



Assignment: Earth
Roadmap for Building
a Circular Economy

USC Zero Waste Task Force April 2025



# **Letter from Leadership**

The University is committed to Assignment: Earth's circular economy goals and recognizes the urgency to address environmental challenges by taking meaningful actions toward a more sustainable future. To achieve our commitments, we must ingrain sustainability into all aspects of operations at USC. Our Zero Waste Roadmap lays out the approach and strategies required to achieve zero waste and advance our sustainability goals.

The roadmap was developed in collaboration with departments across the campus and reflects a collective effort. It is a living document and will continue to be updated as approaches adjust and new opportunities emerge.

Achieving zero waste will not only reduce our environmental impact but also conserve resources, save money and promote a culture of sustainability among our students, faculty, staff and visiting community members. As an institution of higher learning, it is our responsibility to lead by example and to take concrete actions to minimize our environmental footprint.

We invite all members of the university community to join us in this important endeavor. Together, we can build a more sustainable future for our campus, our community and our planet.

Fight On!

### **Dave Wright**

Senior Vice President for Administration Office of Senior VP Administration

### **Christopher J. Toomey**

Vice President and Executive Director Facilities Planning and Management

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# **Executive Summary**

USC's Roadmap for Building a Circular Economy documents the wide-ranging zero waste efforts across the campus to ensure alignment of strategies and identification of potential gaps. It was developed by USC Zero Waste Task Force through a collaborative process, bringing in stakeholders from across the campus, each of whom have a unique perspective and opportunity to influence implementation. Success will depend on our entire USC community's participation and commitment.

### Highlighted initiatives include:

- Investing in infrastructure with hundreds of multi-stream bins being installed across the interior of buildings and campus exteriors.
- Engaging students, facility and staff, from online training to social media videos, town halls, mobile tailgate recycling carts and more.
- Launching processes and targeted efforts, including the development and implementation of the Sustainability Design and Construction Guidelines and establishing a robust back-ofhouse composting program at all dining halls.

As milestones are achieved, challenges arise and new opportunities emerge, the Zero Waste Task Force will continue to solicit input and update the Roadmap.

# **Framework**

# **USC's Assignment: Earth**

Announced in April 2022, <u>Assignment: Earth</u> is USC's plan to work toward a healthy, just and thriving campus and world. Authored by the USC Presidential Working Group\* on Sustainability in Education, Research and Operations with input from teams across the university, it established a vision along with aspirations and goals for USC across five domains: Education, Research, Inclusion, Operations and Engagement.

Under Assignment: Earth, USC campus operations is tasked with achieving the following Zero Waste Goals for Building a Circular Economy:

- 4.2.a. Achieve Zero Waste (90% diversion rate) by fiscal year 2028.
- 4.2.b. Achieve 30% aversion (reduction in total municipal solid waste generated, using a fiscal year 2022 baseline) by fiscal year 2028.
- 4.2.c. Convert at least two additional material streams to more circular or closed-loop systems annually.

\*The Presidential Working Group (PWG) on Sustainability was established in September of 2019 to explore approaches for USC to become a model for sustainability in its education, research and campus operations. The group is comprised of representatives from 10 schools, the Academic Senate, the Office of the Provost, the Office of Sustainability, the Office of University Relations, the Office of Research, Auxiliary Services, Facilities Planning and Management, Keck Medicine of USC, the Environmental Student Assembly and student government. The PWG continues to work toward the effective implementation of the Assignment: Earth framework and its ambitious goals through the engagement of students, faculty and staff across the USC community.

### **Zero Waste Task Force**

Recognizing that achieving the Assignment: Earth Circular Economy goals requires ambitious effort and coordination from across the university, the Zero Waste Task Force was formed under the executive sponsorship of the Senior Vice President of Administration and the Vice President of Facilities Planning and Management (FPM), with co-chairs from FPM Energy & Sustainability and Auxiliary Services Sustainability.

The Zero Waste Task Force is charged with ensuring all departments are aligned in their understanding of the goals, definitions and boundaries along with developing and executing a universitywide strategic waste plan striving to reach the related Assignment: Earth goals. Planning includes the development of clear milestones, targets and actions, plus broader stakeholder outreach and the tracking and reporting of results. The Task Force sends recommendations to the PWG and reports progress to the Senior Leadership Team.

