

**CITY OF LOS ANGELES**  
**INTER-DEPARTMENTAL CORRESPONDENCE**

**DATE:** October 26, 2022

**TO:** The Honorable Mitch O'Farrell, Chair  
The Honorable Paul Koretz, Member  
The Honorable Paul Krekorian

**FROM:** Barbara Romero, Director and General Manager   
LA Sanitation and the Environment

**SUBJECT:** **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) NOTICE OF EXEMPTION AND DRAFT ENVIRONMENTAL ANALYSIS FOR THE ZERO WASTE CITY FACILITIES AND EVENTS ON CITY PROPERTY ORDINANCE (COUNCIL FILE # 21-0064)**

On April 27, 2022, the Los Angeles City Council approved the Energy, Climate Change, Environmental Justice, and River Committee (ECCEJR) report, instructing the City Attorney to draft an ordinance for Zero Waste City Facilities and Events on City Property, and for the draft ordinance to come back to ECCEJR Committee, along with the required California Environmental Quality Act (CEQA) analysis (COUNCIL FILE # 21-0064). LASAN is hereby recommending the Los Angeles City Council to:

**RECOMMENDATIONS FOR COUNCIL ACTION:**

1. Following the requirements of the California Environmental Quality Act (CEQA), the City of Los Angeles - LA Sanitation and the Environment has prepared a draft Notice of Exemption (NOE), and accompanying Environmental Analysis report attached thereto, based upon its environmental review of the proposed project: Zero Waste City Facilities and Events on City Property Ordinance (Council File # 21-0064). Staff recommends that City Council make the following determination as its first recommended action before approving the remaining recommended actions that approve the project:
  - a. Determine that the City's actions approving the the Zero Waste City Facilities and Events on City Property Ordinance project are categorically exempt from the California Environmental Quality Act pursuant to State CEQA Guidelines Sections 15301 (Class 1), 15307 (Class 7), and 15308 (Class 8) and that no exceptions to the exemptions under CEQA Guidelines Section 15300.2 exist, including that no unusual circumstances exist that would cause a significant impact on the environment, as more fully described in the Notice of Exemption (NOE) and accompanying Environmental Analysis report submitted by LASAN in the Council File for this action.
2. Approve the Zero Waste City Facilities and Events on City Property Ordinance provided by the City Attorney.
3. Request all Proprietary Departments and their respective Boards to adopt and implement the Zero Waste at City Facilities and Events Ordinance.

4. Direct LASAN to prepare an outreach program to educate City departments and businesses about the Zero Waste City Facilities and Events on City Property Ordinance.
5. Direct all City departments to report back to ECCEJR within 6 months of the adoption of this draft ordinance on their compliance with the Ordinance and their zero waste plan.
6. Request the City Attorney to develop the standardized contract, lease, or event agreement language to confirm with the Zero Waste City Facilities and Events on City Property Ordinance.

## **BACKGROUND**

The Los Angeles City Council and the Mayor have demonstrated strong leadership by approving ordinances that focus on green energy, reducing water consumption, zero waste, and single-use plastics reduction. In addition, the council adopted ordinances that focused on reducing plastics pollution, with measures such as the plastic bag ordinance of 2014, to the more recent plastic straws on request and single-use foodware accessories-on-request ordinances. The City should continue to model zero waste behaviors at all City sponsored events, facilities and parks as directed by Council and Mayor Garcetti Executive Directive 25, "L.A.'s Green New Deal: Leading by Example".

The City's objectives for the ordinance include the following:

- Reducing the volume of solid waste that will be sent to local landfills.
- Minimizing the City's contribution to solid waste streams in support of the City's goal of achieving zero waste by 2050.

## **DISCUSSION**

As analyzed in the attached Draft Environmental Analysis, the ordinance would have substantial environmental benefits. The Ordinance would not result in a significant impact, either direct, indirect, or cumulative. These findings are based on the fact that at City events/facilities, there will be a shift away from disposable foodware and accessories that cannot be composted or recycled due to the ordinance requiring reusable, compostable, or recyclable products. There would also be a reduction in food waste (donation of eligible edible surplus food, composting of food scraps, offering smaller portion options), which would contribute to less material in solid waste landfills from City events/facilities.

### Schedule

The ordinance would be effective for all City contracts and amendments to contracts entered into on or after January 1, 2023.

### Statewide Legislation

In 2011, the Legislature and Governor Brown set a goal of 75 percent recycling, composting, or source reduction of solid waste by 2020, calling for the state and CalRecycle to take a statewide approach to decreasing California's reliance on landfills (AB 341, Chesbro).

The Plastic Pollution Prevention and Packaging Producer Responsibility Act (Senate Bill 54) was passed in June 2022 and contains provisions requiring 30% of single-use packaging and plastic single-use food service ware be recycled beginning January 1, 2028; at least 40% be recycled by January 1, 2030; and at least 65% be recycled by January 1, 2032. The Act also requires a 25% source reduction for single-use packaging and plastics by January 1, 2032.

#### Education and Outreach

LASAN has met with City Departments and also hosted two virtual workshops to provide an overview of the proposed ordinance, and obtain feedback on the proposed ordinance. LASAN has also sent a survey to City Departments to obtain feedback on the proposed ordinance.

Upon Council approval of the draft ordinance, LASAN will conduct further education and outreach. Because the draft ordinance applies to the entire City of Los Angeles, LASAN plans to send informational emails to all City employees; conferring/meeting with City Departments that lease space to food/beverage facilities and/or permit/host/organize/coordinate events on City property at which vendors provide food and beverages, so that these City Departments can revise their leases and event agreements/guidelines/policies, as necessary or applicable, to conform with the Zero Waste City Facilities and Events on City Property Ordinance.

# Notice of Exemption

## Appendix E

**To:** Office of Planning and Research  
P.O. Box 3044, Room 113  
Sacramento, CA 95812-3044

County Clerk

County of: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**From:** (Public Agency): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Address)

Project Title: \_\_\_\_\_

Project Applicant: \_\_\_\_\_

Project Location - Specific:

Project Location - City: \_\_\_\_\_ Project Location - County: \_\_\_\_\_

Description of Nature, Purpose and Beneficiaries of Project:

Name of Public Agency Approving Project: \_\_\_\_\_

Name of Person or Agency Carrying Out Project: \_\_\_\_\_

Exempt Status: **(check one):**

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number: \_\_\_\_\_
- Statutory Exemptions. State code number: \_\_\_\_\_

Reasons why project is exempt:

Lead Agency

Contact Person: \_\_\_\_\_ Area Code/Telephone/Extension: \_\_\_\_\_

**If filed by applicant:**

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?    Yes    No

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Title: \_\_\_\_\_

Signed by Lead Agency      Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.  
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: \_\_\_\_\_

# **Environmental Analysis for Zero Waste at City Facilities and City Events Ordinance Notice of Exemption**

**October 2022**

**Lead Agency:**

City of Los Angeles

LA Sanitation and Environment

Barbara Romero, Director and General Manager

Alex Helou, Assistant General Manager

**Consultant to Lead Agency:**

Catalyst Environmental Solutions Corporation

## SECTION 1 Project Description

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The proposed project is a City of Los Angeles City Council ordinance adding Article 27 of Chapter 1, Division 10 of the Los Angeles Administrative Code. The ordinance would curtail the production of solid waste during City-sponsored events and at City-owned facilities by reducing food waste, preventing the usage of non-recyclable foodware and other non-recyclable materials, and promoting the use of reusable and/or recyclable or compostable materials. The ordinance would apply to all City departments as well as contractors that operate at City facilities and events on City property. Mandatory provisions of the ordinance are summarized below:

### – Food Waste Reduction

- Contractors would be required to donate eligible surplus edible food to a food rescue organization and would not be allowed to dispose of any surplus edible food unless donations are not permitted under applicable laws and regulations.
- Contractors would be required to place pre-consumer and post-consumer food scraps be placed into designated collection bins as provided by the City or a private waste management services provider for proper recycling. Contractors would be encouraged to utilize all portions of foods that they prepare, such as vegetable and fruit foliage, rather than disposing these items.
- Contractors would be required to offer half portions, child portions, and a la carte options and avoid garnishes that are not commonly eaten.

### – Reusable Foodware and Foodware Accessories

- Contractors would be required to use only recyclable or compostable foodware for to-go service.
- Contractors would be prohibited from providing disposable foodware for dine-in meal service or catered service.
- For all meal services, Contractors would be required to dispense or serve beverages in reusable or recyclable cups, or in recyclable bottles or in cans made of glass, metal, or recyclable plastic. No single-use/disposable beverage cups would be allowed.
- Contractors would be required to allow customers to provide their own reusable food containers, and offer a discount to customers that provide their own foodware if Contractors charge for their food and beverages.
- Contractors would not be allowed to provide water in plastic bottles or in disposable cups and would be required to provide hydration or bottle refill stations.
- The ordinance would prohibit Contractors from using EPS products.<sup>1</sup>
- Contractors would be required to serve condiments in reusable dispensers and for dine-in meals or catered services, provide only reusable napkins and tablecloths. Contractors would only be allowed to provide disposable napkins for take-out/to-go meals if the napkins are unbleached and contain a minimum of 30% post-consumer recycled content.

### – Other Waste Reduction

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<sup>1</sup> As EPS is already prohibited under another ordinance, adopting this ordinance does not result in any new impacts related to EPS regulation because EPS regulations in this ordinance are provided to ensure consistency with the existing prohibition.

- The ordinance would require that Contractors equip any restrooms accessible to customers with electric hand dryers, to the extent feasible, and by no later than 2025. If the City provides composting or other processing of used restroom paper towels, used paper towels shall be deposited into designated collection bins, or delivered to designated sites, for composting consistent with the Rules and Procedures. Hand soap would be provided in refillable containers, and disposable paper toilet seat covers would be prohibited.
- All informational literature (e.g., brochures, flyers) printed on paper distributed at community events or catered events would be required to contain a minimum of 30% post-consumer recycled content and display text presenting that information.
- All promotional items given away at community or catered events would have to be functional and not made of plastic or any synthetic fabric.
- Contractors who are not “stores” as defined by California Public Resources Code section 42280 or any successor provision would be prohibited from providing customers with plastic bags, or bags that are made wholly or partially of synthetic fabrics, including recycled PET plastic.

