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Building Climate Resilience Through Food Recovery

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**Climate
Collaborative**
SAN DIEGO REGION



BUILDING CLIMATE RESILIENCE THROUGH FOOD RECOVERY

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THE CLIMATE IMPACTS OF FOOD WASTE

Food waste is a major contributor to climate change, particularly through the methane emissions produced when food decomposes in landfills. Methane is a potent greenhouse gas (GHG), with a global warming potential approximately 27 to 30 times greater than that of carbon dioxide over a 100-year period.¹ Nearly 20% of California's methane emissions originate from landfills, where organic materials like food waste and plant matter break down.² Food waste can occur throughout the supply chain—from production to disposal—costing consumers, farmers, and businesses nearly \$218 billion annually across the U.S.³ Each year, approximately half a million tons of food end up in San Diego's regional landfills⁴, accounting for about 15% of the county's total waste stream.⁵ While not all surplus food can be donated, ReFED estimates that only 12% of donatable food is actually recovered.⁶ This means that large quantities of edible food are wasted. Based on the U.S. Department of Agriculture's average meal weight of 0.45 pounds, this wasted, donatable food alone could have provided up to 778 million meals annually.⁷

In an effort to combat GHG emissions from food waste, California passed Senate Bill 1383 (SB 1383) into law in 2016.⁸ The bill contains key provisions aimed at increasing edible food recovery. By rescuing food that would otherwise go to the landfill, California entities have been able to help save precious food and advance sustainable solutions to address climate change in their local communities. Since the food recovery requirements took effect in January of 2022, over 217,000 tons of unsold food have been recovered annually, providing more than 700 million meals to food-insecure Californians.⁹

While the bill sets ambitious guidelines, businesses and jurisdictions face challenges such as extensive recordkeeping, regulatory compliance, and hesitancy in adopting new systems. By increasing awareness of available resources, entities can more effectively adopt climate solutions. Ultimately, SB 1383 represents a significant policy step toward reducing food waste and promoting sustainability through governance and collaboration.

Uneaten food accounts for a loss of resources and environmental impacts. Annually in the U.S., food waste accounts for:

- **170 million metric tons of CO₂** (Carbon dioxide equivalent) emissions;
- **140 million acres of agricultural land** – an area the size of California and New York combined;
- **5.9 trillion gallons of water** – equivalent to the annual water use of approximately 50 million American households;
- **And 664 billion kWh of energy** – enough to power 50 millions US homes for a year.¹⁰

SB 1383: MITIGATING CLIMATE CHANGE AND COMBATING FOOD INSECURITY

SB 1383 aims to mitigate climate change by reducing methane emissions from organic waste in landfills and addressing food insecurity in California. The legislation sets ambitious goals: a 75% reduction in organic waste disposal and a 20% increase in food recovery by 2025. The baseline for the organic waste reduction target is 2014 data, while the baseline for surplus edible food recovery is determined using CalRecycle's 2018 waste characterization data.¹¹ Organic waste, as defined by SB 1383, includes materials originating from living organisms, such as green waste, food and garden scraps, organic textiles, and wood and paper products. SB 1383 also emphasizes organics recycling and reducing organic waste disposal for jurisdictions, businesses, and other entities.¹² These efforts aim to further minimize landfill contributions and support broader sustainability goals. Businesses like grocery stores, restaurants, and schools are required to divert organic waste for composting or recycling and donate the maximum possible surplus food to help meet at least 20% of the statewide donation target.

