>feasibility of prohibition:</u>

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

> "Instruct the Director of Public Works, in consultation with County Counsel, to investigate and **report back in six months on the feasibility of prohibiting the use of expanded polystyrene food containers at all food service establishments and retail stores in the Unincorporated County Areas, including recommended changes to the County Code;"** (2007 LA County BOS Motion, Item #21)

The Board of Supervisors charge did not request information about recycling.

Further, the Draft Document leaves many unanswered questions that need to be addressed:

- Which of the "elements" outlined in the Draft Document will be utilized in the "Comprehensive Plan"?

- What specific educational programs, recycling programs, etc. will be utilized in the "Comprehensive Plan" that go above and beyond the status quo?

- What analysis has been completed to demonstrate that the "Comprehensive Plan" will meet the same reduction levels as an EPS ban (or in fact, any reduction levels)? The Draft Document states that this effort "may achieve comparable results" but there is no more information given on how this conclusion was reached.

- How will the "comprehensive plan" be funded? What will this plan cost? Is the County willing to fund these programs? No stakeholder has made a commitment to fund any of these elements in part or in full.

- What EPS reduction targets will trigger a ban on EPS food containers and in what specified timeframe? At a minimum this type of reduction program should reflect the fast pace at which other cities have been moving towards bans and should not be longer than a year, after which time, if targets are not met, a ban shall be instituted.

- As required in County Board of Supervisors Motion 07-1260, what are the recommended changes to the County Code?

As discussed in detail in our previous letters (attached), EPS is ubiquitous in the environment and impacts wildlife. In addition, styrene, the building block of EPS is recognized to be a likely human carcinogen by the National Institute of Health. Despite many efforts from our groups and others to educate the public, EPS is still a top item found in beach and creek cleanups. Fifty-two jurisdictions in California have moved forward a type of EPS ban as they have realized that alternate programs simply do not work. We believe the County EPS Stakeholder process has led to a clear conclusion: EPS food containers should be banned in the County in order to mitigate

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

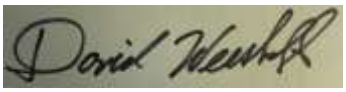
the negative impacts. We urge County to consider this approach in their final document. At a minimum, we need detailed answers to the questions outlined above.

Sincerely,

Kirsten James
Water Quality Director
Heal the Bay

Leslie Tamminen
Ocean Program Director
Seventh Generation Advisors

Craig W. Cadwallader
South Bay Chapter, Rise Above Plastics Committee Chair
Surfrider Foundation



David Weeshoff
President
San Fernando Valley Audubon Society

Californians Against Waste
Conserving Resources. Preventing Pollution. Protecting the Environment.

October 26, 2011

Mr. Suk Chong
Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: Comments on Draft Elements and Options for Mitigating Expanded Polystyrene (EPS) Litter Impacts

Dear Mr. Chong:

Californians Against Waste (CAW) thanks Los Angeles County for convening the working group meetings on its EPS food container litter reduction efforts and for the opportunity to comment on a Draft Elements and Options for Mitigating EPS Litter Impacts ("Draft Document") dated October 19, 2011. The County of Los Angeles faces some serious hurdles in meeting its TMDL for Trash requirements and CAW believes that these working group meetings can be useful in considering effective solutions to meet these targets. However, we feel that the County's recommendations for mitigating EPS litter impacts can be much stronger to successfully achieve those goals.

Urge Banning EPS and Nonrecyclable Materials
Instead of a strong recommendation to phase-out EPS, the Draft Document appears to conclude that a "comprehensive effort" combining such elements as education, recycling, litter collection, waste conversion, and a container fee would have comparable results to a ban on EPS. We disagree and are concerned that this comprehensive program would instead lead to an unnecessary waste of time and money on these alternative elements before eventually coming to the conclusion that a ban of EPS and other nonrecyclable materials is needed for satisfactory litter mitigation results. We have seen similar actions before in the County with its 2008 voluntary plastic bag recycling program, which failed to meet recycling goals and ultimately led to the Board of Supervisors adopting a plastic bag ban in 2010.