– **Additional Provisions**

- Contractors must offer a recycling collection program (e.g., recycling bins and foodwaste bins) identical to the City’s curbside residential and City facilities recycling programs as specified in the Rules and Procedures.
- Contractors would be required to display information or signage about zero waste measures as specified in the ordinance, as well as appropriate use signage at the solid waste collection bins.

## SECTION 2 Project Objectives

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The City's objectives for the proposed project include the following:

- Reducing the volume of solid waste that will be sent to local landfills.
- Minimizing the City’s contribution to solid waste streams in support of the City’s goal of achieving zero waste by 2050.

## SECTION 3 Project Location

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The proposed ordinance would apply to City events that occur on City property and City facilities that are located within the City of Los Angeles, which encompasses approximately 469 square miles, stretching from the Angeles National Forest to the north to the Pacific Ocean to the south. Because the ordinance would only affect City facilities and City events, the project would only impact a small percentage of the area of the City. Figure 1 shows a map of the project area.

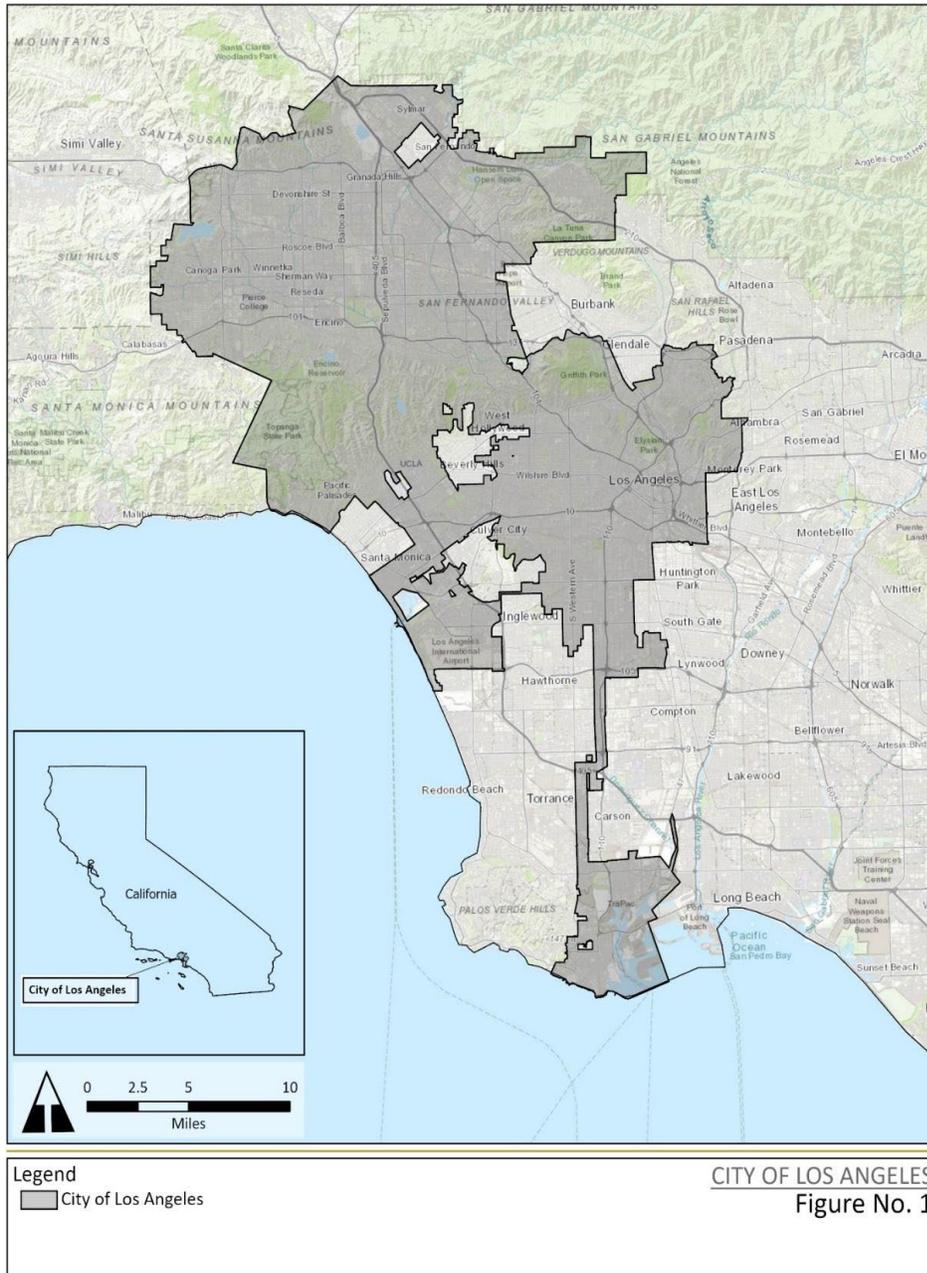


Figure 1. The Project Location: City of Los Angeles

## SECTION 4 Basis for Categorical Exemption(s)

The California Environmental Quality Act (CEQA) Guidelines Section 15300, et seq. (California Code of Regulations, Title 14) provide a list of classes of projects that are exempt from CEQA. Three specific classes apply to this ordinance:

- CEQA Guidelines Section 15301 (i.e., Class 1) provides an exemption from environmental review for “the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use.” This exemption includes “Interior or exterior alterations involving such things as interior partitions, plumbing, and electrical conveyances.”
- CEQA Guidelines Section 15307 (i.e., Class 7) provides an exemption from environmental review for "actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Examples include but are not limited to wildlife preservation activities of the State Department of Fish and Game. Construction activities are not included in this exemption."
- CEQA Guidelines Section 15308 (i.e., Class 8) provides an exemption from environmental review for "actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and relaxation of standards allowing environmental degradation are not included in this exemption."

Class 1 Categorical Exemption applies to this project because it would require the installation of hand dryers within City facilities. There is also the potential for Contractors or the City to install washing facilities (dishwashing for reusable foodware or laundry for reusable linens) within existing facilities. Both installations would be minor alterations to the interior of an existing facility and as discussed below in the No Exceptions Apply section, none of the exceptions to the use of the Categorical Exemptions apply to the project.

Class 7 and Class 8 Categorical Exemptions apply to this project for the following reasons:

- By the proposed ordinance as authorized by the City Charter, the City is proposing to exercise its regulatory powers for the purpose of protecting natural resources and the environment, and therefore meets the definition of a "regulatory agency".
- As discussed below in the No Significant Impacts section, the ordinance would maintain, enhance, or protect a natural resource and the environment.
- As discussed below in the No Significant Impacts section, there are no construction activities authorized by the ordinance either directly or indirectly, and the ordinance would not allow environmental degradation.
- As discussed below in the No Exceptions Apply section, none of the exceptions to the use of these classes of Categorical Exemptions apply to the project.

## SECTION 5 No Exceptions for Categorical Exemptions Apply

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In applying the categorical exemptions, the City must consider if any exceptions apply, as defined in the CEQA Guidelines, Section 15300.2, and summarized in the following:

1. The project site is environmentally sensitive as defined by the project's location. A project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant;
2. The project and successive projects of the same type in the same place will result in cumulative impacts;
3. There are "unusual circumstances" creating the reasonable possibility of significant effects;
4. The project may result in damage to scenic resources, including, but not limited to, trees, historic buildings, rock, outcroppings, or similar resources, within an officially designated scenic highway, except with respect to improvements required as mitigation for projects for which negative declarations or EIRs have been prepared;
5. The project is located on a site that the Department of Toxic Substances Control and the Secretary of the Environmental Protection have identified, pursuant to Government Code section 65962.5, as being affected by hazardous wastes or clean-up problems; or
6. The project may cause a substantial adverse change in the significance of an historical resource.

As described in the following, no exceptions to application of a categorical exemption apply, and therefore Class 1, Class 7, and Class 8 are appropriate.

### 5.1 No impact on sensitive environments.

CEQA Guidelines Section 15300.2(a) state the following:

“(a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located -- a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. These classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.”

The exception to categorical exemptions under CEQA Guidelines Section 15300.2(a) of projects in sensitive environments does not apply to the ordinance, because it does not apply to Class 1, 7, and 8 categorical exemptions.

### 5.2 No cumulative impact.

CEQA Guidelines Section 15300.2(b) state the following:

“(b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.”

The ordinance would not lead to significant impacts, and where there are impacts, they are beneficial. Therefore, the exception to categorical exemptions under CEQA Guidelines Section 15300.2(b) of successive projects of the same type in the same place over time does not apply to the ordinance.

### 5.3 No Unusual Circumstances

The ordinance would not lead to a significant impact due to unusual circumstances. None of the direct or indirect impacts of the ordinance described in this section would result in an unusual scope or magnitude of impacts, nor would they occur in sensitive locations such that they would be considered unusual. The proposed ordinance would require that Contractors replace paper towel dispensers with electric hand dryers in City facility restrooms under their control to the extent feasible. Replacement of hand drying equipment would occur within the interior of existing facilities. As a minor alteration to an existing facility involving negligible or no expansion of use, the proposed ordinance would qualify for a categorical exemption under CEQA Guidelines Section 15301 and none of the exceptions to the categorical exemptions identified under CEQA Guidelines Section 15300.2 would apply.

In addition, there is no unusual circumstance related to this ordinance because it is the usual type of regulation that cities and counties adopt to protect the environment, which fits the Class 7 and 8 exemptions. The ordinance is in compliance with and builds upon AB 1276, expanding the regulation of disposable single-use foodware and foodware accessories. Further, the proposed ordinance involves procedures for protection of the environment by reducing plastic and other solid wastes from waste streams and throughout the natural environment. The California State Legislature has recognized that littered plastic products have caused and continue to cause significant environmental harm and have burdened local governments with significant environmental cleanup costs, most recently with the passage of Senate Bill 54.

