2025 INDICATORS REPORT

Local Food Actions for a Cooler Future

Sustainable Diets

Food Recovery

Food Waste

Sustainable San Mateo County
Economy. Equity. Environment.

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Executive Summary

Food systems are one of the largest yet least addressed drivers of climate change. While emissions from energy, transportation and buildings are starting to decline, food-related emissions continue to rise. **Globally, food systems account for 34% of greenhouse gas emissions (GHG) and almost 60% of all methane emissions.** Animal products alone are responsible for 60% of GHG emissions, and 50% of all methane, from the food system. At the same time, **30% to 40% of all food produced is never eaten**, wasting the land, water and energy used to grow it and adding emissions when it decomposes in landfills.

Like the energy transition, which combines clean energy expansion with efficiency improvements in buildings and industry, **transforming our food system will require both reducing waste and shifting toward foods with lower carbon and resource impacts**. By making better use of what we already produce and encouraging more sustainable diets, we can cut emissions, ease pressure on land and water, and build a more resilient food system.

Sustainable San Mateo County's 2025 Indicators Report focuses on two of the most impactful levers for reducing food-related emissions, where local governments and institutions have the greatest influence: food consumption and food waste. **Drawing on interviews, quantitative data and surveys**, the report describes the current state of food-related emissions in the county, reviews local government commitments, and identifies key challenges and opportunities for action.

For food consumption in the county, household food accounted for 17% of total household emissions in 2023, ranking third after transportation and services. Animal-derived products made up 45% of food-related emissions, and the **average carbon footprint from food was 2.2 metric tons of CO2e (carbon dioxide equivalent) per person,** with per-capita values across communities ranging from 1.7 to 2.8 tons. Most Climate Action Plans in San Mateo County give little attention to food consumption, with only a few jurisdictions recognizing it as a distinct sector and just three promoting plant-based diets. Interviews with sustainability managers and advocates highlight opportunities in education, procurement and data tracking, but progress will require regional leadership and shared resources to scale plant-forward options and connect them to health and community well-being.

For food waste, organics represent nearly 30% of California's solid waste stream, with food accounting for about 40% of that total. More than one-third of the food reaching landfills is edible and could be recovered. In San Mateo County, **per-capita solid waste emissions averaged 0.2 metric tons of CO2e** in 2023, a 30% decline since 2005 despite 5% population growth.

Most Climate Action Plans in the county propose organic waste collection, but coverage of other SB 1383 responsibilities (education, procurement, food recovery and enforcement) remains uneven. Interviews and surveys revealed persistent challenges in multifamily building and commercial compliance, limited education and enforcement, funding gaps for food recovery organizations, and staffing constraints in schools. Programs such as Share Tables show promise but remain underutilized.

The report concludes with 10 recommendations, each with context, rationale and suggested implementers and partners. Together, these actions highlight concrete ways local governments, schools, organizations and waste agencies can build on existing progress to reduce emissions, strengthen food recovery, and make sustainable food choices easier and more accessible across San Mateo County.

Recomendations

1. **Include plant-based diet impacts and mitigation strategies explicitly in Climate Action Plans via amendments or updates, using food-consumption inventories as a baseline for local action.**

   Context and rationale: Food consumption is a major source of greenhouse gas emissions, yet it is rarely addressed in local climate planning. By explicitly including plant-based diet impacts and mitigation strategies in Climate Action Plans, cities in San Mateo County can align food with other climate priorities, commit to concrete actions and create accountability for progress.

   Food-consumption inventories (e.g., emissions estimates from what people eat) can serve as a baseline for local action. For government operations, jurisdictions could begin by monitoring their own purchasing data from city events or food service contracts to track progress over time, model leadership and set measurable goals. At the community level, newer inventory methods now allow us to track broad changes over time. While these models cannot yet capture the impact of specific local policies, they remain a powerful tool to raise awareness, set goals and guide progress.

   Main implementers: Local jurisdictions (Climate Action Plan updates, adoption of food-related measures), San Mateo County (technical guidance, shared inventory data)

   Partners: Schools and community-based organizations (community-wide education and engagement)

2. **Launch a countywide public awareness campaign on the environmental, public health and equity benefits of plant-based diets, using clear, multilingual messaging tied to community events in local jurisdictions and unincorporated areas.**

   Context and rationale: Stakeholder interviews revealed that lack of awareness is the first barrier to advancing plant-based food initiatives in San Mateo County. While resistance is minimal, most decision-makers are simply unaware of the climate or health impact of diets. Plant-based eating has been shown to prevent, treat and even reverse chronic illnesses such as heart disease and diabetes, which disproportionately affect communities of color. Consistent, repeated messaging across jurisdictions can normalize plant-forward eating. Examples from other cities, such as Mountain View's Plant-Based Eating initiative and Baltimore's Vegan Restaurant Week, demonstrate how pairing campaigns with visible, community-based activities like festivals, cooking demos and school events can make sustainable diets accessible and appealing. A countywide effort would provide consistency across municipalities while leveraging local events and community groups for amplification.

