



# 2023-2024 SAN MATEO COUNTY CIVIL GRAND JURY



## THE STATE OF COMPOST COMPLIANCE IN SAN MATEO COUNTY



## ISSUE

California regulations adopted pursuant Senate Bill 1383 (2016) mandate separating compostable materials like food waste from garbage to reduce methane emissions. How effective has San Mateo County been at meeting composting goals, and what can be done to improve?

## SUMMARY

Starting January 1, 2022, regulations adopted pursuant Senate Bill 1383 (2016) required California businesses and residents to participate in organic waste collection. According to a 2022 San Mateo Daily Journal article, 70% of Burlingame’s businesses and multi-family dwellings did not have organic waste collection services. San Bruno had 86% of businesses and 45% of multi-family dwellings without organic waste collection (Browning 2022). From December 2023 to April 2024, officials were interviewed and data was collected from the County, cities, the RethinkWaste Joint Powers Authority (JPA), and haulers to assess current compliance.

A statewide goal is to reduce 75% of organic waste disposal from 2014 levels by 2025. Disposal means sending all waste, organic, recyclable, or trash, to the landfill. Diversion means sending organic waste or recyclables to conversion centers, where they become compost, mulch, or consumer recycled content, as opposed to sending them to landfills. Any stand-alone references to diversion in this report refers to converted organic waste and recycling combined. “Organic waste diversion” only refers to only converted organic waste. This report’s goal is to identify where consumers and producers are failing to fully contribute to organic waste diversion consistent with their abilities.

The report’s recommendations are that the responsible local public entities implement solutions to increase organic waste participation and diversion rates. Notably, jurisdictions should have begun penalizing generators for non-compliance beginning January 1, 2024 (California Public Resources Code § 42652.5 (2022)). Most multi-family dwellings and businesses in San Mateo County have lower organics collection enrollment compared to single-family homes. High enrollment rates for all three property types, however, do not necessarily result in high diversion rates and more organic waste in the waste stream. For example, in 2023, Foster City’s multi-family dwellings had a 98.81% participation rate; but, organics made up only 5.49% of total waste (Recology San Mateo County 2024, 2023).

There are several reasons behind multi-family dwellings and businesses having low participation and diversion rates. Green cart enrollment costs, and insufficient space for the three-cart system are the largest factors. Contamination brought about by improperly sorting organics into bins

also plays a role. In some multi-family dwellings, trash chutes do not offer an opportunity to sort and appropriate bins are not conveniently located. Further, local governments cannot reliably assess their progress on Senate Bill (SB) 1383 compliance because JPAs, haulers, and cities have different data reporting formats. And residents and the press must retrieve waste statistics from haulers because most cities do not have or post them.

To address these problems, the Grand Jury recommends that:

1. Cities, the County, and RethinkWaste should host monthly in-person green cart enrollment summits for non-compliant businesses and landlords and develop and implement other compliance strategies.
2. Jurisdictions should develop and implement new ways to make green bins usable in multi-family dwellings' and businesses' narrow or small waste enclosures.
3. To increase transparency and accountability, cities and the County should regularly publish waste reports with diversion and participation rates on their government websites.

## **BACKGROUND**

On September 19, 2016, Governor Jerry Brown signed Senate Bill 1383 to reduce California's methane emissions. This law classifies any person or entity responsible for creating organic waste as an "organic waste generator" (Short-Lived Climate Pollutants, Cal. Code Regs. tit. 14, § 18982 (2020)). Generators must comply with the law by subscribing to their jurisdiction's organic waste collection service or self-hauling organic waste (§ 18984.9 (2020)). If residents or businesses do not subscribe or self-haul, "a jurisdiction shall impose penalties for violations" ranging from \$50-\$500 depending on one or more infractions (§ 18997.2 (2020)). SB 1383 defines jurisdictions as "a city, county, a city and county, or a special district that provides solid waste collection services." (§ 18982 (2020)).

The new law builds on previous solid waste management legislation. Assembly Bill 939 was the first law of its kind to provide a solid waste diversion goal for cities and counties. Each jurisdiction had to divert 50% or more of solid waste from the landfill starting January 1, 2000 through source reduction, recycling, and composting (Cal. Pub. Res. Code § 41780 (1989)). SB 1016 later replaced Assembly Bill (AB) 939 with a per capita disposal rate equivalent to the 50% annual diversion rate (§ 41780.05 (2008)). In 2011, lawmakers directed businesses that generate four or more cubic yards of commercial solid waste weekly and multifamily dwellings of five units or more to recycle (§ 41780.05).

**Equation 1. Diversion Rate**

**$[(R+O)/(R+O+S)] * 100 = \text{Diversion Rate } \%$**

**R:** Recycling tons, **O:** Organic tons, **S:** Solid Waste tons

(Sources: Republic Services 2024a and 2024b, [Recology San Mateo County Q4 2023 Report](#), GreenWaste 2023)

California passed SB 1383 to tackle the pervasiveness of organic and recyclable waste in landfills. In 2021, CalRecycle estimated landfill composition to be 28.4% organic waste (11,305,710 tons), 15.5% paper (6,193,825 tons), and 13.7% plastic (5,445,299 tons) (2022a). Failing to divert the majority of reusable materials has polluted the environment Californians share. From August 2016 to October 2018, landfills were the largest source of methane, contributing 41% of point source emissions (California Air Resources Board 2019). California’s track record on recycling and waste emissions has not improved over the years either, as emissions have increased by 24.4% since 2000 (CARB 2023). If mandatory organic waste collection successfully diminishes landfill emissions, it will support the struggle against climate change.