EPS Recycling is No Solution
One of the elements discussed in the Draft Document is EPS recycling. We feel that this is not the answer. EPS can become litter even when properly disposed of, as it is easily blown by the wind out of recycling and waste bins. Statewide, the level of recycling of EPS takeout food packaging is negligible. Although some curbside recycling programs within LA County do accept polystyrene in their blue bins, we all know that most recyclers do not process the EPS and instead landfill it. One reason for this is because of food residue contamination. In addition, EPS has a limited recycling market after it is downcycled into another product, and it is also not cost-effective to recycle. According to SF Recology, it costs $42 to process 100 pounds of the material into a recycled bale that is sold back at no more than $25.

Other Elements Not as Effective
Over 50 jurisdictions across the state have passed ordinances restricting the use of this problem material. They have found that education and outreach efforts alone do not create enough behavioral change to create an impact. And while litter collection efforts may help reduce the problem through

cleanup and management, they serve more as a temporary band-aid than a long-term solution. Source reduction is key. As the County has recognized in the Draft Document, none of other elements being considered are expected to be as efficient or effective as a ban for significant EPS litter reduction.

Existing Bans Proven Successsful
CAW has recently worked with the cities of Salinas, Foster City, San Mateo County, and San Leandro to pass ordinances banning polystyrene takeout food packaging, and strongly urges the County of Los Angeles do to the same. Alternatives to foamed polystyrene packaging are abundant and competitively priced in the marketplace, sometimes being more affordable than EPS products. Moreover, these ordinances have had a direct impact on the local presence of EPS litter, as indicated in the City of Santa Cruz which saw a 61% decrease in beach litter a year after its ordinance implementation.

Keep Recyclable Materials in the Market
As an organization focused on advocating for waste reduction and recycling, CAW agrees that the County should encourage an increased diversion of alternative products through recycling and composting. There are existing recycling facilities for many plastics such as PET and HDPE, as well as a growing market from composters for compostable products. That said, CAW believes we should continue investing in the markets that have been proven successful, rather than trying to nurture a recycled market for a product that is hard to collect and recycle, has limited downcycling options, and a restricted infrastructure.

EPS Hurts the Environment and Economy
Sixty to eighty percent of marine debris originates as plastic from urban litter and EPS is one of the most common items found during beach cleanups. Once littered, EPS enters the watershed and has been responsible for the deaths of thousands of birds, turtles and marine mammals. EPS threatens California's multi-billion dollar ocean-based economy and essentially never biodegrades. In terms of water quality issues, the impacts of EPS far outweigh the benefits of its use.

Dozens of coastal communities have recognized the issue and solution and have already banned polystyrene. Some, like the City of Berkeley, have been successfully reducing polystyrene litter pollution through such a food packaging ordinance for decades. CAW thanks Los Angeles County for its environmental leadership regarding plastic pollution, and we urge you to continue this leadership by recommending a county-wide ban on EPS and nonrecyclable materials, rather than a program of other elements that will cost the County precious time and money with less effective results.

Sincerely,

Sue Vang
Policy Associate

From: Samantha Martinez [mailto:SMartinez@KindelGagan.com]
Sent: Monday, November 07, 2011 3:05 PM
To: Chong, Suk; Skye, Coby
Cc: Mark Spencer; Michael.Westerfield-GAED@dart.biz; Jonathan.Choi@dart.biz; Robb Korinke; Vanessa Rodriguez
Subject: Comments on Draft Comprehensive Plan EPS 11 7 11

Hi Suk and Coby,
I've attached comments on the draft comprehensive plan document. As discussed we've outlined some details on measurement and timeline. Let me know if you have any questions.
Thanks, Sam

EPS Recycling

The core impediment to increased recycling of foam products has historically been access. Not enough consumers have been able to easily add foam to their curbside recycling bins together with paper, glass and other plastics, and few drop-off recycling facilities accepted foam. Many cities within LA County in cooperation with industry groups have taken great strides to increase access to foam recycling. Foam recycling efforts are now beginning to gain significant traction in Southern California. Over half of Los Angeles County residents now have access to curbside recycling for foam, including foam foodservice containers. According to the RENEW LA Five-Year Milestone Report, there are seven or eight different potential markets to recycle this material.

In addition to many cities accepting EPS in their residential recycling bins, many school districts in Los Angeles County participate in a program to recycle their EPS products. In fact, over 1 million EPS lunch trays are being recycled via a collaborative effort involving a waste hauler, a foodservice distributor, Dart Container, and El Segundo USD, Torrance USD, Manhattan Beach USD, Culver City USD, Pasadena USD, Long Beach USD and other school districts. This program not only diverts waste from landfills but it allows school districts to achieve huge cost savings, Long Beach Unified alone estimates it is saving $1 million a year through this recycling effort. Savings are attributed to the lower cost of foam vs. alternatives as well as a decrease in waste hauling expenses.

