

EXECUTIVE SUMMARY

ZERO WASTE AUDIT AND WASTE CHARACTERIZATION STUDY

INTRODUCTION

The County of Sonoma's 5-year Strategic Plan identifies Climate Action and Resiliency as one of its five pillars. Within that pillar, detailed goals and objectives help direct the County's efforts in combatting the climate crisis. In conjunction with the County's strategic plan, the California Short-Lived Climate Pollutant Reduction Strategy (SB 1383), effective January 1, 2022, aims to reduce organic waste disposal by 75% by 2025, and redirect at least 20% of currently disposed surplus food for people to eat by 2025. This legislation requires all businesses and multi-family dwellings with waste service scheduled weekly for more than 2 cubic yards, and generating over 20 gallons of organic waste weekly, to participate in organic waste collection.

The Zero Waste Audit and Characterization Study (ZWACS) was identified as a necessary step to establish a baseline understanding of current waste levels and conditions and outline a path to making all County facilities zero waste. The County may use the results of the ZWACS to identify which County facilities need to participate in organics collection.

The primary objectives of the study were to:

- Collect statistical evidence of material categories of waste generated by County operations
- Identify specific generator types that are contributing substantial quantities of recyclable and organic materials to the waste stream
- Create a qualitative assessment of the composition of the County waste streams, additionally accounting for seasonality
- Provide recommendations for prioritized actions to achieve the goal of Zero Waste by 2030

METHODOLOGY

The County contracted with SCS Engineers to conduct a waste audit and analysis, including the assessment of existing solid waste management, waste reduction, and recycling activities at County-run facilities. SCS compiled County and waste hauler data to choose a representative sample selection of County facilities. The categories of key waste generators by facility type include:

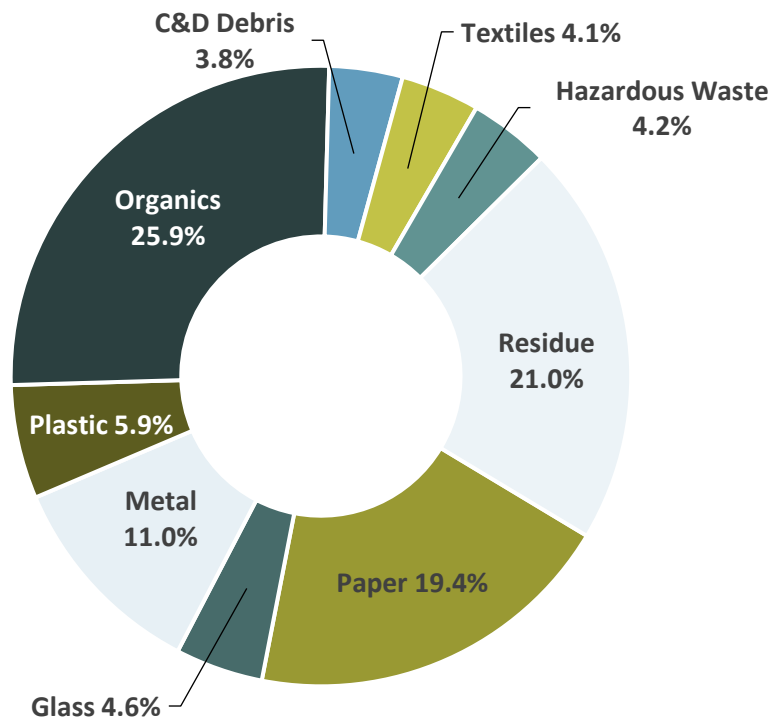
- Airport
- Animal Shelter
- Corp Yard/Maintenance/Warehouse
- Detention
- Office
- Recreation
- Veterans Memorial Buildings

Eighteen facilities were selected for on-site audits. Site audits included interviews of key staff members, detailed assessments of waste management systems, and visual audits of recycling and organic services. Landfill streams were the subject of a comprehensive waste characterization comprised of a 200-pound sample separated into thirty-eight material categories. Facility selection, site visits, visual audits, and waste characterizations follow strict guidelines as outlined by the ASTM Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste.

KEY FINDINGS

The overall results of the study are shown in Exhibit ES-1.

Exhibit 1. Waste Composition – All County Facilities



The results of the study identified characteristics of County facilities:

- Organic material was the most commonly encountered component of the waste stream.
- Residue comprised 21% of the waste stream.
- Paper and metal comprised significant portions of the County waste stream, at 19% and 11%, respectively.
- About two thirds (66.8%) of the overall landfill waste stream was composed of material that could be diverted for recycling or composting. The County has the potential to reduce upwards of 35.3 tons of material per week if properly sorted.

Specific findings related to facility type:

- The animal shelter's landfill stream was more than 50% organic material.

- The Veteran’s Memorial Building landfill stream contained more than 75% divertible material.
- Seasonal variations, such as the fishing season at Spud Point Marina, allow for the targeted capture of considerable recyclable material.
- County offices had significant recyclable paper contamination.

The quantity of waste generated by County facilities is shown in **Table 1**.

Table 1. Weekly County Facility Waste Generation

Waste Stream	Cubic Yards / Week	EPA Volume-to-Weight Conversion ¹	Pounds / Week	Tons / Week
Landfill	765.9	138	105,701	52.9
Recycling	577.8	111	64,139	32.1
Organics	69.6	135	9,399	4.7
TOTAL	1,413.3		179,239	89.7

The largest stream is the landfill, representing 52.9 tons per week of material, or almost 59% of the waste generated. Recycling comprises 35% of the waste generation, and organics 4%.

RECOMMENDATIONS

The analysis of the data collected during this study identified the following recommendations:

- Verify compliance with SB 1383 regulations at all County operated facilities.
- Confirm proper use of organic waste collection programs.
- Provide education and training to staff and the public on which waste items belong in each respective waste receptacle and provide receptacles for garbage, recycling, and compost waste streams.
- Consider auditing subcontractor-run operations.
- Incorporate new language into contracts to incentivize Zero Waste goals.
- Implement seasonal waste protocols for appropriate facilities.
- Provide ongoing communication and technical assistance with facilities.
- Practice deconstruction, salvage, and reuse in all Construction & Demolition activities.

¹ Volume-to-Weight Conversion Factors U.S. Environmental Protection Agency Office of Resource Conservation and Recovery April 2016