In particular, single-use plastic foodware accounts for a tremendous amount of the litter that blights beaches and pollutes waterways. Most of the litter that ends up in beaches and waterways consists of single-use plastic, and a significant portion of that waste consists of single-use plastic foodware such as food wrappers, plastic beverage bottles, plastic bottle caps, plastic/foam carryout containers, and drinking straws, as well as plastic bags.<sup>2</sup> When single-use plastic foodware is properly disposed of, it takes up valuable landfill space, and can take decades or centuries to break down.<sup>3</sup> Replacing single-use foodware with reusable foodware provides an environmental benefit compared with other types of foodware.<sup>4</sup> By prohibiting the use of single-use, disposable foodware and EPS products by Contractors at City events and facilities, the proposed ordinance would protect the environment and natural resources by reducing the amount of plastic waste that litters the environment, makes its way to the oceans and other bodies of water, and causes harm to marine life and to human health. The proposed ordinance would also reduce the amount of single-use plastic that takes up space in landfills without breaking down. Accordingly, the ordinance is also consistent with the US Environmental Protection Agency's waste management hierarchy, in which source reduction is the environmentally preferred method of

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<sup>2</sup> NOAA. 2022. Marine Debris Program. Available online at: <https://marinedebris.noaa.gov/what-marine-debris/plastic#:~:text=The%20NOAA%20Marine%20Debris%20Program,to%20common%20marine%20debris%20items>. Accessed October 12, 2022.

<sup>3</sup> Jahn, A., Kier, B., & Stickel, B.H., (2013). Waste In Our Water: The Annual Cost to California Communities of Reducing Litter That Pollutes Our Waterways. Kier Associates. Available online at: [https://www.nrdc.org/sites/default/files/oce\\_13082701a.pdf](https://www.nrdc.org/sites/default/files/oce_13082701a.pdf). Accessed October 12, 2022.

<sup>4</sup> Gordan, Mariam. No Date. Re-Use Wins – The Environmental, Economic, and Business Case for Transitioning from Single-Use to Reuse in Food Service. Available online at: [https://static1.squarespace.com/static/5f218f677f1fdb38f06cebcb/t/60c9f274b430d0542e1b40dd/1623847549168/Reuse+Wins\\_Executive+Summary.pdf](https://static1.squarespace.com/static/5f218f677f1fdb38f06cebcb/t/60c9f274b430d0542e1b40dd/1623847549168/Reuse+Wins_Executive+Summary.pdf). Accessed October 12, 2022.

managing waste<sup>5</sup> (Figure 2). By requiring the donation of surplus food, recycling of food scraps, and offering of smaller portion sizes, the proposed ordinance is also consistent with the US EPA's food recovery hierarchy, in which source reduction and feeding hungry people are the two most preferred methods for reducing food waste (Figure 3)<sup>6</sup>. Therefore, there are no unusual circumstances that would lead to a significant impact due to the ordinance.



Figure 2. US EPA Waste Management Hierarchy

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<sup>5</sup> United States Environmental Protection Agency (USEPA). 2021. National Overview: Facts and Figures on Materials, Wastes and Recycling. Available online at: <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>.

<sup>6</sup> United States Environmental Protection Agency (USEPA). 2021. Sustainable Management of Food, Food Recovery Hierarchy. Available online at: <https://www.epa.gov/sustainable-management-food/food-recovery-hierarchy>.

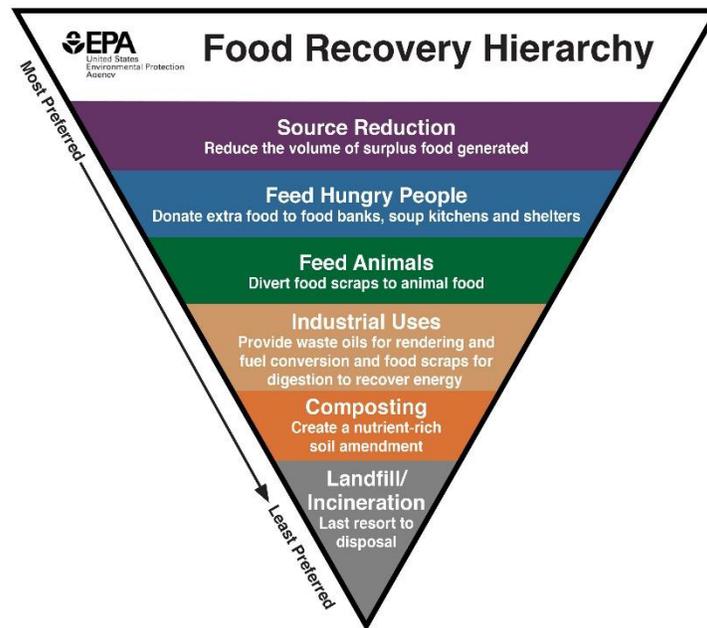


Figure 3. US EPA Food Recovery Hierarchy

### 5.3.1 No Significant Impacts

The Zero Waste at City Facilities and Events ordinance would not result in a significant impact, either direct, indirect, or cumulative. This section provides the factual basis for these findings.

The analysis is based on the fact that at City facilities and events, there would be a shift away from disposable foodware and accessories that cannot be composted or recycled due to the ordinance requiring reusable, compostable, or recyclable products. Substitute products may include those made from various materials including the following:

- Certain plastics: #1, #2, and #5;
- Paper foodware that is not lined/coated with wax, plastic, foil, or any other material that would make it non-compostable;
- Wood, bamboo;
- Metals, including aluminum and tin;
- Glass;
- Cloth/linen (for napkins and tablecloths); and
- Durable/reusable products made from a variety of materials including durable plastics, metals (e.g., stainless steel), ceramic, wood, stoneware, and glass.

Because the use of a particular substitute product would be determined on a case-by-case basis by individual contractors and consumers based on a variety of factors, it is not possible to forecast the

exact substitution behavior caused by the ordinance. Substitution behavior would be impacted by the following factors:

- Specific product (foodware, foodware accessory, etc.) to be replaced;
- Outreach and education to Contractors and consumers;
- Availability of and ease of access to specific replacement products;
- Cost; and
- Systems available to promote use of durable goods.

Therefore, a life-cycle analysis of the potential substitute products is not warranted for the proposed ordinance as the basis of the calculations would be highly speculative (e.g., manufacturing processes for both disposable plastics and substitute products differ by manufacturing plants, grade of product, origin of the raw materials, regulations/permits of facilities outside City limits) and beyond the influence of the City (i.e., the City does not control where manufacturers purchase their raw materials, or how far they must be transported). Further, it is currently unknown what materials would be used for alternative products. This analysis is a good faith effort to provide comparisons between the environmental impacts of disposable products and the potential impacts of substitution products and/or methods (e.g., replacing paper towel dispensers with electric hand dryers, washing reusable linens and napkins) using the best available evidence and substantiated research. Additionally, the ordinance applies to only City facilities and events on City property; as such, the potential impacts of the proposed ordinance are relatively small.

This analysis also assumes the reduction in food waste (donation of eligible edible surplus food, composting of food scraps, offering smaller portion options) would contribute to less material in solid waste landfills.

Based on this analysis, the proposed ordinance would not have a significant adverse impact, directly, indirectly, or cumulatively, on the environment.

#### 5.3.1.1 Aesthetics

Litter has historically presented a challenge to environmental management. Trash and debris that are not properly disposed of are an unsightly presence. In California, disposable foodware accessories such as food wrappers, containers, cups, and plastic bags are among the most commonly littered. Even when disposable foodware accessories are properly disposed of, they can easily become litter because they are light-weight and can blow out of waste and recycling bins, transport containers, and landfills. Food containers and packaging materials are easily blown into storm drains, carried downstream in waterways, entangled in bushes, tossed along freeways, and washed up on beaches. A 1998 study in Orange County, California, quantified the composition of beach debris and found that three categories of plastics, including pre-production plastic pellets, foamed plastics, and hard plastics accounted for 99% of the total abundance. It found that of the whole plastic items, the most abundant were food and beverage items.<sup>7</sup> Caltrans conducted a study from 1998-2000 on litter discharged at 24 freeway

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<sup>7</sup> Moore, S.L., Gregorio, D., Carreon, M., Weisberg, S.B., and M.K. Leecaster. 2001. Composition and distribution of beach debris in Orange County, California. *Marine Pollution Bulletin* 42(3):241-245.

catchments throughout Los Angeles and found that about half of freeway stormwater litter consisted of paper, plastic, or EPS, with the category of moldable plastic making up the largest fraction of total litter captured by weight and volume<sup>8</sup>. Another study conducted in the Los Angeles River in 2004 found that 83% of litter collected from the river (by count) was foamed plastics (inclusive of EPS).<sup>9</sup>

The categories of food wrappers/containers, caps/lids, cups/plates/utensils, and straws/stirrers were the second, third, fifth, and sixth most common items, respectively, found on beaches during the California Coastal Commission annual "Cleanup Day" between 1988 and 2020, comprising almost 30% of waste items collected over that period.<sup>10</sup> In addition, the category for bags was in the top ten and accounted for approximately 7% of waste items collected, with plastic bags making up over 90% of the bags found. In 2020, food wrappers were the second most collected items during beach clean-ups conducted by the International Coastal Cleanup in California. Plastic bottle caps, plastic beverage bottles, plastic grocery bags, and straws/stirrers were the fourth through seventh most commonly collected items.<sup>11</sup> In addition to foodware waste, discarded food at City events is often left behind and can attract unwanted and unsanitary bugs, rodents, birds, and other scavengers. Litter found around our communities, especially in public recreation areas like the beach, is detrimental to the aesthetic value of the City's shared spaces.<sup>12</sup>

In addition to foodware and food waste, promotional items that Contractors hand out at City events can be improperly discarded and end up as litter or in landfills if the items are not functional. This ordinance would require all promotional items given away at community or catered events to be functional and not made of plastic or any synthetic fabric. Functional items may include rulers, food scrapers, and reusable shopping bags. These limitations could reduce the amount of promotional items that are left behind, end up as litter, or are thrown out. According to a study of various venues and events in California, the average volume of waste generated per visitor per day was 2.44 pounds.<sup>13</sup>

Implementation of the Zero Waste at City Facilities and Events ordinance would reduce the volume of solid waste generated (including food waste, disposable plastics, and non-recyclable packaging) and therefore disposed of and littered in the City. Therefore, the ordinance would result in an aesthetic improvement, and the ordinance would result in no impact or a beneficial impact to aesthetics.