The Zero Waste Task Force includes the following members representing departments and units that play a significant role in achieving the goals:

- Athletics
- Auxiliary Services
- LA Memorial Coliseum
- Housing
- Hospitality
- Bookstore
- Transportation
- USC Hotel
- Cultural Relations and University Events

- Office of Sustainability
- Facilities Planning and Management
  - O&M Operations and Maintenance
  - Waste Management/Grounds
- Real Estate Asset Management
- Energy & Sustainability
- Keck Medicine of USC
- Procurement & Strategic Sourcing
- Student Life



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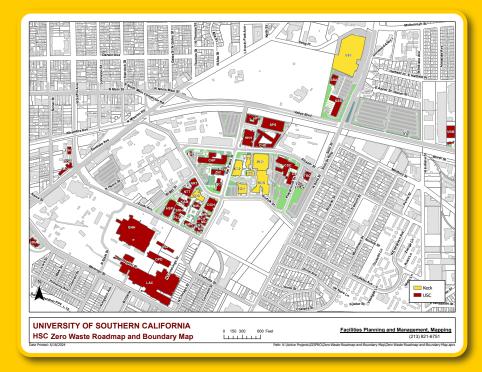


sustainability.usc.edu/assignment-earth

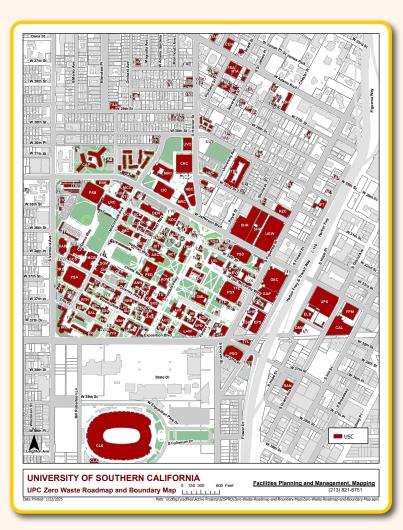


# **Campus Overview**

The University of Southern California was founded in 1880 and is the oldest private research university in California. Located in Los Angeles, California, USC is composed of 22 undergraduate, graduate and professional schools, enrolling 21,000 undergraduate and 28,000 graduate students. The institutional boundaries for the zero waste goal include over 240 buildings covering 16.9 million square feet across 225+ acres.



**Health Sciences Campus (HSC)** 



**University Park Campus (UPC)** 



# **Explanation of Circular Economy**

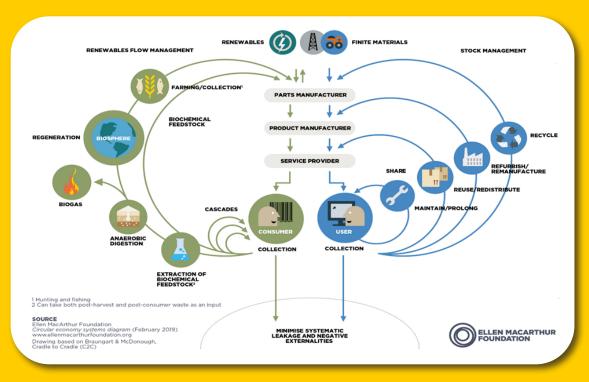
## **Zero Waste: 4.2 of Sustainability Framework**

The circular economy is an economic model that aims to eliminate waste and promote sustainability through reuse and resource efficiency. Through sharing, repairing, refurbishment, remanufacturing and recycling, this model creates a closed-loop system that minimizes the number of resources used. It also reduces the creation of waste, pollution and carbon emissions — a leading cause of climate change.