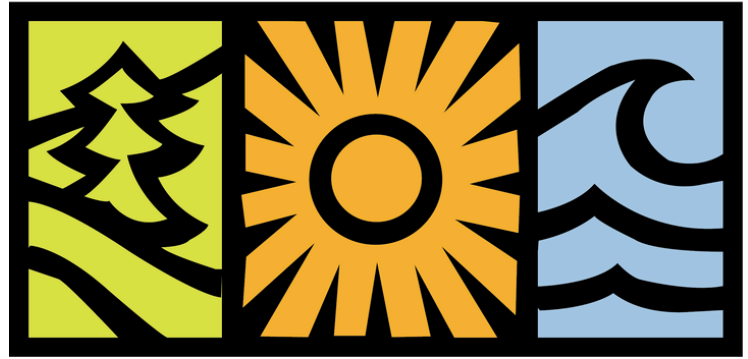
Since its implementation in January 2022, 91% of food-generating businesses have received organic waste collection services, and over 217,000 tons of unsold food have been recovered and redistributed. These efforts have prevented emissions equivalent to removing 3 million cars from the road.¹³ By redirecting and recycling food that would otherwise go to waste, SB 1383 not only combats climate change and reduces landfill waste but also provides tax incentives to businesses and strengthens food security for Californians in need.¹⁴



ELEVATING LOCAL LEADERSHIP

Solana Center for Environmental Innovation (Solana Center) has been a pioneering nonprofit in San Diego since its founding in 1983 as Solana Recyclers. For over 40 years, this environmental organization has evolved, adapted, and advocated for sustainability throughout the San Diego region. Renamed in 2003 to emphasize action and education, this women-led nonprofit empowers individuals and communities with practical solutions to reduce their climate impact. Their efforts have earned California's highest environmental honor, the Governor's Environmental and Economic Leadership Award.¹⁵ Solana Center engages the community through initiatives like waste diversion, zero-waste events, and consultations. These services empower individuals and businesses to rethink waste and adopt sustainable practices.

Solana Center FOR ENVIRONMENTAL INNOVATION



In response to SB 1383, Solana Center expanded its services in 2022, providing expert guidance to help businesses and jurisdictions achieve compliance. The organization supported efforts such as inspections, technical consultations, educational webinars, compliance resources, and the identification of Tier 1 and Tier 2 food generators. Solana Center's role as a liaison helps businesses comply with SB 1383 by facilitating food recovery partnerships, maintaining records of recovery, and providing outreach, inspections, and technical support. This approach, as seen with Frazier Farms and Hollandia Dairy, promotes compliance while fostering sustainable practices that benefit both the community and the businesses.



CASE STUDY 1: FRAZIER FARMS

Frazier Farms, a private grocery chain, has developed a thriving food recovery program with support from Solana Center. However, the path to success was not without its challenges. Initially, Frazier Farms struggled with inconsistent food donations and a lack of proper coordination, which made it difficult to meet the regulatory expectations of SB 1383. Staff hesitated to fully adopt the program due to concerns about additional workload and uncertainty around compliance standards, especially when it came to meeting record-keeping requirements for donations.

In 2023, an inspection revealed that Frazier Farms was only donating baked goods, despite SB 1383 requiring maximum edible food donations. With the guidance of Solana Center, Frazier Farms expanded its efforts to include all grocery departments.

Key motivators included federal tax deductions, reduced holding costs, and legal protections. These incentives helped offset program costs, provided financial benefits, and reduced the size of their green waste bins. As a result, food donations increased significantly across multiple locations. Between 2022 and 2024, the Vista store's donations increased by over 500%. From 2023 to 2024, the Oceanside location saw a donation increase of nearly 90%, while the La Mesa store has maintained consistent donation levels exceeding 40,000 pounds annually. The transition from hesitation to active participation demonstrates how, with expert technical support and clear incentives, businesses can successfully implement and sustain food recovery programs.



CASE STUDY 2: HOLLANDIA DAIRY

Hollandia Dairy, one of California's largest wholesalers and state food distributors, initially struggled with inconsistent food recovery practices. In 2022, the company donated only about 5,000 pounds of food on an ad hoc basis, with donations made sporadically and often based on necessity. The uncertainty around donation policies, particularly for perishable items and guaranteed-sales products, compounded the challenge and the company faced difficulties balancing food safety protocols while attempting to reduce waste.

In March 2023, Solana Center addressed Hollandia Dairy's questions and uncertainties, helping them transition from sporadic donations to a more structured and efficient food recovery system. This shift included establishing a twice-weekly pickup schedule, which streamlined operations and created consistency for partner organizations like Feeding San Diego and the San Diego Food Bank. Between 2022-2024 this new process facilitated a dramatic increase in donations from one truckload to approximately 40 annually.