Composting

As stated in the County's September 2010 staff report, a variety of compostable materials are being utilized to make single use foodservice. These products are exciting to the industry but also raise challenges locally. First, these products are expensive for restaurants to purchase and are made mostly out of state and overseas. Most of these products do not biodegrade if littered, if thrown into the trash nor will they degrade if they make their way into a storm drain or other waterway. The products must be composted in a controlled compost facility and unfortunately there are few options to do so in Los Angeles. The County will need to ensure that compostable products satisfy ASTM D6400, ASTM D6868, EN 13432 standards and that local infrastructure can process material that meets these standards. According to a recent story by CBS San Francisco, "Utensils are certified compostable if third-party tests show they break down in 180 days in a commercial composting operation. But an average composting cycle is typically 60 to 90 days."

The County's leadership in this area will provide opportunities for manufacturers, restaurants and customers to handle these materials properly.

Education

Members of the stakeholder group unanimously agree that education is key to addressing litter and waste. Stakeholders representing business and the environmental community concur that educating children, teachers, adults, customers and all members of the community is a critical element to addressing litter and marine debris. Staff also agreed and included in the September 2010 report the need for education and public outreach as a necessary component as they move forward. There are

several elements that should be part of an education program, school aged kids should receive an anti-litter and pro recycling message; citizens need to learn about all the materials they can recycle, compost or reuse; customers could be educated about how to handle their to-go products; recyclers should be made aware of the available markets for various materials – including EPS – and how to best handle materials; and the County should educate the public about conversion technology and composting opportunities as they develop.

Our organizations are involved in many educational programs focused on addressing litter and waste throughout Los Angeles County. These include a voluntary onsite restaurant recycling pilot education campaign with 700 restaurants participants; support for Keep Los Angeles Beautiful to develop and implement a campaign against litter; sponsorship of the Los Angeles Conservation Corp LA River Corps effort to educate students and restore and revitalize the LA River; a partnership with Keep California Beautiful and State Parks Department to provide recycling bins along state beaches; and many more. These programs could be expanded under the LA County Stakeholder Working Group umbrella and new programs could also be implemented.

Disposal and Litter Maintenance

There are opportunities to improve the current waste and litter removal systems which will enhance the County's efforts to address litter and waste. Some of the ideas mentioned by the working group include install screens in catch basins which is already being done in 16 LA County cities and is estimated to keep 840,000 lbs of debris out of our oceans each year; review and adjust the timing and frequency of trash and recyclable collections; and coordinate these activities with street sweeping and other efforts. It has also been mentioned that as the County is looking to franchise its recycling collections there is an opportunity to include EPS, glass and other materials, expand services to multi-family and commercial locations as well as expand recyclable collections to all unincorporated County areas. Since resources are slim, other simple tweaks have been mentioned that could provide huge cost savings in the long run – including making sure there are lids on public trash receptacles, locating recycling containers in public areas and maintaining these sites on peak days/hours. There are undoubtedly more opportunities and as part of this element, the stakeholder group should examine public private partnerships to develop solutions.

Conversion Technologies

Through the Integrated Waste Task Force the County is a leading force in the conversion technology arena and plans to utilize conversion technology as an alternative to traditional waste disposal. The Task Force is developing demonstration projects to showcase different conversion technologies, many of which can process EPS and alternative foodservice products and convert them to renewable resources including energy. Despite advances in reclamation of plastics and other products there remains a portion of the plastic waste stream that cannot be recycled, thus these technologies combined with recycling of EPS and other plastic waste can greatly reduce the amount of waste that goes to landfills and also create a source of alternative energy. We support the County's efforts and believe that conversion technologies are an important piece of this effort to address litter and waste.

The combination of these key elements is the best solution and will have the most impact in addressing all litter and waste. We do not believe that an expanded ban on polystyrene will achieve the County's goals of litter abatement, waste diversion or provide a workable, economical framework for impacted businesses.

Bans and Fees Don't Achieve County's Goals

The California Integrated Waste Management Board's (CIWMB) 2004 report on "Use and Disposal of Polystyrene in California" concluded that "Litter is a pervasive problem involving diffuse sources and human behavior with no easy solutions. Specific materials such as EPS and PS do not cause the litter problem; rather, it is caused by human behavior." Indeed, bans in other areas of the state have demonstrated that a ban on one product leads to an increase in litter of other products. San Francisco has banned polystyrene containers but according to a 2008 litter audit conducted for the city, paper cup litter increased after the ban was enacted. Bans lead to litter substitution, not reduction.