A circular economy works best by creating closed-loop systems where waste is minimized, resources are conserved and natural systems are regenerated. Strategies that can be used to achieve this include:

- Sustainable purchasing policy
- Rethinking design
- Extending product lifespan
- Vendor take-back programs
- Reusable foodware
- New approaches to packaging
- Elimination of single-use plastics
- Asset refurbishing and repair
- Surplus stores
- Anaerobic composting
- Composting and recycling

In practice, it implies reducing waste to a minimum. So much of the waste created today can be traced back to decisions made in the design stage. Rather than treating the symptoms of pollution and finding ways to deal with waste once it has already been generated, we need to design products and processes so that waste and pollution are not created in the first place.



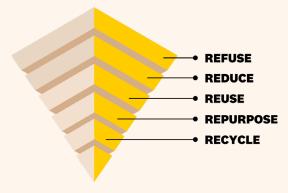
**Ellen MacArthur Foundation: The Butterfly Diagram** 

Zero waste, or waste minimization, is a set of principles focused on waste prevention that encourages redesigning resource life cycles so that all products are repurposed or reused. The goal of the movement is to avoid sending waste to landfills, incinerators, oceans or any other part of the environment. Zero Waste, as defined for purposes of the University goal 4:2a, is when 90% or more of all waste generated is diverted away from landfills and incineration.

These principles of zero waste are often called the 5 Rs:

Refuse Reduce Reuse Repurpose Recycle

### The Zero Waste Hierarchy



A circular economy encompasses all the zero waste principles with an emphasis on waste reduction through rethinking the design of products. It is important to consider environmental and sustainability issues when designing a new product not only to reduce environmental impact but reduce costs in the long term.



# Government Policy, Regulations and Goals Historic and Current State of California Laws

AB 341: AB 341 was passed on January 17, 2012, requiring businesses and multifamily residential dwellings of five units or more that generate four or more cubic yards of commercial solid waste per week to implement recycling programs by July 1st, 2012. The Mandatory Commercial Recycling Law focuses on increased commercial waste diversion as a method to reduce Greenhouse Gas (GHG) emissions and is designed to achieve a reduction in GHG emissions of 5 million metric tons of carbon dioxide (CO2) equivalents. Mandatory Commercial Recycling

AB 1826: In October 2014, Governor Jerry Brown signed AB 1826, requiring businesses to recycle their own organic waste on and after April 1, 2016. The law also requires that after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste and food-soiled paper waste.

**Mandatory Commercial Organics Recycling** 

SB 1383: In September 2016, Governor Jerry Brown signed into law SB 1383 in a statewide effort to reduce emissions of short-lived climate pollutants. SB 1383 establishes targets to achieve a 50% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75% reduction by 2025. SB 1383 regulations went into effect January 1, 2022, and require jurisdictions to conduct education and outreach on organic recycling to all residents, businesses, haulers, solid waste facilities, local food banks and other recovery organizations. New Statewide Mandatory Organic Waste Collection and SB 1383 Implementation

# Los Angeles Initiatives

The RENEW LA Goal: Reduce, reuse, recycle or convert the resources (municipal solid waste) now going to landfills in order to achieve an overall recovery level of 90% or more by 2025. Los Angeles County Zero Waste Plan

LA's Green New Deal: The City of Los Angeles adopted LA's Green New Deal in 2019 to combat climate change and push the city to achieve climate neutrality by 2050. In this plan, the city aims to increase landfill diversion rates to 90% by 2025, 95% by 2035 and 100% by 2050.

Zero Waste Plan — City of Los Angeles: This plan will be the road map for how the city will manage the solid resources generated in the city through the year 2030. Solid Waste Integrated Resources Plan (SWIRP)

