



Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Toni J. Taber, MMC
City Clerk

A handwritten signature in blue ink, appearing to read "Toni J. Taber".

SUBJECT: SEE BELOW

DATE: November 6, 2025

SUBJECT: Climate Smart San José Zero Waste Element Report

Recommendation

As recommended by the Transportation and Environment Committee on October 6, 2025:

(a) Accept the Climate Smart San José Zero Waste Element Report.

(b) Approve the Zero Waste Element implementation into the Climate Smart San José Plan.

CEQA: Exempt, File No. PP17-001, Statutory Exemption for Feasibility and Planning Studies with no commitment to future actions. (Environmental Services)

[Transportation and Environment Committee referral 10/6/2025 Item (d)2]

TO: TRANSPORTATION AND
ENVIRONMENT
COMMITTEE

FROM: Jeff Provenzano

SUBJECT: See Below

DATE: September 15, 2025

Approved



Date:

9/17/2025

COUNCIL DISTRICT: CITYWIDE

SUBJECT: Climate Smart San José Zero Waste Element Report

RECOMMENDATION

- (a) Accept the Climate Smart San José Zero Waste Element Report.
- (b) Cross-reference this report to the November 18, 2025, City Council meeting for consideration and approval by the full City Council to incorporate this element into the Climate Smart San José Plan.

SUMMARY AND OUTCOME

The Climate Smart San José plan¹ (Climate Smart) identified solid waste as a topic for future consideration that could be incorporated into updates of the Climate Smart plan. The waste reduction and diversion goals in the Zero Waste Element (ZWE) will help the City move towards its goal of carbon neutrality by 2030 and also serves as an update to the 2008 Zero Waste Strategic Plan.

Compostable materials disposed of in landfills account for approximately 20 percent of the methane emissions in California.² One ton of methane in the atmosphere has over 80 times the warming impact of one ton of carbon dioxide for 20 years after it's released, making it a particularly destructive greenhouse gas (GHG). Reduction of waste generated and disposed would thereby reduce the GHG emission impacts of solid waste which contribute to climate change.

By implementing the new zero waste strategies in the proposed ZWE, the City could reduce the GHG emissions released in San José by approximately 244,000 metric tons

¹ The original Climate Smart San José plan can be accessed here:

<https://www.sanjoseca.gov/home/showpublisheddocument/32171/636705720690400000>

² CalRecycle. 2025. "California's Short-Lived Climate Pollutant Reduction Strategy." Available at:

<https://calrecycle.ca.gov/organics/slcp>

of carbon dioxide equivalent per year. In 2021, Environmental Services Department (ESD)-managed solid waste and recycling programs diverted 63 percent of waste from landfills. By implementing zero waste strategies, the City aims to reach 82 percent diversion from landfills by 2030 and 96 percent diversion from landfills by 2050.

City Council (Council) approval of the proposed ZWE would allow staff to proceed with ZWE implementation and formally incorporate its strategies and metrics into the Climate Smart plan during the next plan update. As outlined in the original Climate Smart plan, updates to the plan are intended to follow the Envision San José 2040 General Plan's (General Plan's) four-year review cycle. This approval would also confirm the City's support for the ZWE's goals and actions, without changing the City's General Plan.

BACKGROUND

In 2008, the City adopted its Zero Waste Strategic Plan and established a goal of zero waste by 2022, becoming one of the first cities in the nation to do so. In San José, zero waste is defined as landfilling no more than 10 percent of waste. This standard recognizes that there will continue to be some materials, including legacy materials generated in prior decades (such as treated wood and asbestos), that must be landfilled at the end of their useful life. In February 2018, Council approved the Climate Smart plan, with specific goals and milestones to reduce communitywide GHG emissions in alignment with the 2016 Paris Agreement, designed to prevent global temperatures from rising by more than 2°C (or 3.6°F), which includes milestones to significantly reduce GHG emissions by 2050. Climate Smart focuses on three targeted climate action areas - mobility, energy, and water – and the associated quality of life co-benefits. In 2019, the City declared a “climate emergency.” In November 2021, Council adopted a resolution to work towards communitywide carbon neutrality by 2030, and in June 2022 approved the Pathway to Carbon Neutrality by 2030 to further focus staff's efforts and accelerate work towards this new goal. Council approved the addition of a Natural Working Lands Element to the Climate Smart plan in April 2023.