#### 5.3.1.2 Air Quality

The use of disposable foodware and accessories can have indirect effects on air quality through emissions associated with its production and through emissions associated with its transport (both

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<sup>8</sup> Lippner, G., J. Johnston, S. Combs, K. Walter, D. Marx. 2000. Results of the Caltrans Litter Management Pilot Study.

<sup>9</sup> Moore C.J., G.L.Lattin, A.F. Zellers. 2005. Working Our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California.

<sup>10</sup> California Coastal Commission. 2020. Statewide Results for Cleanups between 1988 and 2020. <https://www.coastal.ca.gov/publiced/ccd/history.html>. Accessed August 4, 2022.

<sup>11</sup> Ocean Conservancy. 2021. We Clean On. 2021 Report. Available at: [https://oceanconservancy.org/wp-content/uploads/2021/09/2020-ICC-Report\\_Web\\_FINAL-0909.pdf](https://oceanconservancy.org/wp-content/uploads/2021/09/2020-ICC-Report_Web_FINAL-0909.pdf). Accessed August 8, 2022.

<sup>12</sup> Ibid.

<sup>13</sup> CalRecycle. 2022a. Venues and Events: Reducing Waste. Available at: <https://calrecycle.ca.gov/venues/>. Accessed August 26, 2022.

delivery for use and as part of disposal). Large-scale production of plastics for use in consumer goods produces emissions of air pollutants including sulfur oxides, nitrous oxides, methanol, ethylene oxide, and volatile organic compounds.<sup>14</sup> Additionally, transport, and disposal of disposable foodware accessories produce air pollutant emissions, including volatile organic compounds, nitrous oxides, carbon monoxide, and particulate matter from fuel combustion.<sup>15</sup>

The ordinance would lead to an increase in the manufacture of substitute products from alternative materials. At those facility locations where disposable products are currently produced, there would be a related decrease in emissions associated with decreased production. Similar to plastic production, the manufacturing process and emissions associated with the manufacture of alternative products such as paper, plant-based compostable materials, or other durable plastic products can vary based on the manufacturing plant and origin of the raw materials anywhere in the world. By eliminating the use of disposable plastic as part of zero waste at City facilities and events, the ordinance would result in less manufacturing, as substitute materials could include reusable packaging and containers. This would reduce air emissions associated with manufacturing as well as truck trips to landfills. Substitute materials that are recyclable and/or compostable but not reusable could also increase under this ordinance. It is assumed that these materials would have similar transportation needs as single-use plastics, to arrive at composting and recycling centers, but would reduce materials transported to landfills. Thus, these replacement products would not reduce air quality emissions associated with transportation to disposal facilities.

By reducing food waste through food donations, recycling food scraps, and offering various meal portion sizes, emissions associated with transport to landfills would be reduced. Transport to donation facilities or composting facilities would be needed, but overall, there would be less food waste that requires transport under the Zero Waste at City Facilities and Events ordinance.

Any local manufacturing facilities that may increase production of substitute products would continue to operate under permits from the South Coast Air Quality Management District, ensuring compliance with both federal and state air quality regulations. Therefore, the proposed ordinance would not result in significant impacts to air quality.

### 5.3.1.3 Biological Resources

Plastic waste generated from human activity has the potential to threaten biological resources, particularly when waste is improperly disposed. While plastic litter can contaminate terrestrial, freshwater, and marine environments, most available data on plastic pollution comes from marine environments. A discussion of plastic impacts to the food chain and water quality is included in Section 5.3.1.7 below.

Approximately eight million tons of plastic waste ends up in the ocean every year, either through intentional dumping or accidental reasons, and the U.S. is one of the top 20 contributors to plastic

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<sup>14</sup> Ecology Center. N.d. PTF: Environmental Impacts. Available at: <https://ecologycenter.org/plastics/ptf/report3/>. Accessed March 22, 2021.

<sup>15</sup> USEPA. 2022. Criteria Air Pollutants. Available at: <https://www.epa.gov/criteria-air-pollutants#self>. Accessed August 8, 2022.

pollution in the world.<sup>16</sup> Plastic pollution has been found in a range of marine environments including the seafloor, surface water, the water column, and along beaches. Several litter studies have found foamed plastics to make up the majority of particles in the total litter stream, with plastic particles less than 5 millimeters in size more abundant than larger debris.<sup>17</sup> Because disposable plastics persist in the natural environment and are also easily broken into small pieces, they are very difficult to contain or collect. Plastics do not biodegrade, but instead present a threat to marine wildlife because they break down to microplastics (i.e., plastic pieces smaller than 5 millimeters), which marine wildlife, including special status turtles, mammals, birds, and fish, may confuse with food and ingest, either directly or through prey items. Exposure to plastics, and subsequently microplastics, can have harmful effects on wildlife, including transport of toxicants through the food chain, decreased reproduction, starvation, and death.<sup>18 19 20</sup> Additionally, floating marine debris is known to facilitate “rafting”, the process by which organisms are transported across vast distances to new ecosystems. Transport of species can result in biodiversity impacts when a new species proves to be invasive.<sup>21</sup>

Eliminating the use of disposable plastics at City facilities and events would have a beneficial impact on biological resources. Lower rates of usage would result in less plastic waste entering marine, freshwater, and terrestrial ecosystems. Therefore, the ordinance would have a beneficial impact to biological resources.

#### 5.3.1.4 Energy

Zero waste at City facilities and events would result in energy used to manufacture, transport, and recycle substitute products made of alternative materials as well as eliminate some of the energy use that would have been required for manufacture, transport, disposal, and litter cleanup of disposable plastic products. There are many factors that determine the total energy expenditure during the life cycle of a product. A 2011 study on the life cycle of disposable food products found that by weight, total energy requirements for average polystyrene products were generally lower than for the equivalent number of paperboard products analyzed. The study found that a significant portion of the total energy requirements for each of the products analyzed came from the energy of the material resources (EMR), which is not an expended energy, but the energy value of resources removed from nature and used as

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<sup>16</sup> Ocean Protection Council. 2022. Plastic Pollution. Available at: <https://www.opc.ca.gov/programs-summary/marine-pollution/plastics/>. Accessed June 24, 2022.

<sup>17</sup> Moore, C.J., Lattin, G.L., and A.G. Zellers. 2005. Working our Way Upstream: A Snapshot of Land-Based Contributions of Plastic and Other Trash to Coastal Waters and Beaches of Southern California. Algalita Marine Research Foundation. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.485.8035&rep=rep1&type=pdf>. Accessed June 17, 2022.

<sup>18</sup> USEPA. 2016. State of the Science White Paper A Summary of Literature on the Chemical Toxicity of Plastics Pollution to Aquatic Life and Aquatic-Dependent Wildlife. EPA-822-R-16-009. December.

<sup>19</sup> Sussarellu, R., et al. 2016. Oyster reproduction is affected by exposure to polystyrene microplastics. *Proc. Natl. Acad. Sci.* 113, 2430–2435.

<sup>20</sup> Thompson, R. et al. 2009. Plastics, the environment and human health: current consensus and future trends. *Phil. Trans. R. Soc. B:* 364, 2153–2166.

<sup>21</sup> California Coastal Commission. 2022. The Problem with Marine Debris. Available at: <https://www.coastal.ca.gov/publiced/marinedebris.html>. Accessed June 17, 2022.

material inputs for the product systems (e.g., for plastic, the EMR is associated with fossil fuels while for paperboard the EMR reflects the energy content of harvested trees).<sup>22</sup> The same study also determined that for polystyrene products, over 95 percent of total energy is fossil fuel energy; and for paperboard product systems, fossil energy accounts for 28 to 37 percent of the total.<sup>23</sup> For reusable materials, the main energy impacts occur during washing.<sup>24</sup> An analysis of reusable cups found washing to be the most significant contributor to life cycle environmental impacts, followed by manufacturing. The energy benefits of reusable materials increase as older, inefficient dishwashers are replaced and renewable energy sources increase in regional electricity grid mixes.<sup>25</sup> A literature review found that while comparative life cycle studies of single-use versus reusable clamshells, plates, bowls, and flatware have been less detailed than those for cups and water systems, they generally reported low usage levels (breakeven points) beyond which reusables have lower overall energy usage than single-use products.<sup>26</sup> Contractors would be responsible for washing their reusable foodware and foodware accessories items at their own facilities or at washing stations provided by the City.

The Zero Waste at City Facilities and Events ordinance also requires that Contractors equip any City restrooms under their control and accessible to customers with electric hand dryers, to the extent feasible. While this could be an additional source of energy use at City facilities, electric dryer use would replace the use of paper products, which require energy to manufacture and transport prior to use and after use. A study comparing the life cycle environmental impact of several hand drying methods, including high-speed dryers, standard dryers, cotton roll towels, and paper towels (0% and 100% recycled) found that the high-speed dryers had the lowest impact for cumulative energy demand.<sup>27</sup> The standard dryer ranked higher than cotton roll towels and 100% recycled paper towels, and lower than 0% recycled paper towels for energy demand.<sup>28</sup> Table 1 summarizes the associated LCA non-renewable energy consumption of each hand drying option (under the assumption that electric hand dryers have a 5-year life span over which they dry 350,000 pairs of hands).

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<sup>22</sup> Franklin Associates. 2011. Life cycle inventory of foam polystyrene, paper-based, and PLA foodservice products. Prepared for the Plastic Foodservice Packaging Group. February 4, 2011. Available at: [https://www.plasticfoodservicefacts.com/wp-content/uploads/2017/12/Peer\\_Reviewed\\_Foodservice\\_LCA\\_Study-2011.pdf](https://www.plasticfoodservicefacts.com/wp-content/uploads/2017/12/Peer_Reviewed_Foodservice_LCA_Study-2011.pdf). Accessed June 22, 2022.

<sup>23</sup> Ibid.