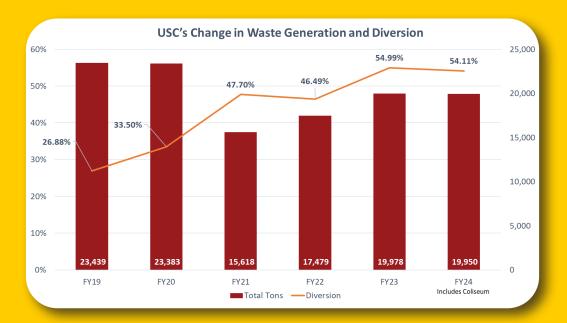
# **USC's Progress\***

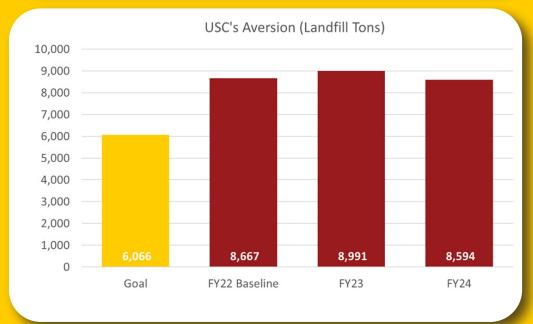
Since FY19, the University has made noteworthy progress in our diversion rates, climbing from 26.88% to 55.1% as of fiscal year 2024.

Following the same boundary set for USC's GHG and water reduction efforts, the diversion rate includes all academic, lab, office, athletic and housing buildings, on and off the campuses that are owned by USC and operated by the academic institution.

The rate does not include waste diverted through construction and demolition nor medical or hazardous waste produced by Keck Medicine.

For more information on waste generation, aversion and diversion, visit <u>Facilities Planning and Management</u> or the Assignment: Earth Progress Dashboard on the <u>Office of Sustainability</u> website.





<sup>\*</sup>The diversion and aversion charts do not include historical Coliseum waste data.

# **Zero Waste Initiatives Infrastructure**

Multi-stream Infrastructure and Signage
The Environmental Protection Agency
estimates that 75% of all waste is recyclable.
While we should always choose reducing
consumption and reusing materials first
according to the Waste Hierarchy, recycling
materials has a significant impact on reducing
greenhouse gases globally.

USC is installing multi-stream bins throughout the campus. These bins are divided into landfill, recycling and composting sections which provide the user access to proper disposal every time they go to throw away their waste. The installation plan includes the distribution of interior and exterior bins campuswide with accompanying signage directing users to the appropriate stream. The new multi-stream bins with signage aligns with State Mandates AB 341 and SB 1383, requiring all residents and businesses to recycle and compost.

As of October 2024, 33 buildings have interior bins installed and 194 exterior bins have been installed throughout campus.

### Management of the Waste Hauler Contract

FPM Waste Management will continue to ensure compliance with all state mandates related to recycling and organic waste which currently includes waste reduction, sustainable purchasing and edible food donations.

Through verification of the correct service levels (aka "right sizing") for each enclosure site, USC can ensure service obligations are met, costs are reduced by increasing recycling and diversion is accurately tracked and reported to all stakeholders. Accurate service levels and service frequency are essential to calculating and maximizing the campus diversion rate.

Approximately 75% of overall waste on campus is calculated using the EPA's estimated weights for municipal solid waste. This is due to the extensive number of front-load bins utilized by staff to dispose of all the waste collected from inside and outside campus buildings. Front-load bins are not weighed by the Franchise service providers. The estimated weights of front-load bins provided by the EPA (Environmental Protection Agency) is an accepted practice in the waste industry.

In addition to front-load bins, USC currently utilizes compactors and roll-offs, where space permits and a high generation of waste is expected. The City Franchise Service Provider provides exact weights of this equipment to the Zero Waste Data Analyst monthly.

### **Outreach and Education**

### **Outreach, Education and Engagement Campaigns**

As part of an ongoing effort to raise awareness throughout the USC community, the appropriate stakeholders including the Office of Sustainability, Auxiliary Services and FPM will continue to employ multimedia communications campaigns and events to bring attention to waste reduction initiatives and catalyze behavior change. Current programs include Waste-Ed Wednesday, the Zero Waste Recycling Wagon that rolls out during tailgates and other compost and recycling training.

Communications efforts also highlight the positive impact from programs on campus. Future communications efforts will increase the use of social psychology research related to behavior change messaging and will leverage experiential learning opportunities with the appropriate USC classes to tap into student communication insights and faculty research. The appropriate stakeholders will also explore technology and social media platforms for their potential to impact waste diversion behavior.