SB 1383 aims to reduce 75% of organic waste disposal from 2014 levels by 2025 (Cal. Health & Safety Code § 39730.6 (2016)). Signing up for a green composting bin is a key to achieving this goal. Jurisdictions that do not have the standard three-cart system of garbage (usually gray, brown, or black cart), recyclables (blue cart), and organics (green cart) can still participate under certain conditions. For example, a two-cart system with only blue and gray carts can have the latter contain organics and garbage. Haulers must deliver the mixed waste gray carts “to a facility that meets or exceeds the organic waste content recovery requirements...” (Cal. Code Regs. tit. 14, § 18984.2 (2020)).

Of the 20 cities in San Mateo County, the state orders 18 to comply with SB 1383. CalRecycle issued a low-population waiver to Colma and Portola Valley on January 1, 2022 (n.d1.). They are exempt from enforcing both laws, and were not interviewed for this report.

An earlier investigation on the conditions of landfill capacity inspired this report. In the 2018-2019 Grand Jury year, jurors released the report “Planning for the County’s Waste Management Challenges.” They used data from a 2014 CalRecycle analysis to note that organic waste comprised 71% of all waste sent to the landfill in the County (SMC Civil Grand Jury 2019). Additionally, Republic Services, which operates Ox Mountain Landfill, projected that the landfill would close by 2034 based on disposal rates (2019). Although the report highlighted the connection between SB 1383 and landfill capacity, jurors geared their recommendations predominantly on revising the County Integrated Waste Management Plan. This 2023-2024 report: “The State of Compost Compliance in San Mateo County” is different. It examines how

increasing composting participation in multi-family dwellings and businesses can contribute to solving the landfill problem.

### **Economic Factors Impacting SB 1383 Progress**

On September 8, 2022, Shereen D’Souza, former CalEPA (California Environmental Protection Agency) Deputy Secretary, told the Milton Marks Commission that the state missed its 2020 recycling goal. Ms. D’Souza referred to the 50% reduction in organic waste disposal from 2014 levels by 2020 under Health & Safety Code § 39730.6 (2016). This goal was the precursor to the current 75% organic waste disposal reduction from 2014 levels by 2025 described above. The Deputy Secretary remarked, “Until this year, CalRecycle’s regulations to meet the organic waste reduction targets were not enforceable” (D’Souza 2022). She adds, “So, it makes sense that the 2020 diversion rate required in 1383 was not met” (2022).

In the same interview, former CalRecycle Director, Rachel Machi Wagoner, described how far California missed the mark. Ms. Wagoner said, “As a matter of fact, in 2020, we were roughly a million tons over our 2014 baseline” (2022). Businesses and residents sent more organics to landfills in 2020 than six years prior. It might be assumed that the COVID-19 pandemic pushed Californians to consume more than usual at home given the lockdowns. Yet, 2020 was also a recessionary year, which decreased some workers’ incomes.

Industrial production and civilian consumption rates are the most consequential causes of landfill pollution. CalRecycle observed that “a strong correlation between disposal and economic growth” prevails (2020). In 1989, California’s GDP “was \$0.72 trillion” and “statewide traditional landfill disposal was 44 million tons” (CalRecycle 2020). In 2018, California’s GDP “rose to \$3 trillion” (CalRecycle 2020), while landfill and “disposal-related activities” (see Glossary) climbed to 46,255,505 tons (CalRecycle 2024).

Categories > U.S. Regional Data > States > California

Real Gross Domestic Product: All Industry Total in California (CARGSP)

DOWNLOAD

Observation:  
2023: 3,233,151.0  
(+ more)  
Updated: May 23, 2024 2:45 PM CDT

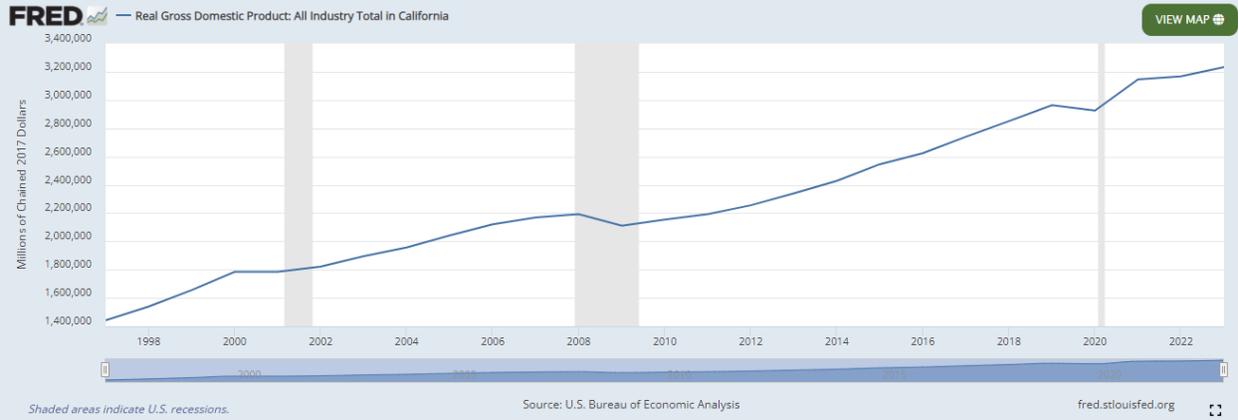
Units:  
Millions of Chained 2017 Dollars,  
Not Seasonally Adjusted