<sup>24</sup> Upstream. N.d. Reuse wins, the environmental, economic, and business case for transitioning from single-use to reuse in food service. Available at: [https://www.eesi.org/files/Reuse\\_Wins\\_Report\\_Final.pdf](https://www.eesi.org/files/Reuse_Wins_Report_Final.pdf)

<sup>25</sup> United Nations Environment Programme. 2021. Single-use beverage cups and their alternatives - Recommendations from Life Cycle Assessments.

<sup>26</sup> Clean Water Fund. 2017. Literature Review & Inventory Greenhouse Gas Impacts of Disposable vs Reusable Foodservice Products. Available at: [https://www.cleanwateraction.org/sites/default/files/CA\\_ReTh\\_LitRvw\\_GHG\\_FINAL\\_0.pdf](https://www.cleanwateraction.org/sites/default/files/CA_ReTh_LitRvw_GHG_FINAL_0.pdf)

<sup>27</sup> Material Systems Laboratory, Massachusetts Institute of Technology. 2011. Life Cycle Assessment of Hand Drying Systems.

<sup>28</sup> Ibid.

**Table 1. Non-renewable energy associated with LCA of high-speed dryers, standard dryers, cotton roll towels, and paper towels (kilojoule [kJ]).<sup>29</sup>**

Airblade Aluminum	Airblade Plastic	XLERATOR	Standard Dryer	Cotton Roll Towels	Paper Towels (Virgin Materials)	Paper Towels (100% Post-Consumer Materials)
72.1	69.2	130	285	171	245	247

High-speed hand dryers are much faster than standard hand dryers and also more energy efficient, making high-speed hand dryers generally preferred over standard hand dryers. Therefore, it is reasonable to assume that standard hand dryers would likely not be selected for City facilities. Also, as shown in Table 1, high-speed electric hand dryers would consume 40 to 70 percent less non-renewable energy over their lifetime than the equivalent hand-drying capacity of paper towels (i.e., 350,000 pairs of hands). Paper towel dispensers currently installed at City facilities would be removed and discarded. The expected lifetime of a paper towel dispenser would be approximately 7 to 10 years for average use.<sup>30</sup> It is currently unknown what the replacement schedule is for each paper towel dispenser that would be replaced with an electric hand dryer, but it can be assumed that every existing paper towel dispenser would be removed and discarded within 10 years whether or not this ordinance is adopted. As such, replacing existing paper towel dispensers with electric dispensers would not increase energy consumption associated with disposal of existing paper towel dispensers. Accordingly, replacing paper towels with high-speed hand dryers would result in an overall reduction in energy consumption.

When food is wasted, the energy resources used to produce, process, transport, prepare, and store it, are also wasted.<sup>31</sup> The Zero Waste at City Facilities and Events ordinance would reduce the volume of food waste generated and therefore would limit wasted energy inputs.

The substitute products to be used as a result of the ordinance would include reusable materials that would require washing. It is anticipated that Contractors would utilize their own existing facilities or City facilities to implement efficient washing procedures. Therefore, the ordinance would have no significant impact on energy.

### 5.3.1.5 Greenhouse Gases

The use of disposable foodware and related disposable plastics can indirectly impact greenhouse gases (GHGs) through their production and transport. Many single use foodware accessories are made from polypropylene or polystyrene. Polypropylene emits 1.55 MT CO<sub>2</sub>e for each ton of material produced,

<sup>29</sup> Ibid.

<sup>30</sup> Carvalho, Monica; Abrahao, Raphael. 2017. Environmental and Economic Perspectives in the Analysis of Two Options for Hand Drying at an University Campus. Available online at: Environmental and Economic Perspectives in the Analysis of Two Options for Hand Drying At an University Campus. Available at: <https://www.cascadia.edu/discover/about/sustainability/documents/Hand%20dryers%20vs%20paper%20towels.pdf>. Accessed October 13, 2022.

<sup>31</sup> U.S. Department of Agriculture. 2022. Why should we care about food waste? Available at: <https://www.usda.gov/foodlossandwaste/why#:~:text=According%20the%20U.S.%20Environmental%20Protection,methane%2C%20a%20powerful%20greenhouse%20gas>. Accessed August 25, 2022.

and polystyrene emits 2.5 MT CO<sub>2</sub>e for each ton produced.<sup>32</sup> Additionally, transport and disposal of disposable food accessories produce GHG emissions from fuel combustion.

In the United States, food waste is the largest category of material placed in municipal landfills, where it emits methane. Municipal solid waste landfills are the third-largest source of human-related methane emissions in the United States.<sup>33</sup> California passed Senate Bill 1383 in September 2016 and regulations took effect January 2022.<sup>34</sup> The law requires cities to divert organic waste from landfills by redirecting surplus edible food to be donated to people in need, and diverting the remainder to composting or anaerobic digestion.<sup>35</sup> LASAN has implemented a food waste recycling program for many customers to help meet these mandates. To divert from landfilling, LASAN transports food waste to a composting facility where it can be converted to nutrient-rich soil amendments used in farming applications.<sup>36</sup> LASAN is also currently investigating the option of “in-sink” food waste disposal with a focus on diverting food waste from landfills by using the garbage disposal and the sewer system plant’s anaerobic digesters to convert food waste into biogas, which is then utilized to create renewable energy. By recycling food waste from City facilities and events, organic waste would be diverted from landfills, which would reduce methane sources.<sup>37</sup> In addition to diverting food waste from landfills, the ordinance would also help the City meet the requirements of Senate Bill 1383 by requiring donation of surplus food.

The United Nations Food and Agricultural Organization estimated that the carbon footprint of wasted food is equivalent to 3.3 billion tons of CO<sub>2</sub> per year.<sup>38</sup> When food is wasted, the natural resources used to produce, process, transport, prepare, and store it are also wasted; these include land, water, and energy<sup>39</sup>. The Zero Waste at City Facilities and Events ordinance would reduce the volume of food waste

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<sup>32</sup> USEPA. 2015. WARM Version 13. Plastics. March.

<sup>33</sup> U.S. Department of Agriculture. 2022. Why should we care about food waste? Available at: <https://www.usda.gov/foodlossandwaste/why#:~:text=According%20the%20U.S%20Environmental%20Protection,methane%2C%20a%20powerful%20greenhouse%20gas>. Accessed August 25, 2022.

<sup>34</sup> CalRecycle. 2022. Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions General Information. Available at: <https://calrecycle.ca.gov/climate/slcp/#:~:text=In%20September%202016%2C%20Governor%20Brown,various%20sectors%20of%20California's%20economy>. Accessed August 26, 2022.

<sup>35</sup> Los Angeles County Sanitation District. 2022. Food Waste Recycling. <https://www.lacsd.org/services/solid-waste-programs/food-waste-recycling#:~:text=Font%20Size%3A%20Every%20day%2C%204%2C000%20tons%20of%20food,fruit%20and%20vegetables%20from%20grocery%20stores%20and%20restaurants>. Accessed August 25, 2022.

<sup>36</sup> Los Angeles Times. 2022. L.A. is finally separating food waste from trash. Will residents embrace composting? Available at: <https://www.latimes.com/environment/story/2022-08-18/los-angeles-food-waste-composting>. Accessed August 25, 2022.

<sup>37</sup> Methane is developed due to the anaerobic decomposition (lack of oxygen) that takes place in a landfill. Whereas a compost pile decomposes aerobically (with oxygen) producing mainly carbon dioxide. Methane is 26 times more potent than carbon dioxide as a greenhouse gas and is a significant contributor to global greenhouse gas emissions.

<sup>38</sup> Reuters. 2013. A third of food is wasted, making it third-biggest carbon emitter, U.N. says. Available at: <https://www.reuters.com/article/us-food-wastage-idUKBRE98A0E920130911>. Accessed August 25, 2022.

<sup>39</sup> U.S. Department of Agriculture. 2022. Why should we care about food waste? Available at: <https://www.usda.gov/foodlossandwaste/why#:~:text=According%20the%20U.S%20Environmental%20Protection,methane%2C%20a%20powerful%20greenhouse%20gas>. Accessed August 25, 2022.

generated, and therefore its related proportional carbon footprint, by requiring that eligible Contractors donate surplus food, and that all Contractors offer half portions, child portions, and a-la-carte options.

Polystyrene does not decompose to produce methane in landfills, but plastic products also do not sequester carbon. The U.S. EPA has determined that landfilling plastic serves to transfer from one source of carbon (the oil field) to another (the landfill) with no net change in overall carbon stored.<sup>40</sup> A study that investigated the production of hydrocarbon gases from various plastics, including polystyrene and polypropylene, found that when incubated in seawater and exposed to ambient solar radiation for several days, all plastic polymers tested released the GHGs methane and ethylene.<sup>41</sup> Of the plastic types studied, polystyrene produced the second highest amount of both GHGs. The results of this study also indicate that hydrocarbon gas production may continue indefinitely throughout the lifetime of plastics.<sup>42</sup> The Zero Waste at City Facilities and Events ordinance would reduce the amount of disposable plastics that end up as marine debris, and therefore this potential source of GHG would be proportionally reduced as well.

In a meta-analysis of ten life-cycle analysis studies for single use (including paper and various plastics) and reusable beverage cups, the United Nations determined that *“For all types of single-use beverage cups the largest contributor to the environmental impacts is the production of raw materials. Using recycled materials to produce beverage cups reduces fossil fuel resource depletion and climate impact substantially. The end-of-life scenario has a substantial influence on the environmental impacts of single-use beverage cups. In general, the higher the recycling rate the lower the climate impact.”*<sup>43</sup> This analysis concluded that reusable cups have lower climate impact than disposable cups, regardless of material, although the number of reuses to breakeven with disposable cups in terms of climate impact varies with the material used. Most of the studies analyzed determined an environmental breakeven point for climate change and non-renewable energy use ranging from 10 to 140 uses depending on the materials compared, end-of-life assumptions, and washing assumptions. This analysis also noted that consumer behavior plays a large role in determining the environmental impact of a reusable item, because the benefits of these products are contingent on the number of uses.<sup>44</sup> A literature review of GHG impacts found that while comparative life cycle studies of single-use versus reusable clamshells, plates, bowls, and flatware have been less detailed than those for cups and water systems (i.e., bottled water, tap water, and home/office delivery water), they generally reported low usage levels (environmental breakeven points) beyond which reusables have lower overall GHG emissions or energy usage than

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<sup>40</sup> USEPA. 2006. Solid Waste Management and Greenhouse Gases. A Life-Cycle Assessment of Emissions and Sinks. 3<sup>rd</sup> Edition. September 2006. Available: <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=60000AVO.TXT>.