### **Move In/Out Campaign and Messaging**

To reduce waste generated by students moving in and out of the dorms, Auxiliary Services, Student Life and the Office of Sustainability work in collaboration to create messaging for students. For Move In, the <a href="Sustainable Move-In Tips">Sustainable Move-In Tips</a> campaign focuses on informing incoming students what they should bring to campus and what they should leave at home. For Move Out, the campaign instructs and motivates students as to where and how they can donate items they no longer need to avoid the landfill.







# 4.

### **Guidelines, Procedures and Business Practices**

#### **Zero Waste Events Guidelines**

USC is working to develop comprehensive guidelines that will support all permitted events, through a phase-in process, to be zero waste. The guidelines effort is being run in collaboration between the Office of Sustainability, Auxiliary Services, Facilities Planning and Management and Cultural Relations and University Events to establish a standard and processes for materials used at events. Although additional guidance is in development, currently, events can sign up to be zero waste. The Zero Waste Events checklist can be found on pages 7 and 8 of USC's standard event planning form. **FPM Events Checklist** 



### **Developing a Plan for Re-opening Surplus Store**

Currently, USC is investigating the possibility of re-opening the USC Surplus Store which was closed during the COVID-19 pandemic. The goals of the Surplus Store would be to reduce furniture and office supply material being sent to the landfill, increase the recirculation of materials on campus, reduce user costs related to materials acquisition, generate revenue through increased demand enabled by online sales and improve space utilization on campus by freeing up space currently occupied by stored, unused materials. Other goals may include experiential learning for students and training students in repair, reuse and refabrication to extend the useful life of commonly used products.

### **Green Cleaning**

Custodial teams reuse their spray bottles until they break, at which point the bottles are recycled. The teams have a chemical mixing machine in their custodial closets on campus where they refill their existing bottles with cleaning products.

### **Back-of-House Dining Composting**

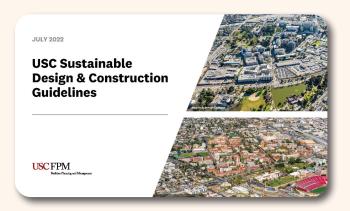
USC Hospitality trains all dining hall kitchen staff to scrape post-consumer food waste from plates into specified composting bins. At the end of the day, kitchen staff discards collected compost into the correct dumpster in the waste enclosure for pick up. This waste is randomly weighed throughout the year to track data on food waste. Pre-consumer food waste is also composted.

### **Compostable Products and Reusables Initiatives**

In October 2023, USC implemented the use of reusable containers at three of its on-campus dining locations: Everybody's Kitchen, Parkside Restaurant and the USC Village Dining Hall. USC Hospitality has transitioned its on-campus dining locations with either reusable containers or compostable containers where appropriate.

### **Sustainable Design and Construction Guidelines**

Released in July 2022, the <u>USC Sustainable Design & Construction Guidelines</u> (<u>SDCG</u>) serves as a guide for selecting and implementing sustainable design strategies for USC construction-based projects. The guidelines are a product of the efforts and collaboration of many dedicated and trained USC stakeholders working with building industry sustainability experts to advance and realize the university's commitment to sustainable design, construction and operations of new buildings, renovations and asset renewal projects. The SDCG includes technical guidelines specifically targeting waste generated in the construction process and operational waste once the building is active. Specific targets are set, such as hitting a minimal diversion rate of 75% for construction and demolition but aspiring for 90% or more in diversion.



#### **LA Memorial Coliseum**

For events with an anticipated attendance of more than 10,000 people, the Coliseum implements zero waste operations. The waste diversion process begins with a pre-event audit that removes non-compliant materials from the premises. The Coliseum partners with Legends Hospitality to procure compostable and recyclable serviceware and beverage options and ABM Industries to collect trash and hand sort it in their "waste compound." During an event, fans dispose of waste into dedicated compost, recycling and reusable waste streams. ABM staff collects waste from these locations and brings it to the waste compound. There, the Coliseum sorting team separates collected waste into several streams: compost, recycling and landfill. Following a successful sort, waste data is documented and analyzed, ensuring zero waste compliance.