Frequency:  
Annual

1Y | 5Y | 10Y | Max

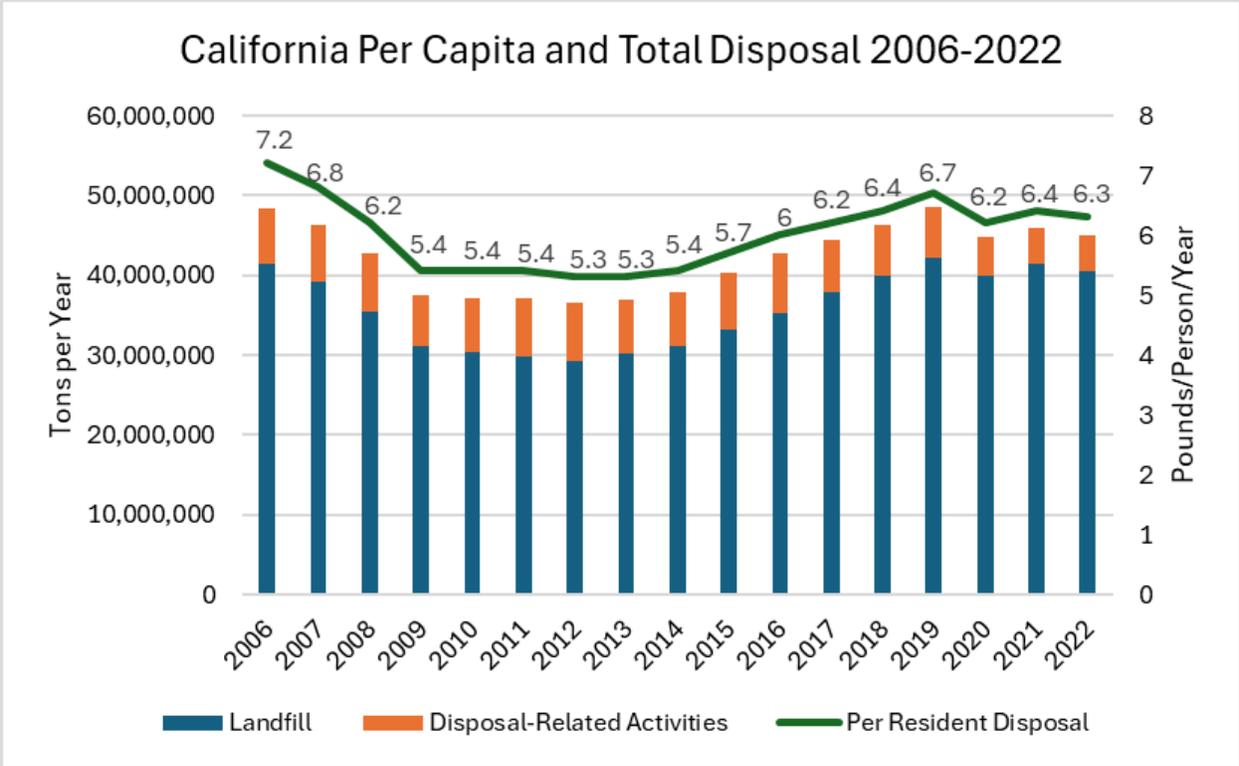
1997-01-01 to 2023-01-01

EDIT GRAPH



Source: [Real Gross Domestic Product: All Industry Total in California \(CARGSP\) | FRED | St. Louis Fed](#)

During the Great Recession (2007-2009), landfill disposal plummeted by 20.7% in California (CalRecycle 2020). In 2020, the state’s overall disposal (landfill added to disposal-related activities) tonnage fell by 7.46% when compared to the 2019 peak (CalRecycle 2024). Per capita disposal rates, and by extension overall disposal, have risen in the state since 2014 (2024). As the chart and table below illustrates, the timing of SB 1383 enforcement appears to not have a significant impact on California reaching its 2020 objective. Curiously, the 2020 surge of organic waste in landfills occurred while overall disposal fell.