Cognizant of this, the Integrated Waste Management Board did not recommend a ban in its 2004 report, noting in its final recommendations that "The CIWMB does not believe that a separate PS initiative is warranted." Rather, the Board offers a set of recommendations much in line with some of the Public Works Department's proposed framework, including expanded litter educational efforts.

With a potential ban affecting solely unincorporated areas of the County, we also believe this will leave businesses in these jurisdictions at a significant competitive disadvantage, together with a potentially confusing regulatory overlay for multi-location operations.

Similarly, fees on individual containers present retailers and consumers with uneven choices and does not address the root issue, which is litter. Presentations at Working Group meetings have demonstrated that food-service EPS is a fraction of the overall litter stream, and the County's own September 2010 staff report on Expanded Polystyrene suggests the unincorporated areas of the county account for just 10 percent of countywide consumption of EPS.[i]

In fact, by implementing a ban or a fee the County would negatively impact the local economy at the worst time. The economic impact of a ban on polystyrene foam can be quantified in terms of direct and indirect effects. The direct effects of a ban will include changes in output, earnings, and employment at polystyrene foam product manufacturing facilities and with similar indirect effects, including decreased output, earnings, and employment in upstream industries. Of equal importance is the "ripple effect" throughout the economy which inherently affects suppliers, consumers and the local economies that rely on this industry.

Polystyrene foam products are important to the California economy because the products are made and used within the state. Because it is not cost effective to transport polystyrene foam products out-of-state, one likely result of any ban on polystyrene foam foodservice products is closure of one or more of California's six polystyrene foam product-manufacturing facilities, which support 1,578 jobs statewide.

A recent study by Keybridge Research finds the indirect impacts of the reduced demand for polystyrene foam foodservice products on the California economy could include up to $600 million in reduced output, nearly $150 million in reduced earnings, and the loss of as many as 3,200 jobs.

A more measured and results oriented approach is to expand education efforts for vendors and the general public and to explore innovations in collection, recycling and litter abatement as described above. We work closely with a number of Southern California-based vendors who both collect food-service foam and make excellent use of it as a raw material in a range of consumer products. Though municipal recycling efforts of EPS are growing, public awareness of the recyclability of foam is not pervasive among the general public. This is an opportunity for the County to engage its residents in a new avenue to reduce waste and increase diversion rates.

We request that County Staff and the Stakeholder group weigh these issues as we finalize the draft elements and present the following elements recycling, composting, education, disposal and litter maintenance, and conversion technologies as our recommended comprehensive solution to address litter and waste.

Sincerely,

Lara Diaz Dunbar
Senior Vice President, Government Affairs and Public Policy
California Restaurant Association

Carol Schatz
President and CEO
Central City Association

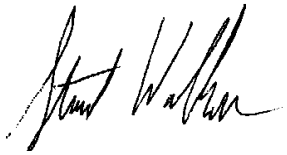
Michael Westerfield
Corporate Director of Recycling Programs
Dart Container Corporation

Gary Toebben
President and CEO
Greater Los Angeles Area Chamber of Commerce

Tracy Rafter
Chief Executive Officer
Los Angeles County Business Federation

Mike Spencer
Business Manager, Emerging Materials and Sustainability

Pactiv Corporation



Mike Levy
Director
Plastic Foodservice Packaging Group

Stuart Waldman
President
Valley Industry and Commerce Association

[i] "An Overview of Expanded Polystyrene Food Containers in Los Angeles County" Staff Report Presented 9.21.11, Table 1

Friends of Ballona Wetlands

www.ballonafriends.org

November 9, 2011

Mr. Suk Chong and Mr. Coby Skye
L.A. County Department of Public Works
Via email: SCHONG@dpw.lacounty.gov
cskye@dpw.lacounty.gov

Dear Mr. Chong and Mr. Skye:

Friends of Ballona Wetlands is submitting the following comments on the Draft Elements and Options for Mitigating EPS Litter Impacts ("Draft Document") dated October 19, 2011.