This robust process has garnered industrywide recognition since 2015, most recently receiving the California Resource and Recovery Association Outstanding Practices in Venue/Event Resource Recovery Award in 2023. The Coliseum has partnered with <u>r.World</u> to provide fans and attendees with reusable r.Cups for draft beer and cocktails during events. This five-step process takes about 48–120 hours (about five days) to complete, and the Coliseum is in the process of expanding its zero-waste program to smaller events and daily operations.



# Waste Auditors Staff and Waste Characterization Studies

To ensure USC is on track to meet the zero waste goals, the Waste Management department's Zero Waste Auditors perform regular visual waste assessments along with quarterly and ad hoc waste characterization studies for buildings.

A waste characterization study is the process of analyzing the composition of different waste streams. It helps plan waste reduction, set up recycling programs and conserve resources. This process measures the amount of contamination in each stream (i.e., recyclable material in the landfill stream). These characterization studies track the progress toward the zero waste goals and provide valuable information for outreach and education campaigns.

### **Procurement RFP Template**

To encourage sustainability within procurement questions have been added to the RFP template for the Procurement & Strategic Sourcing teams. These questions are related to the vendor's sustainability offerings, such as takeback programs, recyclable packaging materials and more.

### Weekly E-Waste Pickups

The Environmental Health & Safety department is continuing their weekly e-waste pick up where they collect old electronic items (i.e., computers and printers) to be disposed of correctly. Many departments actively participate in this program. Pollution Prevention — USC Environmental Health & Safety



### **Digital Tickets and Parking**

Starting in July 2022, USC has transitioned all Athletic events physical tickets and parking tickets to a digital format.

For additional information on Sustainable Transportation, visit the website. **Home — USC Transportation** 

### **Preferred Supplier Meetings**

During meetings with vendors, USC will encourage and educate managers on how to incorporate sustainability into their conversations during their quarterly business reviews. These conversations will kick off projects that will drive sustainable messaging, enable sustainable purchasing practices throughout campus and highlight existing supplier programs (i.e., take-back programs).

### **Real Estate Policies**

At USC Village, USC's tenants participate in training to promote and ensure all garbage, recycling materials and refuse are kept in containers and prepared for collection in the manner specified. USC includes a requirement in all new leases that tenants will not sell or distribute single-use plastic water and beverage bottles or non-recyclable water containers and will provide reusable alternatives. USC facilitated the placement of a trash compactor on the ground floor of the McCarthy Residence Hall to facilitate improved recycling in the building for the dining hall, Housing and other tenants. Off campus, when USC leases space from third-party landlords, USC endeavors to lease in buildings that include:

- LEED Certifications
- Annual Utility Data and Benchmarking
- Energy, Water and Waste Audits
- LED Lighting
- EMS systems to help reduce energy consumption
- Solar Window Film
- Electric Vehicle (EV) Stations
- Water Smart Meters
- Elevators with microprocessor regenerative drives to reduce electrical consumption
- Recycling programs for collecting paper, plastic, glass, aluminum and wet trash

### **Elimination of Single-use Plastic Beverage Bottles**

USC's Single-use Plastics Elimination — Beverage Bottles Policy was established in July 2022 to prohibit the purchase or use of single-use plastic beverage products across the university. The policy's development was a multi-year

process involving a coalition of university stakeholders, third-party partners and community members to define the policy's scope, compliance framework and implementation plan. The collaborative approach ensured broad awareness, identified potential obstacles and created compliance pathways for USC's diverse campus operations. By implementing this policy, USC has successfully transitioned to aluminum and glass alternatives, reducing single-use plastic waste significantly and setting an example for sustainable practices in higher education. **Policy Statement** 







### **Keck Medicine of USC**

Keck Medicine of USC covers approximately 2.5 million square feet, including 967 licensed beds across 4 hospitals and serving over 660,000 outpatient visits per year. The Keck team has put a significant focus on reducing waste.

Approximately 2.75 million meals are served per year by the health system. Composting is taking place in the central prep kitchens as the first phase of the compost program includes food waste from preparation areas and dish rooms. The team is targeting to divert over 40 tons of waste annually from landfills through this robust food services composting program. Furthermore, Keck Hospital of USC tracked 820 pounds of donated food in 2023 and is seeking a way to donate hot meals to increase contributions to local food pantries.