Sources: [2018 State of Disposal and Recycling in California](#), [State of Disposal and Recycling Report 2021](#), [State of Disposal and Recycling Report 2022](#); note, values are found in Appendix 1, Figure 2 or 3 on each report

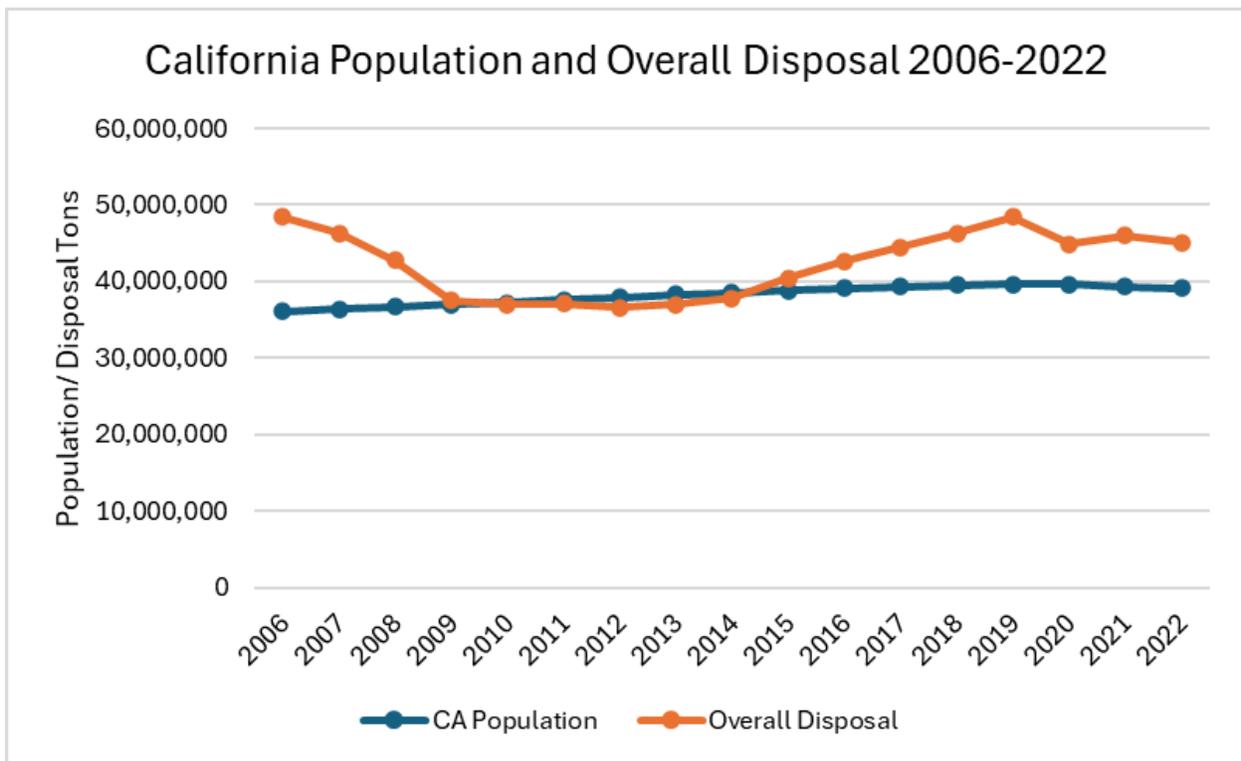
**Table 1. State Compost Tonnages and Percentage of Overall Waste 2018-2022**

	2018	2019	2020	2021	2022
<b>% of total waste</b>	12%	12.28%	12.3%	12.41%	14.73%*
<b>Compost Tons</b>	≈9,312,000	9,522,164	9,522,164	9,522,164	≈11,200,000*

Sources: [2018 State of Disposal and Recycling in California](#), [2019 State of Disposal and Recycling and Exports in California](#), [State of Disposal and Recycling Report 2020](#), [State of Disposal and Recycling Report 2021](#)

\*Jurors could only find evidence of this number through an Associated Press ([California is forging ahead with food waste recycling. But is it too much, too fast?](#)) article, which cited Rachel Wagoner. The [State of Disposal and Recycling Report 2022](#) offers a combined amount for “Source Reduction, Recycling, and Composting,” but not for its individual components.

Overall disposal tonnages throughout the 2006-2022 period have not increased alongside the population. Again, waste deposited at landfills fell 20.7% during the Great Recession in spite of the population growing by 1.56% (CalRecycle 2020; California Department of Finance 2012). Even more peculiar is that overall disposal hit rock bottom in 2012, shedding 2.58% of its 2009 volume (2020). Nonetheless, the state’s 2012 population rose by 2.59%, an inverse of landfill trends, from its 2009 value (California Department of Finance 2022, 2012). Since population growth and SB 1383 implementation inadequately explain waste patterns, macroeconomic events are the significant factor governing waste generation. A former CalRecycle executive has expressed concern over this fact and opined which economic actors spawn the most waste.