We are disappointed that the Draft Document does nothing to suggest a viable course of action to stop solid EPS trash from entering our Ballona Wetlands. As sympathetic as we would like to be to the foodservice packaging industry, and having heard their concerns at the June 29th working group meeting where I presented a PowerPoint presentation entitled, "Trashing our Wetlands," I believe it is time that a concerted effort is finally made to begin to control the volume and/or eliminate the vast amount of EPS containers that find their way into the Ballona Valley Watershed. The number of abandoned EPS containers that litter our Wetlands and surrounding areas are staggering. These photos were taken just in the past six months along Ballona Creek:



Along with other stakeholders concerned about the wellbeing of Santa Monica Bay and surrounding watersheds, we believe EPS food and beverage containers should be banned in the County.

Sincerely,

Lisa Fimiani

Lisa Fimiani
Executive Director

211 Culver Blvd., Suite K, Playa del Rey, CA 90293
ph: 310.306.5994 fax: 310.306.0031 e: info@ballonafriends.org

BALLONA CREEK Renaissance

P.O. Box 843, Culver City CA 90232

November 10. 2010

Mr. Suk Chong and Mr. Coby Skye
Los Angeles County Department of Public Works
Via email: SCHONG@dpw.lacounty.gov, cskye@dpw.lacounty.gov

Subject: Expanded Polystyrene (EPS) Litter Impacts

Dear Mr. Chong and Mr. Skye:

As a broad-based nonprofit organization working toward a healthier environment and community, Ballona Creek Renaissance (BCR) appreciates this opportunity to comment on the Draft Elements and Options for Mitigating EPS Litter Impacts ("Draft Document") dated October 19, 2011. Long a leader in creek cleanups, greening, and related education efforts, BCR requests that this document be strengthened significantly to help stem the tide of EPS (expanded polystyrene) and other plastic trash that is overwhelming our communities, landfills, waterways, and oceans at great cost to the state and the environment.

As part of our work, we have enjoyed working with the County and all levels of government and a wide variety of stakeholders toward ecological and personal health and related economic and quality of life benefits. The draft document, unlike the County's strong lead regarding single-use plastic bags, seems mired in the status quo--an approach that we believe will only lead to ever-increasing impacts on our ecosystems and economy rather than to the needed reversal of this tide.

For details, BCR is in strong agreement with the letters of Heal the Bay, dated October 25, 2011, and Friends of Ballona Wetlands, dated November 9, 2011. Although some restaurants, school districts, and others who use EPS packaging may believe that the cost of change would be prohibitive, our experience and knowledge of this and similar situations suggests otherwise. In fact, often businesses, institutions, and homeowners find that going green improves the bottom line as well as public and environmental health. Although they and we, the consumers, can adjust, the environment and our future have run out of adjustment room.

In our most recent hands-on encounter with EPS and other litter, BCR hosted a very successful Ballona Creek Cleanup at Centinela Avenue last Saturday. Volunteers collected over 25 very large and full bags of trash, much of it EPS. Yet such efforts, while worthy, capture only a small portion of the trash that is destined for the ocean or landfill.

BCR really appreciates all the positive work that the County has done to help heal our environment. Please take another look at your draft document. We look forward to working with you and others on this.

Sincerely,

Jim Lamm, President

From: Samantha Martinez [mailto:SMartinez@KindelGagan.com]
Sent: Monday, November 14, 2011 8:21 AM
To: Chong, Suk; Skye, Coby
Subject: Fw: Industry commitment toward Comprehensive Program at the County

Hi Suk and Coby
Here is an outline of our commitments to the comprehensive program. I will forward a more formal letter later today with this info. As we discussed, a reduction of 35% in 3 years divided in half for a 17.5% reduction at the first follow up litter survey 18 month benchmarks and then 35% at 36 months seems like a good goal.
Please call me with any thoughts or questions
Thanks
Sam

Comments to DRAFT Comprehensive plan.

Key Components

- Public Education Program
    - Industry, KCB, NGOs as well as the County should partner in this effort. Each stakeholder listed brings a unique set of resources to the table but if done in a coordinated manner, this effort will have the greatest impact.
    - Our goal is to focus industry resources that support KAB and KCB be used primarily in LA County towards this effort.
    - We would adjust the voluntary restaurant education posters to include the overall message of the coordinated public education program's message
- EPS recycling
    - Industry will work with and provide technical assistance to cities and haulers that would like to accept or are currently accepting EPS but not processing EPS appropriately

Measurements of Success

The objective of the comprehensive plan is to achieve meaningful, across-the-board reductions in litter in Los Angeles County, with a core focus on EPS food container litter. The above outlined components are designed to work in concert to produce qualitative results, including enhanced educational efforts and recycling, as well as quantitative measures that will reduce all litter. These qualitative and quantitative results should be viewed as coequal values in the conduct and review of the plan.