Paper recycling is merging confidential shred and general paper to be collected in the same containers. The intent is to simplify paper recycling into one location. Mixed recycling of glass, metal, cardboard and plastic is expanding according to Keck Medicine of USC's waste reduction plan. The USC campus standard bins are rolling out to more and more Keck Medical Center buildings.

Keck Medical Center is also exploring opportunities to reduce waste in clinical operations such as reprocessing an even larger array of single-use devices and switching to reusable textiles. These initiatives have clinical champions who work with administrative teams to make improvements in patient care while reducing waste.

As a member of a national healthcare sustainability network called Practice Greenhealth, Keck Medicine of USC is tracking and reporting waste data in a way that can be benchmarked with similar healthcare organizations. This is key for continued improvement in environmental stewardship.



# **Looking Forward**

Our Trojan community is committed to its ambitious circular economy goals. The development of this roadmap lays out the initial projects, programs and initiatives. However, to be successful, we need all students, staff and faculty support, along with the continued identification of new opportunities and reevaluation of activities and approaches.

Together, we can embrace this opportunity to be a leader within the sustainability movement, identifying and executing a new path forward.

Fight On!





# **Glossary of Terms**

**Anaerobic composting:** A method of breaking down organic materials in an environment without oxygen. Anaerobic composting uses special microorganisms that work in oxygen-free conditions to decompose organic waste.

**Aversion:** In sustainability practices, aversion to waste is the tendency to avoid consumption in order to prevent waste.

**Behavior change messaging:** Defining barriers and motivators to change, designing interventions to promote desired behaviors and using various methods of communication to spread and promote the message.

**Circular economy:** An economic system based on the reuse and regeneration of materials or products, especially as a means of continuing production in a sustainable or environmentally friendly way.

**City Franchise Service Provider:** A waste hauling company that provides recycling and trash collection services to commercial businesses, multifamily buildings and large multifamily establishments in Los Angeles.

Closed-loop systems: Closed-loop recycling is the process by which a product or material can be used and then turned into a new product (or converted back to raw material) indefinitely without losing its properties during the recycling process.

**Trash compactor:** A motorized device that compresses trash into a smaller, denser form.

**Front-of-house composting:** The collections of waste produced by visitors, guests and patrons of a business or institution. This waste can include food scraps and napkins.

**Back-of-house composting:** Compost collection of everything produced in the kitchens and prep areas of an event.

**Construction and demolition waste:** Construction and demolition (C&D) waste is the debris produced during the construction, renovation and demolition of buildings, roads and bridges. It includes a wide variety of materials, such as concrete, bricks, wood, glass, metals, plastic, asphalt shingles, plaster, plasterboard and insulation.

**Contamination:** Contamination is the action of polluting a waste stream with anything that should not be there. This includes general waste items going into a recycling bin, food and liquid waste and other potential issues including the presence of hazardous and clinical waste in non-specialist bins.

**Diversion:** Waste diversion is the practice of redirecting waste from landfills or incinerators to other options, such as recycling, composting or reuse.

**Front-load bins:** A commercial front-load bin is a waste disposal container that is used at businesses and other commercial properties to collect and empty trash on a regular basis.

**Greenhouse gas:** A "greenhouse gas with waste" refers to a gas released into the atmosphere as a result of waste decomposition, typically methane, which traps heat and contributes to climate change; this primarily occurs when organic materials like food scraps or yard waste break down in landfills without oxygen present, producing methane as a byproduct.

**Medical waste:** Healthcare waste that may be contaminated by blood, body fluids or other potentially infectious materials and is often referred to as regulated medical waste.

**Hazardous waste:** Simply defined, hazardous waste is waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment.

Methane emissions: Methane is emitted during the production and transport of coal, natural gas and oil. Methane emissions also result from livestock and other agricultural practices, land use and by the decay of organic waste in municipal solid waste landfills. (EPA)

Mixed recycling: Mixed recycling, also known as single-stream recycling, is a system that allows all recyclable materials to be disposed of in a single recycling bin.