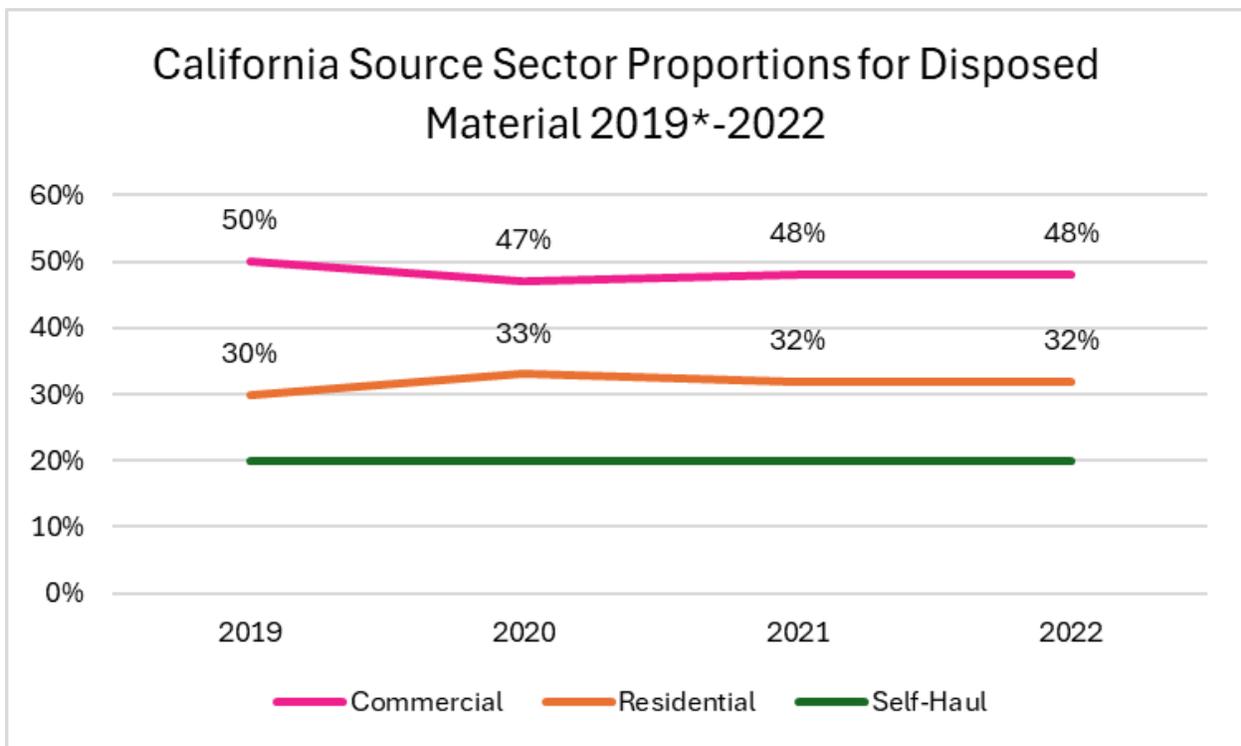
Sources: [2018 State of Disposal and Recycling in California](#), [State of Disposal and Recycling Report 2021](#), [State of Disposal and Recycling Report 2022](#), [E-4 Population Estimates for the State, 2001–2010](#), [E-4 Population Estimates for the State, 2011–2020](#), [E-4 Population Estimates for the State, 2021–2024](#)

Note: Population figures are for January 1 of each year according to the California Department of Finance

Former CalRecycle Director Rachel Machi Wagoner issued an urgent warning in the agency’s “State of Disposal and Recycling in California for Calendar Year 2020” report. Ms. Wagoner blamed “an economy driven by resource extraction and single-use disposable products” for California being on track to miss its 75% recycling goal by 2025 (CalRecycle 2021). She

claimed, “Consumers placing items in the right bin alone will not solve systemic problems like unrecyclable product designs and a lack of end markets for complex materials” (2021). A solution the Director proposes is getting “local and private partners” to efficiently collect and remanufacture the goods “California produces and uses” into new commodities (2021). Wagoner’s call for reaching the 2025 target focuses on getting manufacturers to sell goods with recyclable content. Annual reports from CalRecycle partially support this statement because manufacturers generate the highest proportions of refuse.

Businesses and multi-family dwellings with five or more units produce more landfill waste than residential properties statewide. For the last three and a half years, 47% to 50% of all refuse in the state originated from the commercial sector (CalRecycle 2024). Self-haulers contributed 20% of garbage. Residential properties contributed 30% to 33% (2024). An important distinction is that the California Code of Regulations labels multi-family dwellings of less than five units as residential areas (§ 18982 (2020)). Multi-family dwellings with five or more units, then, fall under the commercial category.



Source: [State of Disposal and Recycling Report 2022](#); \* = Data from Q3 and Q4 2019 only

## **METHODOLOGY**

### **Interviews**

The Civil Grand Jury interviewed officials from nine cities: Atherton, Brisbane, Daly City, Half Moon Bay, Millbrae, Pacifica, San Bruno, South San Francisco, and Woodside.

Instead of interviewing the nine remaining cities directly, the Grand Jury spoke with an official from the RethinkWaste JPA. Each city has one council member on the Board of Directors (RethinkWaste n.d. (no date)). Jurors interviewed San Mateo County twice to gather information on unincorporated areas outside and inside the RethinkWaste service area. Lastly, three haulers were interviewed (Republic Services, Recology of the Coast, and Recology San Bruno) because their cities had incomplete data.

### **Online Public Documents**

The CalRecycle and California Air Resources Board websites provided the state's most recent recycling rates and landfill composition. RethinkWaste was the only public entity that disseminated diversion rates for cities and a few unincorporated areas on their agency website. This jurisdiction provided calendar year quarterly records and diversion rates separated by the three property types (single-family, multi-family dwellings, and businesses). This makes comparing performance across cities straightforward.