   Main implementers: County (coordination, campaign design, funding), local jurisdictions (local rollout, integration into city events)

   Partners: Schools (student engagement, family outreach) and community-based organizations (trusted messengers, cultural relevance)

3. **Provide financial and technical assistance to expand plant-based food access in underserved neighborhoods with grants, procurement incentives and pilot programs.**

   Context and rationale: Access and affordability are critical to enabling a community-wide dietary shift. Local governments can play a pivotal role by offering mini-grants to schools, nonprofits and food banks, providing incentives for institutions to increase plant-based procurement and support for culturally relevant menu development. Pilot programs in schools or community centers create low-cost, high-visibility opportunities to test plant-forward meals and build familiarity. By reducing financial barriers and supporting institutional capacity, jurisdictions can ensure that plant-based options are not only encouraged but also are accessible to all residents, particularly in underserved areas.

   Main implementers: Local jurisdictions and institutions (hospitals, jails, schools) and businesses (program funding, procurement policies, pilot programs)

   Partners: San Mateo County (regional coordination, funding alignment), community-based organizations (outreach, cultural tailoring) and food service providers (implementation in schools and community centers)

4. **Strengthen and expand existing education efforts on green bin use by adopting and displaying available standardized signage, ensuring multilingual training is consistently delivered, coordinating with waste haulers to clarify service-area differences, and committing municipal support to reinforce and amplify a countywide compost quality campaign.**

   Context and rationale: Stakeholder feedback consistently identified contamination and confusion around bin sorting as major barriers to SB 1383 compliance. While progress is being made (for example, through the compost quality campaign recently launched by the county and 15 jurisdictions), continued efforts are needed to strengthen and expand education. RethinkWaste has developed standardized signage and covers production costs, but adoption depends on cities opting in and ensuring materials are displayed in public spaces and other key locations. A multi-modal approach that combines standardized signage where feasible, multilingual training, coordination with haulers to minimize cross-jurisdictional confusion (particularly for residents who live and work in different service areas), and strong municipal buy-in will reinforce consistent messaging and is essential to maximize impact and build on the momentum already underway.

   Main implementers: Local jurisdictions (adopt signage, train staff, support deployment)

   Partners: Waste haulers (providing signage, service-specific rules and expertise), county Sustainability Department (regional coordination, outreach templates), schools and community-based organizations (reinforcement)

5. **Adopt Share Tables and other food recovery programs within schools and districts, building on an existing but underutilized model.**

   Context and rationale: Share Tables, a statewide initiative that encourages students to place unopened, uneaten and sealed food and beverages on a communal table, remain one of the most effective, low-cost strategies for reducing food waste in schools and improving

student access to nutritious food. Despite the program's benefits, only a small number of schools in San Mateo County currently participate in it. Research shows the impact can be substantial: A 2022 multi-state study across 41 schools found that Share Tables recovered an average of 978 kg of food per school each year, valued at $2,565, while requiring only minimal additional costs and staff time. Leveraging already available resources offered by the county, more schools could adopt Share Tables and achieve meaningful reductions in food waste while providing immediate benefits to students.

Main implementers: School districts and individual schools (program adoption, management)

Partners: County Sustainability Department, RethinkWaste and local jurisdictions (technical assistance, outreach, training support), public health departments (safety guidance and approvals)

6. **Establish a Waste Ambassador program that trains students to lead peer-to-peer education on waste sorting and food waste prevention, with potential expansion to residents and employers.**

Context and rationale: Interviews revealed that local champions, whether students in schools, tenants in multifamily buildings or motivated city staff members, often make the difference in whether waste programs succeed. A countywide Waste Ambassador program would build on existing efforts of the county and waste management partners, by formalizing and expanding training, tools and recognition for student leaders. With the county's coordination, all schools could be reached through consistent, online-accessible materials customized to local hauler rules. Starting in schools, where students influence both peers and families, and where peer-to-peer education has been shown to reduce contamination, the program could later expand to residents and employers, embedding community leadership and supporting long-term compliance with SB 1383.