Previously, excess products were primarily diverted to animal feed due to food safety and storage concerns. With the scheduled pickups and clear guidelines, Hollandia Dairy began donating effectively while also reducing hauling costs and ensuring safe, efficient food handling. Additionally, by leveraging guaranteed sales and leaving unused crates at partner retailers for donation pickups, Hollandia Dairy not only reduced transportation expenses but also contributed to food recovery efforts.

Despite the progress, opportunities remain. Expanding pickup schedules and exploring new donation streams could further enhance Hollandia Dairy's community impact. The company's journey highlights how clear policies, strategic partnerships, and logistical planning can drive sustainable food recovery practices.



LESSONS LEARNED

Structured Systems – Establishing scheduled donation programs rather than relying on ad hoc efforts enhances efficiency, ensures consistency, and increases overall food recovery rates.

Targeted Education – Providing sector-specific training on food safety and donation logistics helps businesses navigate compliance requirements, reduces waste, and builds long-term organizational confidence in donation processes.

Financial Incentives – Highlighting the financial benefits of food donations, such as tax deductions and waste disposal cost savings, can encourage broader industry participation and long-term commitment.

Collaborative Partnerships – Strengthening coordination between food donors and recovery organizations improves logistics, enhances record-keeping, and creates more efficient food redistribution networks.

Industry-Specific Training – Developing training and resources tailored to different sectors (e.g., grocery stores, food manufacturers, restaurants) ensures adherence to best practices in food handling, storage, and compliance with local and state regulations.



INTEGRATING SB 1383 SOLUTIONS: A PATH FORWARD FOR THE SAN DIEGO REGION

SB 1383 offers a unique opportunity for California communities to address food waste and insecurity while advancing climate change mitigation efforts. As businesses and jurisdictions adapt to the new regulations, the challenges faced—particularly by small to mid-sized organizations—highlight the critical need for cross-sector collaboration.

The work of Solana Center with businesses like Frazier Farms and Hollandia Dairy exemplifies how tailored technical assistance, strong partnerships, and financial and environmental incentives can support organizations in implementing sustainable food recovery programs that meet SB 1383's requirements. As local governments, nonprofits, academic institutions, and consultants in the San Diego region engage with businesses, it is crucial to consider how these collaborations can contribute to broader regional and state climate goals.

Local governments and nonprofits can play a vital role in supporting businesses through educational resources, logistical support for food recovery, and connecting partnerships with expert organizations like Solana Center. By leveraging existing regional partnerships and resources, known hubs for knowledge-sharing and regional agencies can provide the latest guidance, case studies, and best practices. This can lead to better and more effective connections with organizations that specialize in SB 1383 compliance, fostering collaborative action across the region.

Looking ahead, Solana Center's Food Recovery Inspection Training Workshops will provide a valuable resource for businesses and jurisdictions to meet SB 1383 requirements. Regional partners can leverage these workshops to further empower businesses, strengthen partnerships, and develop tailored sector-specific solutions. By prioritizing ongoing education, incentive programs, and collaboration, we can ensure that food recovery programs not only meet compliance standards but also create lasting environmental, economic, and social benefits for our region. This way, food recovery and donations help contribute to healthier communities and a more equitable food system.

These food recovery initiatives help to bridge the gap between food waste and food insecurity by reclaiming surplus food. They bring together individuals, businesses, and organizations to work toward a common goal: eradicating hunger and waste. Essentially, food recovery and donation projects provide a vital link between surplus food and the most disadvantaged, fostering a more equitable and nutritious community. During its 2023-2024 fiscal year, Solana Center worked with local food-generating businesses to increase edible food donations. Businesses that received consultation from Solana Center collectively donated 7,503,036 pounds of edible food.¹⁶



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The San Diego Regional Climate Collaborative was established in 2011 as a network for public agencies to advance climate change solutions and is currently housed at the University of San Diego.