### **Private Electronic Documents**

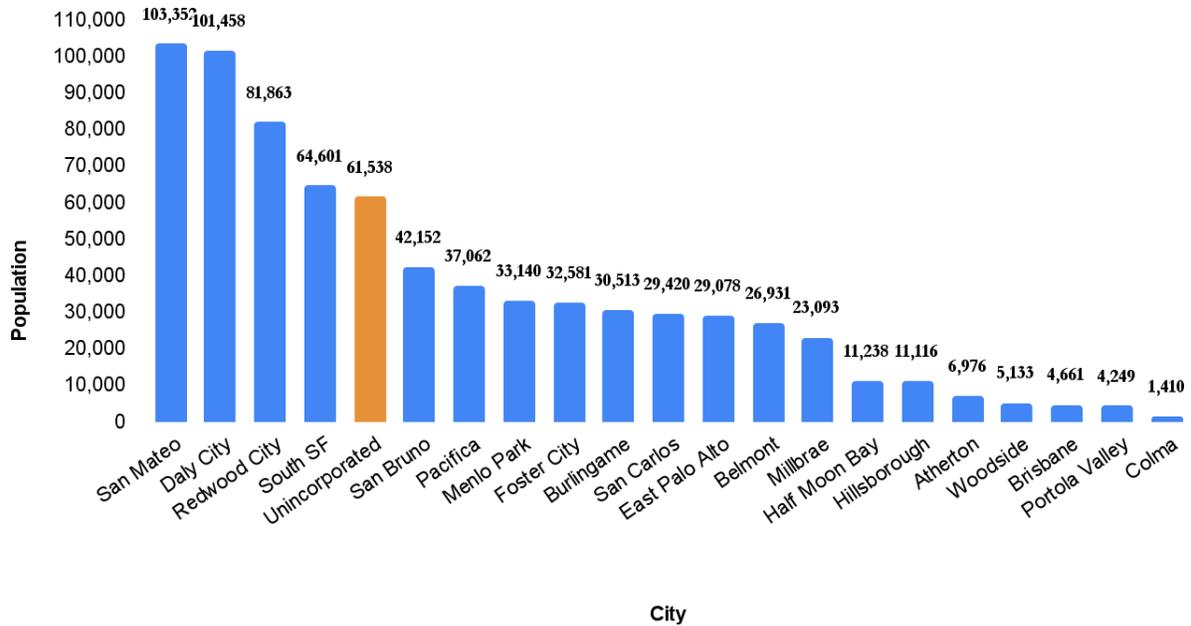
During the investigation, various documents unavailable online were collected. These resources included diversion rate tables, participation rate tables, sample citations, waivers, and non-compliance notices from 2022 to 2023. The Grand Jury asked haulers, city governments, and the County government permission to use this data. Some differences were noted in the ways cities ask haulers to collect data, which made it difficult to compare jurisdictions. A few haulers combine multi-family dwellings' participation rates with either single-family homes or commercial properties. Other haulers furnish quarterly reports over fiscal years instead of calendar years.

## **DISCUSSION**

The County's political, legal, and economic organization largely account for the contrast in diversion and participation rates among the three property types. Based on the 2022 1-Year American Community Survey, 729,181 people live in San Mateo County, down 4.61% from 2020 (U.S. Census Bureau 2022a). Yet, U.S. Census Bureau population estimates for Woodside

and several unincorporated areas were unavailable in 2021 and 2022. California’s Department of Finance includes these jurisdictions for its January 1, 2024 estimates, putting the total County population at 741,565 people. 61,538 of these residents live in unincorporated communities, and they could be the County’s fifth largest city (2024). This large number of unincorporated residents poses a challenge to County waste management.

### San Mateo County: City and Unincorporated Populations January 1, 2024



Source: [E-1 Cities, Counties, and the State Population and Housing Estimates with Annual Percent Change — January 1, 2023 and 2024](#)

Two special districts and one JPA unite geographically adjacent public agencies to coordinate and plan for waste management. The South Bayside Waste Management Authority (SBWMA), known as RethinkWaste, has 11 member agencies spanning from Burlingame to East Palo Alto. Each city and grouping of unincorporated areas share a single hauler and transfer facility despite having separate franchise agreements. On the coast, the Granada Community Services District (GCSD) and the Montara Water and Sanitary District (MWSD) follow a similar pattern for unincorporated areas exclusively. Jurors will cover these institutions in the next subsection.