Main implementer: County Office of Education (program design, training curriculum, coordination with school districts)

Partners: School districts and individual schools (recruitment, supervision, integration into activities), local jurisdictions (community outreach support), waste haulers (technical expertise, bin audits, reinforcement), and community-based organizations already active in education and outreach (trusted messengers, cultural relevance)

7. **Provide ongoing, flexible funding to food recovery organizations to adapt to unpredictable operating realities and shifting community needs, and to allocate resources where they are most needed.**

Context and rationale: Food recovery organizations emphasized that their greatest need is sustainable, flexible funding that they can direct where it is most effective. Needs vary widely across their network of partner agencies. Some require staff support, others vehicles or fuel, while others need equipment or training. Currently, many of these needs are funded piecemeal by lead organizations themselves, which is not sustainable and limits the scale of food recovery. While SB 1383 requires commercial food generators to donate surplus food, nonprofits cannot fully absorb these donations without stable resources. Providing flexible, ongoing funding from jurisdictions and large food generators would allow organizations to adapt as needs change, stabilize the food recovery system, and ensure both compliance with SB 1383 and greater community food security.

Main implementers: County and local jurisdictions (create ongoing funding streams, grants or contracts), Tier 1 and Tier 2 commercial food generators (direct contributions or in-kind support)

Partners: food recovery organizations (implementation, reporting), community-based organizations (distribution support)

8. **Share key waste metrics with community members to demonstrate progress, raise awareness and build accountability.**

Context and rationale: Interviews revealed that staff often do not know whether progress is being made on waste diversion, and the public has little visibility into results. Publishing key metrics (such as tons of organic waste collected, contamination levels in loads or findings from periodic waste characterization audits) helps communities see both achievements and areas for improvement. Making this information accessible through city websites, newsletters or community organizations not only raises awareness but also motivates residents and businesses by showing real outcomes, including the consequences of contamination (e.g., compost rejected at facilities). Transparent reporting builds trust, keeps the issue visible and creates accountability for jurisdictions and waste haulers.

Main implementers: Local jurisdictions (publication)

Partners: Waste haulers (data collection, reporting), Community organizations (amplification and outreach)

9. **Adopt ordinance language to establish a formal community reporting mechanism that allows tenants, residents and employees to report when multifamily properties, businesses (including restaurants) or other commercial generators are not providing required composting service or bins**

Context and rationale: Stakeholder feedback highlighted uneven compliance with SB 1383 across multifamily and commercial properties. A formal reporting process gives cities a structured way to identify noncompliance without relying solely on inspections. Reports submitted through an online form or hotline would be reviewed by city staff, who could first provide technical assistance to property owners or managers, escalating to enforcement only upon complaint or when necessary. This approach empowers community members and allows cities to focus staff time and enforcement efforts on properties where problems are actually occurring, rather than spreading resources thinly across all properties.

RethinkWaste already offers a reporting tool in its service area, showing feasibility. Expanding and formalizing this approach through local ordinances would strengthen consistency and accountability across all jurisdictions.

Main implementers: Local jurisdictions (adopt ordinance language (example in Appendix B) with assistance from each one's local waste hauler, designate staff to manage reports and follow-up, and promote the platform)

Partners: County (develop shared reporting platform, coordinate across jurisdictions), waste haulers (service verification, technical support), tenants, residents and employees (submit reports)

10. **Expand the placement of compost bins near food establishments, downtown areas and high-use public parks**

Context and rationale: Several cities in the county have begun adding compost bins in downtown areas where food establishments are concentrated, but this practice is not yet consistent across jurisdictions. Expanding bin placement in high-use public spaces helps reinforce education, reduces contamination, and makes proper sorting more convenient for residents and visitors. While costs may be a barrier, a county-coordinated group purchase could help reduce expenses and promote consistency in bin standards. This type of visible infrastructure complements education and outreach efforts and strengthens compliance with SB 1383.

Main implementers: Local jurisdictions (identify priority locations, install and maintain bins, coordinate service)

Partners: County (explore group purchasing options, provide guidance), waste haulers (collection service, signage, monitoring), community-based organizations (outreach and reinforcement)

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Introduction

Food systems are a major driver of climate change and environmental degradation, yet they remain under-addressed. Food, agriculture and related land use contribute about 22% of direct greenhouse gas emissions worldwide. Half of this is due to deforestation caused by clearing of land for grazing animals or growing feed crops such as soy. About a quarter comes from animals, particularly methane-producing livestock such as cows, while soil tilling, fertilizer use, rice cultivation and manure management contribute another 25%. When including food processing, refrigeration, transport and food waste in landfills, food systems are responsible for an estimated 34% of global emissions. Beyond climate, the food system places intense pressure on ecosystems, driving freshwater depletion (with meat and dairy using a third of it), biodiversity loss and nutrient pollution of air and waterways. As global food demand grows, building a sustainable and resilient food system is increasingly urgent.