The Climate Smart plan identified solid waste as a topic for further study. The ZWE proposes a roadmap to reduce solid waste-related GHG emissions and reduce material to landfills, and serves as an update to the 2008 Zero Waste Strategic Plan. This work aligns with efforts at the state level to address zero waste in the context of climate change. California's Department of Resources Recycling and Recovery (CalRecycle) is working with a contractor to identify gaps in its existing programs and develop a comprehensive statewide Zero Waste Plan to move California away from a single-use economy to a fully circular and zero waste economy. CalRecycle is expected to publish its Zero Waste Plan in 2026.

Climate Smart staff conduct periodic estimates of GHG emissions resulting from activities in San José (communitywide GHG inventories) to provide a benchmark for San José's progress towards its carbon neutrality goal. The communitywide GHG

inventories (most recently completed for 2023³ and previously conducted 2008, 2014, 2017, 2019 and 2021 inventories) help the City to evaluate the impact of its initiatives and programs. In the 2023 communitywide GHG inventory, solid waste accounted for 8 percent of total communitywide GHG emissions. The 2023 inventory informed the 2025 update to the Climate Smart plan, which aims to ensure the City's climate strategies remain targeted, up-to-date and identify areas where adjustments or new approaches are needed. The strategies identified in the proposed ZWE can contribute to the City's goal of carbon neutrality by 2030 while also providing valuable co-benefits such as preventing waste and reducing climate impacts associated with production and transportation of goods before they are managed as waste.

ANALYSIS

Zero Waste Element Development Process

ESD staff, in coordination with consultants, Ruth Abbe and Associates and Cascadia Consulting Group, developed the ZWE in three stages: first, a technical analysis leading to a draft ZWE; second, community and stakeholder engagement; and third, this updated proposed ZWE to align with the City's 2021 community wide GHG inventory and to reflect new legislation leading to the final, proposed ZWE. The 2021 community wide GHG inventory was utilized for the analysis since that was the most current information available at the time. These stages are detailed further below.

In the first stage of work, from 2020 to 2023, ESD staff and consultants worked to define the scope of the ZWE, assess the City's net GHG emissions resulting from the solid waste sector, and to reevaluate the prioritization of the City's zero waste strategies. The analysis also included the effects of changing waste regulations on City programs, and local reuse potential and infrastructure related to solid waste and landfill capacity. Consultants utilized data collected during the first stage to create a draft ZWE, which was further refined by City staff. The ZWE focuses only on ESD-managed solid waste programs and services for the following sectors: residential, commercial, construction & demolition, and City facilities. This scope was chosen because the ZWE serves as an update to the 2008 Zero Waste Strategic Plan, and the City has direct control over these areas. Conversely, sectors like schools, colleges, jails, self-hauled materials, encampment trash, illegal dumping, and litter were excluded from the analysis due to limited City influence or concurrent efforts to address these issues.

In the second stage of work, ESD Staff conducted a series of outreach and engagement events from January 17, 2024, to February 11, 2024. This was done to ensure the ZWE accurately reflected the priorities and concerns of the community. This included a

³ 2023 Inventory of Communitywide Greenhouse Gas Emissions:
<https://www.sanjoseca.gov/home/showpublisheddocument/122510/638866287441830000>

community survey, a community meeting, and an online open house, where over 200 community members provided feedback.

City staff sent invitations to the community meeting directly to representatives of neighborhood associations, business associations and community-based organizations. Information on the survey and how to participate in the meetings and provide feedback through the online open house portal was also shared publicly on the City website and in social media posts by ESD.

In the third stage of work, which occurred in 2024 and early 2025, ESD, in coordination with the third-party consultant, Cascadia Consulting Group, updated the draft ZWE. The update incorporated community feedback regarding priority strategies, revised GHG estimates associated with each strategy, and incorporated information on new California legislation regarding single-use packaging and single-use plastic food ware.

The project team then conducted three separate analyses to understand the potential of each zero waste strategy to divert waste from landfill and thereby lead to GHG emissions reductions. First, an emissions analysis showed total waste-related GHG emissions from City-managed waste programs. The project team gathered activity data and then calculated San José's waste-related GHG emissions associated with landfill, composting, and anaerobic digestion. Next, an avoided emissions analysis specified the total GHG emissions reductions achieved if the ZWE's diversion goals are met. Finally, a diversion potential forecast revealed the amount of waste diverted and the associated GHG emissions reductions by strategy, if the strategies are implemented to an extent that meets the ZWE's diversion goals.