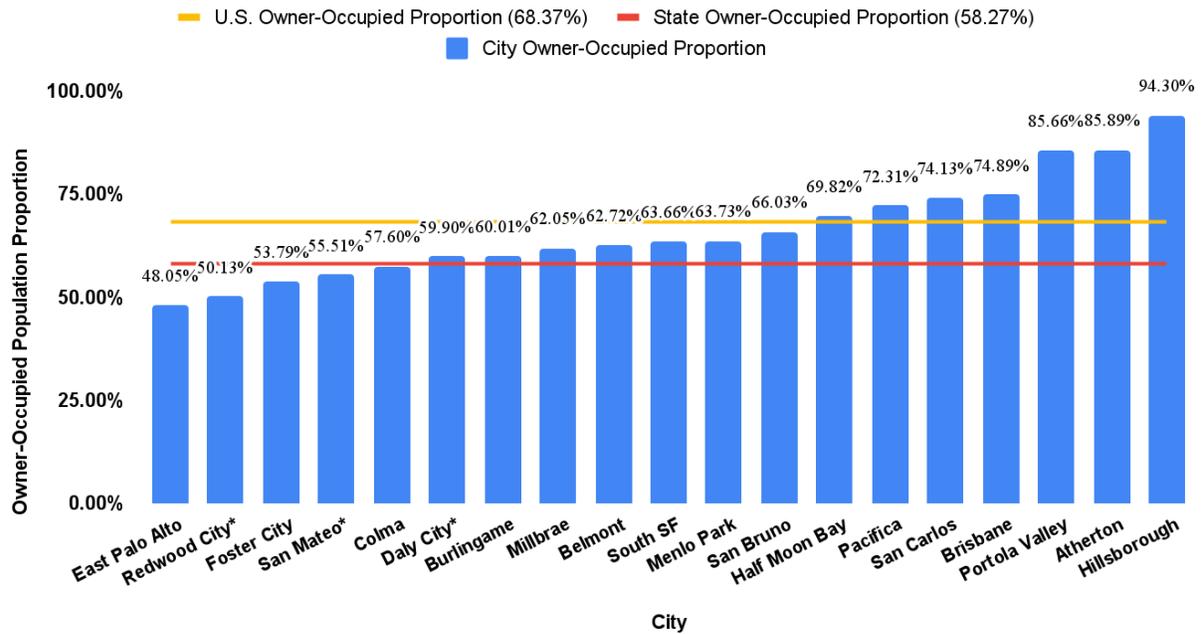
Multi-family dwellings and single-family homes have unequal responsibilities for organics collection enrollment and proper waste disposal. Residents of single-family homes and multifamily complexes of less than five units individually subscribe to their jurisdiction’s organic waste collection service. In contrast, multi-family dwellings owners or managers are

responsible for enrolling in organic waste collection services on behalf of tenants and employees. Multi-family dwelling and business owners “must supply and allow access to an adequate number, size, and location of containers” with the correct labels or colors (CalRecycle n.d3.). Furthermore, they must annually educate tenants and employees on proper organic waste sorting. Lastly, owners or managers must distribute information to new tenants within 14 days of occupying the premises (n.d4.).

Cities have pursued a policy of maximizing single-family homes’ participation rates. Homeowners in every San Mateo County city benefit from having blue and green carts included in the price of garbage collection (Table 2 links). Unfortunately, tenants countywide do not have green carts included in the price of garbage collection, except in San Bruno (Table 2 links). Hence, rental property owners or managers must add a green cart for the same or discounted price as their gray cart. This barrier to participation poses another threat to the county’s waste diversion efforts.

San Mateo County’s tenants play a decisive role in diverting as much waste as possible. In 2022, renters in San Mateo County made up 38.77% (278,126 out of 717,387) of the total population in occupied housing units (U.S. Census Bureau 2022b). Five cities have an owner-occupied population proportion less than the current state baseline of 58.27%. Another seven cities have an owner-occupied population proportion less than the national average of 68.37% (U.S. Census Bureau 2022b). The County’s substantial renter population indicates their waste disposal practices and green cart participation can either enhance or counteract homeowners’ or businesses’ diversion endeavors. Although cities can be commended for expediting green cart enrollment for homeowners, they could have worked with haulers to make tenant organic waste collection easier.

## San Mateo County: Owner-Occupied Population Proportions 2022



Sources: [2022 1-Year ACS Data: U.S. Occupied Housing Unit Populations](#), [2022 1-Year ACS Data: California Occupied Housing Unit Populations](#), [2022 5-Year ACS Data: City Occupied Housing Unit Populations](#)

\* = ACS 1-Year Estimate; all other values are from vintage year 2022 from the ACS 2018-2022 5-Year Estimate. See the link for explanation: [When to Use 1-year or 5-year Estimates](#)

Note: Again, Woodside does not appear on either the 1-Year or 5-Year ACS

### San Mateo County’s Waste Management Landscape

Most haulers currently have franchise agreements with JPAs, cities, and the County to collect, transport, and dispose of waste. Franchise areas consist of municipalities or special districts that use their bulk purchasing power to negotiate waste collection rates with a hauler (SMC Sustainability Department n.d. (no date)). Each of the franchised haulers also operate in unincorporated areas as part of or apart from existing agreements. Kunz Valley Trash has a non-exclusive franchise agreement with San Mateo County (n.d2.), and alongside Peninsula Sanitary Service, Inc., operates solely in unincorporated communities. The following table lists the six haulers operating in San Mateo County, along with their properties. All haulers offer the full range of waste collection; Kunz Valley Trash clients do not have bins and instead must place their waste in bags (n.d1.).