Only 55% of crops grown globally are consumed directly by people, with the rest used as animal feed or non-food purposes. Converting crops into animal products is highly inefficient: 100 calories of feed yield just 3 calories of beef. Yet animal-based foods provide 37% of our protein and just 18% of our calories. Shifting diets toward more plant-based foods could free vast areas of land for restoration, turning emissions sources into carbon sinks.

Just as the energy transition has relied on both expanding clean energy sources and improving efficiency in buildings and processes, a similar approach can be used with food. Transforming our food system will require both shifting toward foods with lower carbon and resource impacts and wasting less, making better use of the resources we already invest in growing food.

A significant portion of that investment is lost: globally, 30 to 40% of all food produced is never eaten—a statistic that holds true for California as well. When food is wasted, so are the land, water, energy and labor invested in producing it, along with the emissions from inputs, transport and disposal. Reducing waste therefore offers immediate climate and environmental benefits while easing pressure on the food system.

Unlike other sectors where emissions are declining, food-related emissions have not yet peaked, making them an overlooked but powerful lever for local climate action. Local governments and institutions play a critical role through food recovery programs, procurement policies and community engagement that advance climate goals while also promoting health, equity and stewardship.

This report focuses on two of the most impactful levers for reducing food-related emissions: food consumption and food waste. The chapter on food consumption provides a breakdown of countywide food emissions, assesses local Climate Action Plans, and shares insights from sustainability managers, schools and advocates. The chapter of food waste analyzes trends in landfill disposal and solid waste emissions while investigating the barriers to effective organics collection. Drawing on Climate Action Plan reviews, interviews and surveys with multifamily housing managers and schools, it highlights both progress and remaining gaps. Each chapter concludes with concrete opportunities for action that local governments and institutions can take to reduce emissions, improve efficiency and demonstrate climate leadership.

By working together, across jurisdictions, sectors and communities, we can build a more sustainable, equitable and climate-resilient food system in San Mateo County.

Key Terms

Anaerobic Digestion: The breakdown of organic waste (e.g., food scraps, manure) without oxygen, producing biogas (CO_2 and methane) for renewable energy and a nutrient-rich byproduct called digestate. Digestate can be composted, and compost produced at a permitted facility may count toward procurement targets for recovered organic waste.

Climate Action Plan (CAP): A strategic plan that guides local efforts to reduce greenhouse gas emissions and prepare for climate impacts. Although not always binding, CAPs set targets, outline actions and track progress, typically with public input and adoption by local governments.

CO2e (Carbon Dioxide Equivalent): A unit for comparing greenhouse gases by expressing their warming effect in terms of carbon dioxide, based on each gas's Global Warming Potential (GWP).

Consumption-Based Inventory: An approach that measures emissions tied to the production, transport, use and disposal of goods and services consumed by residents, businesses and governments, regardless of where the emissions occur.

Edible Food Recovery: Collecting and redistributing surplus food for human consumption.

Generation-Based Inventory: Also called a production- or sector-based inventory, it measures GHG emissions from activities within a community's geographic boundaries, including direct energy use, electricity consumption and waste emissions.

Green Bin: The container for food scraps, yard waste and food-soiled paper.

Organic Waste: Biological material such as food scraps, yard trimmings, paper and wood. In landfills, it decomposes to produce methane.

Plant-Based Default: A food service practice where plant-based meals are offered as the standard, with animal-based options available on request.

Plant-Based Foods: Foods made primarily from fruits, vegetables, grains, legumes, nuts and seeds, including products derived from them (e.g., plant-based milks, tofu and meat alternatives).

RICAPS: The Regionally Integrated Climate Action Planning Suite, a program supporting all 21 jurisdictions in San Mateo County—including cities, towns and unincorporated areas—in developing and implementing Climate Action Plans.

Waste Characterization Study: An analysis of what people throw away—such as food scraps, paper, plastics and other materials—by collecting, sorting and weighing waste from a specific site or sector. These studies provide a clear picture of the waste stream and help identify opportunities to improve composting, recycling and cost savings. CalRecycle provides statewide data, while local audits offer practical, site-specific insights.