Measurable reductions of EPS in the litter stream should be pursued and gauged by reasonable instruments as established via the baseline characterization study (Component 8.a), centered on litter collected in roadways in the unincorporated County areas. Pending feedback from a designated agency to perform the baseline study, an EPS litter reduction should be pursued according to the following table:

EPS% of Total Litter Stream	**50%+**	**40.1 – 50%**	**30.1- 40%**	**20.1 – 30%**	**15 – 20%**	**10.1 – 15%**	**7.51 – 10%**	**5.1 – 7.5 %**
Total Target Reduction	60%	55%	50%	45%	40%	35%	30%	25%
Per Year Reduction Target	12%	11%	10%	9%	8%	7%	6%	5%

If the baseline survey or subsequent review studies conclude that EPS litter stands at 5 percent or less of the overall litter stream, the Working Group should convene to determine the capacity to measure EPS within the margin of error and the resources to address remaining EPS in the litter stream.

Also of key importance is evaluating the public education program, participation by industry, diversion of EPS food containers, and litter prevention infrastructure. These areas are more difficult to measure in quantitative form, but some indicators of success would include:

Public Education Program – develop milestones and report quarterly to the board with the following information:

- Number of new restaurants participating in the education program
- Number of new sites participating in the Littering is Wrong Too Campaign
- Number of community organizations briefed on campaign
- Number of individuals aware of the campaign

Participation by industry – report quarterly to the board on industry's involvement

- Financial support toward implementing public education program, litter infrastructure, EPS recycling, litter studies, etc
- Technical support towards EPS recycling, litter infrastructure improvements, conversion technologies, etc
- In kind support of public education program, EPS recycling, litter studies, etc
- Attend quarterly meetings and other meetings as appropriate

Diversion of EPS food containers – report quarterly on

- Assistance to MRFs, haulers or municipalities to enable better collection and recycling of EPS foam
- Information to customers on recycling of EPS foam foodservice
- Promotion of EPS foam foodservice recycling
- Collection and recycling of EPS foam foodservice from schools and other large venues
- Collection and recycling of EPS foam foodservice from restaurants via take-back program

Litter prevention infrastructure – once the litter study is complete, the group should review options to upgrade infrastructure at top identified hotspots in County unincorporated. The group would put together a plan and develop benchmarks accordingly.

The above outlined components are viewed as coequal values in the conduct and review of the plan. Annual reviews of both quantitative and qualitative components will be necessary. Given the broad range of components contained in the comprehensive plan, the program should be left open to adjustment over the course of the program and be evaluated by the Working Group after 60 months.

<u>Suggested deliverable timeline for first two years:</u>

Q4 2011	Identify potential litter survey consultants Identify funding for litter survey Develop methodology for litter survey Develop language for public education program messaging
Q1 2012	Finalize RFP for Litter Survey Finalize public education program messaging Report on industry efforts to divert EPS foodservice

Q2 2012	Select Litter Survey consulted Roll out public education program with benchmarks for outreach Report on industry efforts to divert EPS foodservice
Q3 2012	Conduct litter survey Continue public education program – report benchmarks Report on industry efforts to divert EPS foodservice
Q4 2012	Litter survey results Develop plan to address hotspots identified in the County unincorporated Continue public education program – report benchmarks Report on industry efforts to divert EPS foodservice
Q1 2013	Working group discuss litter survey results Report on steps to address hotspots identified in the County unincorporated Continue public education program – report benchmarks Report on industry efforts to divert EPS foodservice
Q2 2013	Prepare for follow up litter survey Report on steps to address hotspots identified in the County unincorporated Continue public education program – report benchmarks Report on industry efforts to divert EPS foodservice
Q3 2013	Conduct follow up litter survey Report on steps to address hotspots identified in the County unincorporated Continue public education program – report benchmarks Report on industry efforts to divert EPS foodservice
Q4 2013	Follow up litter survey results First annual report on all efforts
Q1 2014	Litter survey results Review of efforts and discuss any change in approach

Industry commitment to support Comprehensive Program at the County

- PFPG will deposit $150,000 in to an escrow account for 18 month initial program (Jan 2102 - June 30, 2013) to support the County working group's Comprehensive Program recommendation to support sustainable programs to reduce litter and increase recycling. This money shall be used by the County at the working group's direction to assist in the funding of activities to address EPS litter including - a litter characterization survey, litter collection and management, clean ups, recycling and/or enforcement. We will then assess our progress/investment in June 2013 with LA County regarding these programs.