<sup>41</sup> Royer S-J, Ferron S, Wilson ST, Karl DM. 2018. Production of methane and ethylene from plastic in the environment. PLoS ONE 13(8): e0200574. Available at: <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0200574&type=printable>

<sup>42</sup> Ibid.

<sup>43</sup> United Nations Environment Programme. 2021. Single-use beverage cups and their alternatives - Recommendations from Life Cycle Assessments.

<sup>44</sup> Ibid.

single-use products.<sup>45</sup> Improvements in dishwashing energy efficiency and changes in the electrical grid suggest that reusable cups have lower life cycle impacts than disposable cups in many situations.<sup>46</sup>

As a result of the Zero Waste at City Facilities and Events ordinance, reusable materials would be used to replace disposable foodware and accessories, reducing the use of raw materials and reducing climate impacts. The ordinance may result in an increase in the number of people that choose dine-in service, rather than takeaway, due to incentives. This would result in an increase in reusable product use, as cloth napkins and tablecloths are required for dine-in service under the ordinance, further reducing use of raw materials. Any disposable paper napkins provided for takeaway would contain a minimum of 30% post-consumer recycled content (per the requirements of SB 1383). The ordinance would require vendors who distribute informational literature (i.e., brochures, flyers) to use paper that contains a minimum of 30% post-consumer recycled content (per the requirements of SB 1383), reducing use of raw materials as well.

The ordinance also requires that all City-owned facilities are equipped with electric hand dryers in all restrooms. In addition, City event organizers would be required to equip any restrooms that are under their control and accessible to customers with electric hand dryers, to the extent feasible. A study comparing the life cycle environmental impact of various hand drying methods ranked high-speed dryers as having the lowest impact for global warming potential, while the standard dryer ranked higher for global warming potential than cotton roll towels and paper towels.<sup>47</sup> The use stage is the primary driver of dryer system impact, while paper towel system impact is driven by the production stage; therefore, electricity grid mix and use intensity have the largest influence on the global warming potential outcomes for hand dryers.<sup>48</sup> Another study comparing hand dryers to paper towels found that annual CO<sub>2</sub>eq emissions were lower for electric hand dryers than paper towels, when the number of daily uses was greater than five. Previous studies cited in this study noted the global warming potential of hand dryers is approximately 60% lower than paper towels (study evaluated the raw material extraction & refining, manufacturing of semi-finished components for the hand dryer as well as for the dispenser unit, manufacturing of the paper product and corrugated board packaging, assembly of the components into the final finished product systems, transportation of product systems, and their use phase).<sup>49</sup>

Implementation of the Zero Waste at City Facilities and Events ordinance would result in decreased use of disposable food accessories and a reduction in food waste and therefore a reduction in transport and disposal of these items. In turn, this would lead to reductions in GHG emissions from transport and disposal. Thus, the proposed ordinance would have a beneficial impact on GHG emissions.

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<sup>45</sup> Clean Water Fund. 2017. Literature Review & Inventory Greenhouse Gas Impacts of Disposable vs Reusable Foodservice Products. Available at:

[https://www.cleanwateraction.org/sites/default/files/CA\\_ReTh\\_LitRvw\\_GHG\\_FINAL\\_0.pdf](https://www.cleanwateraction.org/sites/default/files/CA_ReTh_LitRvw_GHG_FINAL_0.pdf)

<sup>46</sup> Ibid.

<sup>47</sup> Material Systems Laboratory, Massachusetts Institute of Technology. 2011. Life Cycle Assessment of Hand Drying Systems.

<sup>48</sup> Ibid.

<sup>49</sup> Collier, G., Schiavon, M. & Ragazzi, M. 2021. Environmental and economic sustainability in public contexts: the impact of hand-drying options on waste management, carbon emissions and operating costs. *Environment, Development and Sustainability* 23, 11279–11296. Available at: <https://doi.org/10.1007/s10668-020-01109-x>

The South Coast Air Quality Management District (SCAQMD) does not regulate GHG emissions from specific consumer products. It has published interim CEQA GHG thresholds for stationary/industrial sources (<10,000 MT CO<sub>2</sub>eq/yr). Any increased production of substitute products by local manufacturers would be conducted under the jurisdiction of the SCAQMD and applicable Best Available Control Technology (BACT) for facilities subject to prevention of significant deterioration for GHG established by the USEPA in 40 CFR 52.21 and incorporated by reference in SCAQMD Rule 1714.

Accordingly, the proposed ordinance would result in an estimated overall decrease in GHG emissions. Therefore, the proposed ordinance would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, the ordinance would have no significant impact on GHG emissions.

#### 5.3.1.6 Hazards/Hazardous Waste

Plastic foodware and accessories are generally made of clear or foamed polystyrene<sup>50</sup>, which is made from styrene. Due to the extensive commercial use of styrene, people come into contact with styrene in air, food, water, consumer products, and the built environment. Thermal degradation of styrene polymers also releases styrene into ambient air. Most of the general population has detectable levels of styrene in their biological fluids<sup>51</sup> (e.g., blood, breast milk). The International Agency for Research on Cancer (IARC) has classified styrene as a probable human carcinogen (Group 2A) based on positive associations between exposure to styrene and lymphohematopoietic malignancies as well as sufficient evidence of carcinogenicity in experimental animals.<sup>52</sup> Styrene is also listed by the California Office of Environmental Health and Hazard Assessment (OEHHA) under Proposition 65 as a chemical known to cause cancer.<sup>53</sup>

As noted above, microplastics can accumulate in the aquatic food chain, predominantly in the fatty tissues of animals. A study of predatory fishes, including species commonly eaten by people, in the North Pacific Subtropical Gyre found that 19 percent of sampled fish contained marine debris, most of it

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<sup>50</sup> USEPA. 2021. National Overview: Facts and Figures on Materials, Wastes and Recycling. Plastics: Material-Specific Data. Available at: [https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-](https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data#:~:text=The%20plastic%20food%20service%20items,used%20in%20other%20nondurable%20goods)

[data#:~:text=The%20plastic%20food%20service%20items,used%20in%20other%20nondurable%20goods](https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data#:~:text=The%20plastic%20food%20service%20items,used%20in%20other%20nondurable%20goods)  
<sup>51</sup> IARC. 2002. Some traditional herbal medicines, some mycotoxins, naphthalene and styrene. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans 82:1–556. Available at: <http://publications.iarc.fr/100> PMID:12687954.

<sup>52</sup> IARC. 2019. Styrene, Styrene-7,8-Oxide and Quinoline. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 121. Available at: <https://publications.iarc.fr/582>.

<sup>53</sup> OEHHA. 2016. California Environmental Protection Agency Office of Environmental Health Hazard Assessment Sage Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) Notice to Interested Parties April 22, 2016. Chemical Listed Effective April 22, 2016, as Known to the State of California to Cause Cancer: Styrene. Available at: <https://oehha.ca.gov/media/downloads/crn/042216listingnoticestyrene.pdf>.

plastic<sup>54</sup>. Humans also ingest microplastics in other seafood (e.g., oysters, crabs, and scallops) as well as from food containers and in drinking water.<sup>55</sup>

Many of the chemicals used to synthesize polystyrene particles are considered to be environmental contaminants that can adversely affect water quality. Microplastics have been shown to contain various contaminants such as polychlorinated biphenyls, polycyclic aromatic hydrocarbons, metals, and pesticides.<sup>56</sup> Microplastics cannot be digested, so aggregates can cause gastrointestinal obstruction. Absorbed microplastics and nanoplastics can damage cells directly and can be passed into the bloodstream via the digestive tract. Microplastics ingested via food or water may cause immune reactions such as cytokine or chemokine production.<sup>57</sup>

Although the migration of styrene monomers in foods and food contact materials is of concern, recent studies have demonstrated that polystyrene particles can also be cytotoxic when degraded to nanoplastic size (460 nm diameter).<sup>58</sup> The Zero Waste at City Facilities and Events ordinance would directly reduce exposure from foodware products and packaging and indirectly may reduce exposure via food and water by reducing the overall use of disposable plastics. The ordinance would result in a reduction of potentially carcinogenic styrene monomers and potentially toxic polystyrene micro and nanoplastic particles in the environment and would therefore not result in significant impacts to the environment, and where there are impacts, they would be beneficial.

#### 5.3.1.7 Hydrology/Water Quality

The use of disposable foodware including single-use plastics may impact water quality through improper disposal, urban run-off, or wastewater effluent (for micro and nanoplastics). Ultraviolet radiation from the sun and physical forces degrades larger plastics, such as packing materials or food containers, into microparticles and nanoparticles. Plastics in both marine and freshwater environments degrade into microplastics. These microplastics have been shown to contain various contaminants such as polychlorinated biphenyls, polycyclic aromatic hydrocarbons, metals, and pesticides.<sup>59</sup>

The Zero Waste at City Facilities and Events ordinance would replace disposable foodware containers and packaging with substitute products that are reusable or can be recycled or composted. The only plastics that would be allowable would be those that are recyclable in the City or reusable. Lightweight disposable plastics, including EPS products, can be easily transported by wind into local waterways during proper or improper disposal. By eliminating these products at City facilities and events, there

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<sup>54</sup> Choy, C.A. and J. C. Drazen. 2013. Plastic for dinner? Observations of frequent debris ingestion by pelagic predatory fishes from the central North Pacific. *Marine Ecology Progress Series* 485:155-163. Doi: 10.3354/meps10342.

<sup>55</sup> Van Cauwenberghe, L. and C.R. Janssen. 2014. Microplastics in bivalves cultured for human consumption. *Environmental Pollution* 193:65-70. <http://dx.doi.org/10.1016/j.envpol.2014.06.010>.

<sup>56</sup> Teuten, Emma L et al. 2009. Transport and release of chemicals from plastics to the environment and to wildlife." *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* vol. 364,1526.