Structure and Impact of the Proposed ZWE

The proposed ZWE includes goals, strategies, milestones, and supportive City actions for reducing the GHG emissions associated with solid waste while aligning with the City's General Plan. It follows the Zero Waste Hierarchy (shown in Figure 1 below) by focusing first on rethinking and redesigning systems, then reducing, and finally reusing items to prevent waste. Within this framework, staff also considered four key factors to guide zero waste strategy development:

1. Support state efforts to reduce methane emissions from compostable materials in landfills.
2. Minimize disposal to preserve landfill capacity.
3. Prevent waste to address the climate and waste impacts associated with production and transportation of goods before they are managed as waste.
4. Provide racially equitable, inclusive, and culturally competent services.



Figure 1: Zero Waste Hierarchy

The proposed ZWE lays out 13 broad City-led zero waste strategies (Figure 2) that reflect all areas of the Zero Waste Hierarchy besides destructive disposal. It also includes three foundational strategies – community engagement, materials characterization, and research & development – which underpin all other strategies. Destructive disposal was not included as it is the least favorable waste management solution and does not support the City’s zero waste goal.

 FOUNDATIONAL	Community Engagement Materials Characterization Research & Development
 RETHINK/REDESIGN	Sustainable Packaging Sustainable Purchasing Citywide
 REDUCE	Lead by Example Food Waste Prevention
 REUSE	Surplus Food Recovery Repair & Reuse
 RECYCLE/COMPOST	Construction & Demolition Recycling Reduce Disposal of Compostable Materials in Landfills Recycling Market Development
 MATERIALS RECOVERY	Technology for Higher Diversion

Figure 2: The Element’s Zero Waste Strategies

The analysis in the proposed ZWE shows that the ZWE strategies could reduce GHG emissions by approximately 244,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year.

Role of the City and Next Steps

If approved by Council, the goals, strategies, milestones, and supportive City actions in the proposed ZWE will be incorporated into the Climate Smart plan during the next plan update and, as with the other Climate Smart plan goals, the City would be supporting the advancement of goals associated with the ZWE.

Climate Smart San José Analysis

The proposed ZWE supports the goals of Climate Smart San José. Its strategies to reach zero waste are expected to:

- Reduce net GHG emissions associated with disposal of solid waste
- Reduce energy or water use consumption, or increases in demand for renewable energy

EVALUATION AND FOLLOW-UP

Staff will provide progress updates to the Transportation and Environment Committee and/or Council as part of the Climate Smart San José updates.

COST SUMMARY/IMPLICATIONS

Approval of the ZWE will not result in any immediate City funding needs. As indicated in the ZWE, it is aligned with the General Plan and staff will typically play a supportive role to further its goals by providing recommendations to residents and businesses. Staff may seek grants or present budget proposals in alignment with ZWE initiatives in future budget processes.

COORDINATION

This memorandum has been coordinated with the City Attorney's Office, the City Manager's Budget Office, and the Department of Energy.

PUBLIC OUTREACH

This memorandum will be posted on the Council Agenda website for the October 6, 2025 Transportation and Environment Committee meeting.

Staff shared the draft ZWE with community stakeholders through a series of outreach and engagement events from January 17, 2024, to February 11, 2024. This included a community survey, a community meeting, and an online open house. Invitations to the community meeting were sent directly to representatives of neighborhood associations, business associations and community-based organizations. Information on the survey and how to participate in the meetings and provide feedback through the online open house portal was also shared publicly on the City website and in social media posts by ESD.

COMMISSION RECOMMENDATION AND INPUT

On November 21, 2024, the Climate Advisory Commission received a briefing on the Zero Waste Element. The Commission did not take formal action on the item.

CEQA

Exempt, File No. PP17-001, Statutory Exemption for feasibility and planning studies with no commitment to future actions. This Zero Waste Element identifies strategies to meet the City of San José's Climate Smart goals, but there is no commitment to future actions or approvals of projects.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/
Jeff Provenzano
Director, Environmental Services

For questions, please contact Valerie Osmond, Deputy Director, Integrated Waste Management, at valerie.osmond@sanjoseca.gov or (408) 535-8557.

ATTACHMENT
Zero Waste Element