- PFPG will direct industry's contributions to Keep California Beautiful to implement its $1 million anti-littering public education program in Los Angeles County.

- PFPG and CRA will develop a joint program to provide outreach to the 1500 plus restaurants in Los Angeles County with a targeted public education campaign focused on reducing EPS and foodservice litter and promoting recycling of EPS and other foodservice materials as appropriate. This outreach will be quantified for the working group. Approximate cost of this program for 18 months is estimated to be over $50,000.

- PFPG and CRA will also promote this public education campaign through business, civic and community organizations and partners throughout LA County, This outreach will be quantified for the working group. Approximate cost of this program for 18 months is estimated to be over $50,000.

- PFPG/ACC will continue its financial support of local non-profit groups including FoLAR, Los Angeles Conservation Corp River Corp Program, Keep Los Angeles Beautiful in their education and clean up efforts during this 18 month period. PFPG has supported these organizations with more than $450,000 over the last five years. Support for these programs in 2012 is estimated to be $55,000.

- PFPG will support and promote voluntary programs to manage EPS products at the end of life – including take back, recycling, education of customers and end users and promotion of material collection via using recycled materials in new products – and report these efforts to the working group.

From: Samantha Martinez [SMartinez@KindelGagan.com]
Sent: Thursday, November 17, 2011 3:54 PM
To: Chong, Suk; Skye, Coby; Gemeniano, Nilda
Cc: Samantha Martinez
Subject: Industry commitment toward Comprehensive Program at the County 11 17
Attachments: Industry commitment toward Comprehensive Program at the County 11 17.doc

Here is the outstanding document outlining industry's commitment toward the comprehensive program referred to in my earlier email. It does not include the KCB program as industry does not directly oversee the program, so we felt it wouldn't be appropriate to include that in the list of our commitments. However, it is the intention of PFPG to support and work with KCB and there is already an understanding from KCB and KAB that they will focus efforts and resources via an anti litter education program targeting foodservice packaging litter.
Thanks, Sam

Framework for Industry commitment to support Comprehensive Program at the County

- **Funding to Implement County Working Group Program:** PFPG will donate funds directly to the County to implement the County working group's Comprehensive Program recommendation to support sustainable programs to reduce litter and increase recycling.

    - The donation will be $150,000.
    - Funds will be provided in a lump sum to the County at program initiation.
    - Funds will be used by the County at the working group's direction to assist in the funding of activities to address EPS litter including - a litter characterization survey, litter collection and management, clean ups, recycling and/or enforcement.
    - The program will be 18 months (Jan 2012 – June 2013).

- **Joint Litter Outreach and Education Program to LA Restaurants, Community and Business Groups and Schools:** PFPG and CRA will develop a joint program to provide outreach to restaurants in Los Angeles County with a targeted public education campaign focused on reducing EPS and foodservice litter and promoting recycling of EPS and other foodservice materials as appropriate. PFPG and CRA will also promote this public education campaign through business, civic and community organizations, schools and other partners throughout LA County.

    - The anticipated cost of this program is estimated to be over $75,000.
    - The program will be designed to reach over 1500 restaurants.
    - The program will be designed to reach several thousand groups and individuals
    - The program will be 18 months (Jan 2012 – June 2013).

- **Funding to Local Litter and Conservation Groups:** PFPG/ACC will continue its financial support of local non-profit groups including FoLAR, Los Angeles Conservation Corp River Corp Program, Keep Los Angeles Beautiful in their education and clean up efforts during this 18 month period. PFPG has supported these organizations with more than $450,000 over the last five years.

    - The estimated funding support will be a total of $55,000.
    - The donation period will be for 12 months (2012).

- **Updating Work Group on Innovative Company Programs:** Many of PFPG's member companies have separate, company-specific programs to support and promote voluntary programs to manage EPS products at the end of life – including take back, recycling, education of company customers and end users and promotion of material collection via using recycled materials in new products. PFPG will collect information regarding individual company efforts and report on progress to the working group.