<sup>57</sup> Hwang, J., D. Choi, S. Han, S. Jung, J. Choi, and J. Hong. 2020. Potential toxicity of polystyrene microplastic particles. *Science Reports* 10, 7391. <https://doi.org/10.1038/s41598-020-64464-9>.

<sup>58</sup> Ibid.

<sup>59</sup> Teuten, Emma L et al. 2009. Transport and release of chemicals from plastics to the environment and to wildlife." *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* vol. 364,1526.

would be a reduction in plastic litter that makes its way into water systems. Substitute products may also be more adequately removed by street sweeping or maintenance activities before entering the stormwater collection system and other waterways. All substitute products must either be reusable, compostable, or recyclable in the City (see Section 5.3.1.8 below).

Reducing the quantity and mass of disposable foodware accessories used and discarded in the City would have a beneficial impact on water quality by resulting in lower rates of plastic waste and associated contaminants entering surface water, groundwater, and marine environments. Further, zero waste at City events would help the City meet the Los Angeles River Trash Total Maximum Daily Load (TMDL), Echo Park Lake Trash TMDL, Lincoln Park Lake Trash TMDL, and Santa Monica Bay Trash TMDL. Because the ordinance would result in reductions in litter because substitute items could be reused, recycled, or composted, the impact to water quality is not a significant impact, and where there are potential impacts, they would be beneficial.

When food is wasted, the water resources used to produce, process, and prepare it, are also wasted.<sup>60</sup> The ordinance would reduce the volume of food waste generated and therefore would decrease the amount of wasted water inputs. To achieve zero waste at City facilities and events, there would be an increase in the volume of water used at Contractor facilities and City facilities for washing reusable foodware and foodware accessories, including cloth napkins and tablecloths. The amount of water would be variable depending on the size of the facility and events. By utilizing centralized washing stations, the City would be able to implement efficient washing procedures. Efficient machines certified by ENERGY STAR use less water than standard models. To be certified as an ENERGY STAR dishwasher, water use per cycle must be less than or equal to 3.5 gallons for a standard size model.<sup>61</sup> ENERGY STAR certified dishwashers are 30% more water efficient than standard models and save about 3,870 gallons of water over its lifetime. Full-sized clothes washers that are ENERGY STAR certified use 14 gallons of water per load, compared to the 20 gallons used by a standard machine.<sup>62</sup>

### 5.3.1.8 Utilities and Service Systems

Within the City, solid waste is managed by LASAN and private waste management companies. These companies collect, dispose, and recycle the solid waste generated for single-family, multi-family, industrial, and commercial buildings throughout the City.<sup>63</sup> The Zero Waste at City Facilities and Events ordinance would eliminate the use of disposable foodware at City facilities and events that cannot be recycled or composted and instead become solid waste. Disposable foodware and many plastics are not recyclable at the City contracted Material Recovery Facilities or compostable in any of the City's Green

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<sup>60</sup> U.S. Department of Agriculture. 2022. Why should we care about food waste? Available at: <https://www.usda.gov/foodlossandwaste/why#:~:text=According%20the%20U.S%20Environmental%20Protection, methane%2C%20a%20powerful%20greenhouse%20gas.>

<sup>61</sup> ENERGY STAR. 2022. Dishwashers. Available at: <https://www.energystar.gov/products/dishwashers>. Accessed August 26, 2022.

<sup>62</sup> ENERGY STAR. 2022. Clothes Washers. Available at: [https://www.energystar.gov/products/clothes\\_washers](https://www.energystar.gov/products/clothes_washers). Accessed August 26, 2022.

<sup>63</sup> Los Angeles City Planning Department. August 2001. The Citywide General Plan Framework An Element of the City of Los Angeles General Plan. Available at: [https://planning.lacity.org/odocument/513c3139-81df-4c82-9787-78f677da1561/Framework\\_Element.pdf](https://planning.lacity.org/odocument/513c3139-81df-4c82-9787-78f677da1561/Framework_Element.pdf).

Material Processing Facilities.<sup>64</sup> By replacing disposable items with reusable and recyclable or compostable products and reducing food waste, the amount of solid waste generated at City events and facilities would decrease. Los Angeles Sanitation and Environment currently collects over one million tons of refuse annually from its 750,000 customers.<sup>65</sup> The five landfills that the City owns are closed, and solid waste is disposed of at private landfills and those outside of the City. In addition to reducing the amount of solid waste generated, the ordinance would also reduce the amount of offsite haul trips to landfills, as more foodware items and accessories would be reusable and less food waste would be generated. For disposable items that are replaced by recyclable and compostable products, truck trips needed to transfer to respective facilities other than landfills, are assumed to be comparable to current transportation.

In Los Angeles County, a total of 4,000 tons of food waste is generated every day.<sup>66</sup> To address this waste and comply with Senate Bill 1383, LASAN is currently implementing a food waste recycling program, which diverts food waste from landfills and recycles it at composting facilities or using their wastewater treatment plant's anaerobic digester to convert it into biogas.<sup>67</sup> Food waste collected in bins at City facilities and events under this ordinance would be processed as part of this recycling program and diverted from landfills.

Alternative products to disposable plastics, such as cardboard boxes (e.g., frozen food boxes, dry food boxes), rigid clamshell packaging, food and blister plastic packaging, and plastics numbers 1, 2, and 5, are recyclable in the City through household blue bin recycling and commercial recycling.<sup>68 69</sup> In addition to recycling, substitute foodware would include reusable and compostable materials, further reducing items disposed of in landfills. Therefore, zero waste at City events would help the City achieve its goal of achieving 90 percent diversion of solid waste from landfill by 2025, 95 percent by 2035, and zero trash to landfills by 2050. The ordinance does not require any physical development or alteration to the current state of solid waste management in the City. Overall, the ordinance is expected to have a beneficial impact on the utility and service systems of Los Angeles.

Contractors would be responsible for washing their reusable items used at City facilities and events at their own facilities or existing washing stations at City facilities (e.g., existing school cafeteria

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<sup>64</sup> City of Los Angeles Sanitation and Environment. 2022. Blue Bin Recycling. [https://www.lacitysan.org/san/faces/wcnav\\_externalId/s-lsh-wwd-s-r-rybb?\\_adf.ctrl-state=ziwt0u0xk\\_159&\\_afLoop=7156691206552088#!](https://www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-s-r-rybb?_adf.ctrl-state=ziwt0u0xk_159&_afLoop=7156691206552088#!) Accessed June 17, 2022.

<sup>65</sup> City of Los Angeles Sanitation and Environment. 2022. Collection. Available at: [https://www.lacitysan.org/san/faces/wcnav\\_externalId/s-lsh-wwd-s-c?\\_adf.ctrl-state=127qhyp90y\\_5&\\_afLoop=5286601647667777#!](https://www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-s-c?_adf.ctrl-state=127qhyp90y_5&_afLoop=5286601647667777#!) Accessed June 17, 2022.

<sup>66</sup> Los Angeles County Sanitation District. Food Waste Recycling. 2022. <https://www.lacsd.org/services/solid-waste-programs/food-waste-recycling#:~:text=Font%20Size%3A%20Every%20day%2C%204%2C000%20tons%20of%20food,fruit%20and%20vegetables%20from%20grocery%20stores%20and%20restaurants.> Accessed August 25, 2022.

<sup>67</sup> Ibid.

<sup>68</sup> City of Los Angeles Sanitation and Environment. 2022. Blue Bin Recycling. [https://www.lacitysan.org/san/faces/wcnav\\_externalId/s-lsh-wwd-s-r-rybb?\\_adf.ctrl-state=ziwt0u0xk\\_159&\\_afLoop=7156691206552088#!](https://www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-s-r-rybb?_adf.ctrl-state=ziwt0u0xk_159&_afLoop=7156691206552088#!) Accessed June 17, 2022.

<sup>69</sup> City of Los Angeles Sanitation and Environment. 2022. Mandatory Commercial Recycling. [https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r/s-lsh-wwd-s-r-mcrab?\\_adf.ctrl-state=1biqku5cgg\\_5&\\_afLoop=7758060316408378#!](https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r/s-lsh-wwd-s-r-mcrab?_adf.ctrl-state=1biqku5cgg_5&_afLoop=7758060316408378#!) Accessed June 24, 2022.

dishwashing facilities). This would result in additional water use at Contractor and City facilities, for items which would have been disposed of prior to the Zero Waste at City Facilities and Events ordinance.

In a meta-analysis of ten life-cycle analysis studies for single use (including paper and various plastics) and reusable beverage cups, the United Nations found that reusable options are more environmentally sound than any single-use alternative, as long as washing between uses is efficient (meaning using an efficient, fully-loaded dishwasher or if hand washed, using cold water).<sup>70</sup> Benefits increase as older, inefficient dishwashers are replaced and renewable energy sources increase in regional electricity grid mixes. This analysis also found washing reusable cups to be the most significant contributor to life cycle environmental impacts, followed by manufacturing. In all studies analyzed, the number of reuses required to achieve the environmental breakeven point was found to be well within the assumed life span of the reusable cups and for most studies this ranged from 10 to 670 uses depending on the materials compared, end-of-life assumptions, and washing assumptions.<sup>71</sup> By utilizing centralized stations, the City would be able to implement efficient washing procedures. Therefore, the minimal increase in water use for reusable items would not result in a significant impact on utility and service systems.

#### 5.3.1.9 Resource Areas with No Impact

There are multiple resource areas that would not be affected by the ordinance. These resource areas include the following:

- Agriculture and Forestry Resources
- Cultural Resources
- Geology and Soils
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Wildfire

The ordinance would not have impacts on any of the listed areas.

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<sup>70</sup> United Nations Environment Programme. 2021. Single-use beverage cups and their alternatives - Recommendations from Life Cycle Assessments.

<sup>71</sup> Ibid.

### 5.3.2 Summary of Environmental Impacts

As demonstrated by this analysis, the ordinance would maintain, enhance, or protect a natural resource and the environment, and the ordinance would not cause environmental degradation.

## 5.4 No damage to scenic resources

CEQA Guidelines Section 15300.2(d) state the following:

“(d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.”