Mobile tailgate recycling carts: Carts used by the USC Zero Waste Team to collect recycling and engage tailgaters on campus at USC home games.

Multi-stream bins: A multi-stream bin is a bin where you can sort multiple waste streams because the bin contains three compartments.

Municipal solid waste: Municipal solid waste (MSW) is a term for everyday items that people throw away from their homes, businesses and other facilities.



**Organic waste:** Organic waste is any biodegradable material that comes from a plant or animal. It can be broken down into water, carbon dioxide and methane by living things and microorganisms.

**Pollution:** Pollution is the result of human waste not managed properly and accumulated in nature, cities or landfills. It can have negative consequences for the environment, animals, plants and humans.

Post-consumer food waste: Food that is thrown away after it has been consumed, such as leftovers from meals at home or in restaurants.

**Pre-consumer food waste:** Food waste that is generated before it reaches the customer. It includes storage loss, preparation loss, serving loss and overproduction.

**Recycling:** The process of converting waste materials into new materials and objects. It involves collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.

Reduce: Using less, like using fewer plastic bottles or buying products with less packaging. It is about cutting down on waste from the start.

**Refuse:** This is the first and leading principle in the waste hierarchy that tells us to refuse, avoid or prevent anything we don't really need.

**Repurpose:** When something can no longer be reused for its original purpose, trying to find a new way to use it — or parts of it — for another function is the next best thing. This prevents items from going to the landfill, and these items can often be just as useful in another function.

Reuse: Using things again instead of throwing them away.

Roll-offs: A roll-off dumpster is a large, open-top dumpster often used for one-off or temporary jobs, such as residential and commercial construction projects or cleanouts that produce high volumes of waste and debris. Since it comes in a rectangular shape, it offers greater versatility than traditional or front-load dumpsters.

Single-use plastics: Single-use plastics are goods that are made primarily from fossil fuel-based chemicals (petrochemicals) and are meant to be disposed of right after use — often in mere minutes. Single-use plastics are most commonly used for packaging and serviceware, such as bags, bottles, wrappers and straws.

**Surplus store:** A surplus store or disposals store is a business that sells items and goods that are used, purchased but unused or past their use-by date and are no longer needed due to excess supply, decommissioning or obsolescence.

Sustainable Design & Construction Guidelines: Prepared in collaboration with key stakeholders across USC — from faculty and staff to student interns — the USC Sustainable Design & Construction Guidelines advance the University's commitment to sustainable strategies for the design and construction of new buildings, renovations and asset renewal projects with impacts across multiple areas. This document works alongside the USC Facilities Design Guidelines and many of the goals set in Assignment: Earth, USC's 2028 Sustainability Framework, such as Zero Waste, Water Reduction and Carbon Neutrality.

Sustainable purchasing: Sustainable purchasing evaluates goods and services in a much broader context that goes beyond the costs. It identifies ways to maximize value and minimize environmental and social impacts throughout a product's entire life cycle. It is also concerned with acquiring goods and services that have reduced effects on human health, society and the environment when compared with competing products or services that have the same use or purpose.

**Vendor take-back programs:** According to the Circular Economy Practitioner Guide, a take-back program "is an initiative organized by a manufacturer or retailer to collect used products or materials from consumers and reintroduce them to the original processing and manufacturing cycle." This definition focuses heavily on the recycling of products.

**Visual waste assessments:** A visual waste assessment helps measure the different types of waste generated at an event. The results help determine an approximate waste volume and composition, identify opportunities to improve current waste management initiatives and compare how much waste was truly garbage (landfilled) compared to diverted (recycled or composted).

**Waste characterization:** The process of identifying and categorizing waste materials to understand their composition. The process includes sampling, analysis and documentation to minimize environmental impacts and health risks.

**Waste enclosure:** A waste enclosure serves as a dedicated area for storing waste bins, ensuring that trash remains securely contained and out of sight. By preventing exposure to the elements and potential tampering, it helps maintain the overall cleanliness and aesthetics of surroundings.

**Zero waste:** The conservation of all resources by means of responsible production, consumption, reuse and recovery of products, packaging and materials without burning and with no discharges to land, water or air that threaten the environment or human health.