The proposed ordinance would not result in a significant impact on scenic resources as it would not involve any construction or adverse changes to any designated state scenic highways or locally-designated scenic resources in the City. As described above in Section 5.3.1.1, reduced littering of food waste, disposable foodware and accessories, and other disposable products would have a beneficial impact on scenic resources.

## 5.5 Not located on a hazardous waste site

CEQA Guidelines Section 15300.2(e) state the following:

“(e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site, which is included on any list compiled pursuant to Section 65962.5 of the Government Code.”

The proposed ordinance does not propose construction on "a site". Therefore, there would be no impacts on hazardous waste sites.

## 5.6 No substantial adverse change in the significance of an historical resource

CEQA Guidelines Section 15300.2(f) state the following:

“(f) Historical Resources. A categorical exemption shall not be used for a project, which may cause a substantial adverse change in the significance of a historical resource.”

The proposed ordinance does not modify current protections for historical resources in the city and does not involve any construction or activity that would cause an adverse change in the significance of a historical resource. Therefore, there would be no impacts on historical resources.

## SECTION 6 Conclusion

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As set forth above, the ordinance is exempt under the above-cited classifications and can be appropriately determined to be categorically exempt from CEQA pursuant to CEQA Guidelines 15301 (Class 1), 15307 (Class 7), and 15308 (Class 8).



# Dan Tormey, Ph.D., P.G.

President, Technical Director

## Summary of Qualifications

Dr. Tormey is an expert in energy, water resources, land management and environmental policy. He has served as a technical expert in state and federal court, including testimony in Federal Court on questions related to water supply and sustainable yield and testimony in state court on contaminant assessment, fate and transport, risk assessment and remediation. Other litigation and testimony have included environmental effects of plastics, water quality and quantity, water rights, and Endangered Species Act issues.

Dr. Tormey has been project manager or technical lead for many controversial CEQA and NEPA projects and is noted for the creativity of his policy and technical approaches. He has managed CEQA/NEPA reviews both for regulatory agencies (US Federal Energy Regulatory Commission, US Bureau of Land Management, US Bureau of Reclamation, US Forest Service, California Public Utilities Commission, California State Lands Commission, California State Water Resources Control Board) and for private-sector applicants.

Dr. Tormey has managed several CEQA reviews for the City of Los Angeles, including the PEIR for the City's enhanced watershed management plans; 2 major projects related to achieving the goal of 100% recycling of wastewater; projects related to reducing the presence of plastics; and several support assignments in environmental justice, cleanup of contaminated sites, and CEQA support. Dr. Tormey has conducted geochemical analysis and fate and transport analysis of plastic waste in the environment and associated natural resource damages. He has benchmarked local and state approaches to reducing plastics in the environment, and in the analysis of the comparative impacts and manufacturing of plastic compounds and replacement compounds.

## Representative Project Experience

- Project Manager – Programmatic EIR for Stormwater Management Program – City of Los Angeles Bureau of Sanitation
- Project Manager – EIR for Bacteria TMDL Compliance in Ballona Creek – City of Los Angeles Bureau of Sanitation
- Project Manager – Disposable Foodware Accessories Ordinance Categorical Exemption – City of Los Angeles Bureau of Sanitation
- Project Manager – CEQA/NEPA/Permitting for Santa Felicia Dam Safety Improvement Project – United Water Conservation District
- Geomorphology Expert – Newhall Ranch EIR/EIS, Los Angeles County
- Technical Lead – Comprehensive analysis of impacts of high-volume hydraulic fracturing at an oil and gas field in Los Angeles County
- Project Manager – CEQA Review of SCE's Gas-Fired Generation Capacity – Southern California

## Education

- Ph.D., Geology and Geochemistry, MIT
- B.S., Civil Engineering and Geology, Stanford University

## Registrations

- Professional Geologist

## Appointed

- U.S. National Academy of Sciences: Steering Committee on Geoheritage (2020-present)
- IUCN Geoscientist Specialist Group (2015-present)
- UNESCO World Heritage Site Review Panel (2009 - present)
- California Council on Science and Technology: Hydraulic Fracturing Study (2014-2015)
- California governor and legislature-appointed advisory committees on oil and gas issues (2014-present)
- Lead Scientist, Cruz del Sur (Andean post-disaster search and rescue group)
- Fellow, Explorers Club



# Lindsey Garner, Ph.D.

## SENIOR SCIENTIST

### Summary of Qualifications

Dr. Lindsey Garner is an environmental toxicologist with over a decade of aquatic toxicology, water resources, CEQA/NEPA, permitting, litigation support, risk assessment, and project management experience. Dr. Garner has worked on a variety of large and complex projects involving multiple stakeholders including federal, state, and local government agencies, private industry, legal professionals, and the public. She has evaluated the toxicity, fate, and transport for various anthropogenic and natural compounds, including oil constituents, pesticides, drilling fluid-related materials, and metals, in support of environmental impact reports (EIRs), natural resource damage assessments (NRDAs), ecological risk assessments (ERAs), and various litigated cases. She has also served as subject matter expert and resource lead for various sections of EIRs, environmental impact statements (EISs), and environmental assessments (EAs).

### Representative Project Experience

- Deputy Project Manager, EIR Analyst, and Risk Assessor – Hydrilla Eradication Program Environmental Impact Report, California Department of Food and Agriculture
- CEQA Lead Author and Analyst – Disposable Foodware Accessories Ordinance Categorical Exemption – Los Angeles Sanitation and Environment
- CEQA Lead Author – Categorical Exemption for 61 Oak Grove St Project – EVgo, San Francisco, California
- Project Manager and CEQA Analyst – Ventura County Coastal and Noncoastal Zoning Ordinance Updates for Oil and Gas Development – Ventura County Resource Management Agency
- CEQA Biological Resources Author – Hyperion Wastewater Reclamation Plant Recycled Water Program EIR – Los Angeles Sanitation and Environment
- Environmental Scientist – Comments on Draft CalEnviroScreen 4.0 – Los Angeles Bureau of Sanitation, California
- CEQA Resource Author – San Gabriel Valley Greenway Network Implementation Plan – Los Angeles County Department of Public Works
- CEQA Resource Author – Santa Ana River Watershed Weather Modification Initial Study/Mitigated Negative Declaration – SAWPA
- Deputy Project Manager, EIR and EA Resource Analyst, Biological Assessment Author, Permitting Specialist – Santa Felicia Dam Safety Improvement Project – United Water Conservation District
- Deputy Project Manager, Resource Analyst, Permitting Specialist – Harvey Diversion Fish Passage Restoration Project Environmental Assessment/Mitigated Negative Declaration – CalTrout
- Deputy Project Manager and CEQA Lead Author – Project-Specific Analysis and Addendum for the North Ojai Incendiary Fuels and Ember Cast Reduction Project – Ventura County Fire Department

### Education

- PhD, Integrated Toxicology and Environmental Health, Duke University
- BS, Biology, Aquinas College

### Disciplines

- Environmental Toxicology
- Ecological Risk Assessment
- Natural Resource Damage Assessment
- Aquatic Toxicology
- NEPA/CEQA
- Research and Publication

### Professional Affiliations

- Society of Toxicology
- Society of Environmental Toxicology and Chemistry (SETAC)
- Pacific Northwest SETAC



# Paden J. Voget, P.E., QSD, ENV SP

## SENIOR SCIENTIST

### Summary of Qualifications

Ms. Voget is a licensed Professional Engineer with over 19 years of experience in environmental and civil engineering consulting. She has a diverse background that includes CEQA and NEPA projects, environmental compliance, construction project management, environmental permitting, civil/restoration engineering, and water resources projects. She is highly experienced in working with federal and California environmental regulations and has a working knowledge of many other state and local regulatory requirements and agencies.

Ms. Voget has accumulated extensive experience in CEQA and NEPA compliance for air quality and greenhouse gas resource areas, including air quality and greenhouse gas impact assessments, air mitigation quantification methods, and air pollution control technology. In particular, she has developed air quality and climate change impact assessments to support CEQA and NEPA environmental review documents. For these assessments, she analyzed the construction and operational impacts through quantification of emissions, modelling of pollutant concentrations, and determination of the level of significance, along with providing recommendations for mitigation measures.

### Representative Project Experience

- CEQA Resource Analyst, Transportation/Noise/Air Quality/Greenhouse Gas – Ballona Creek Low-Flow Treatment Facility EIR, City of Los Angeles
- CEQA Resource Analyst, Air Quality/Greenhouse Gas/Noise – Statewide Hydrilla Eradication Program EIR – California Department of Food and Agriculture
- Deputy Project Manager – CEQA Review of the Operation Next/Hyperion 2035 Program EIR, City of Los Angeles
- CEQA Resource Analyst, Air Quality/Greenhouse Gas/Noise - D.C. Tillman Recycled Water Project IS/MND – City of Los Angeles
- CEQA Specialist – Hollywood Burbank Airport Terminal Replacement Project EIS Review and Comment – City of Los Angeles
- CEQA Specialist – Comments on the Draft Environmental Impact Report prepared for the Biogas Renewable Generation Project at Scholl Canyon Landfill (SCH No. 2017081062), Los Angeles, California
- Resource Specialist – CalEnviroScreen 4.0 Review and Comment – City of Los Angeles, California
- CEQA Resource Analyst, Hydrology/Geology/Hazards, Transportation and Hazardous Materials/Noise - Santa Felicia Dam Safety Improvement Project EIR, United Water Conservation District
- CEQA/NEPA Resource Analyst, Transportation/Noise/Air Quality/Greenhouse Gas - Bijou Park Creek Watershed Enhancement Project – City of South Lake Tahoe
- NEPA Resource Analyst, Noise/Air Quality/Transportation - Baltazor Geothermal Energy Project Environmental Assessment – US Bureau of Land Management

### Education

- Bachelor of Science, Environmental Resources Engineering, Humboldt University

### Disciplines

- Civil & Environmental Engineering
- CEQA & NEPA
- Due Diligence
- Site Assessment & Remediation
- Water Resources Compliance & Management
- Hydrology & Geomorphology

### Registrations

- California Professional Engineer No. C69238
- California State Water Resources Control Board, QSD Certification No. C06923
- Institute for Sustainable Infrastructure Envision Sustainability Professional

### Professional Associations

- American Society of Civil Engineers (ASCE)