**Table 2. Haulers Serving San Mateo County Cities**

Legend: \* = Unincorporated areas or Special Districts; **Bold** = Haulers' local affiliates

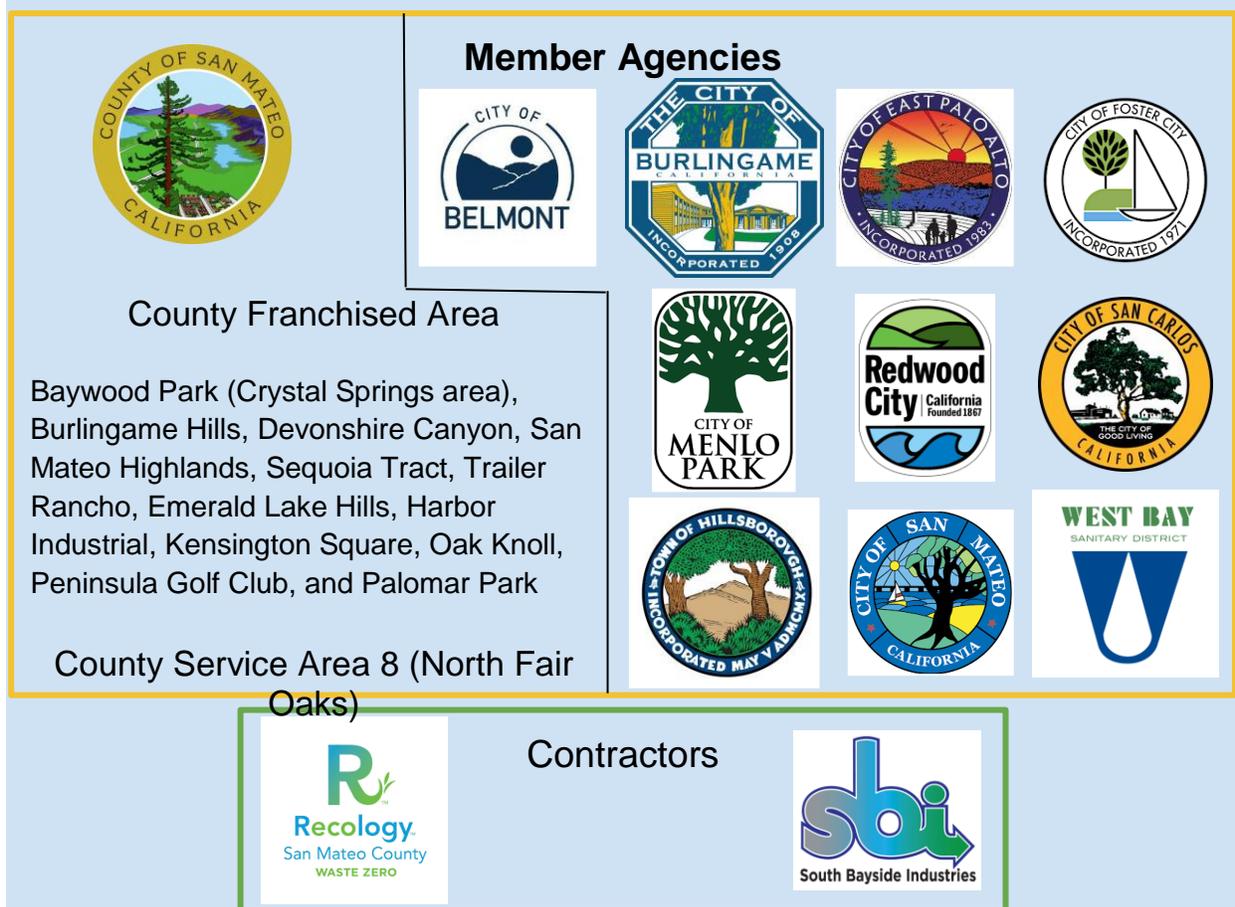
Haulers	Areas Served*	Properties	Franchise Agreements
 (Sources: <a href="#">SMC Sustainability Department: Curbside Collection, GreenWaste Service Areas</a> )	Atherton Portola Valley Woodside Los Trancos Woods* Sky Londa*	<a href="#">Our Facilities - GreenWaste</a>	<a href="#">Atherton 2020</a> <a href="#">Woodside 2019</a>
Kunz Valley Trash (Sources: <a href="#">Kunz Valley Trash: Services, Kunz Valley Trash Service Guide</a> )	La Honda* Loma Mar* Pescadero* San Gregorio*  Each place is exempt from SB 1383 because of a low-population waiver for census tract 6138 (San Mateo County 2021)		Non-Exclusive with San Mateo County (Pending Publication)
 <small>Peninsula Sanitary Service Inc. Refuse Collection &amp; Recycling Services</small> (Sources: <a href="#">SMC Sustainability Department: Curbside Collection, PSSI: What Belongs in Each Container</a> )	Stanford Lands* (includes the SLAC National Accelerator Lab)		

 <p>(Sources: <a href="#">SMC Sustainability Department: Curbside Collection, About The Program – RethinkWaste</a>)</p>	<p><b>Coast:</b> Granada Community Services District* Montara Water &amp; Sanitary District* Pacifica</p> <p><b>San Bruno:</b> San Bruno</p> <p><b>San Mateo:</b> Ladera* RethinkWaste JPA*</p>	<p>San Bruno Transfer Station</p>	<p><a href="#">Granada Community Services District 2018</a> <a href="#">San Bruno 2023</a> <a href="#">Montara Water and Sanitary District 2013</a> <a href="#">RethinkWaste Agreements</a></p>
 <p>(Sources: <a href="#">SMC Sustainability Department: Curbside Collection, Republic Services Daly City: Recycling and Trash</a>)</p>	<p><b>Daly City:</b> Broadmoor* Colma Daly City Olympic Country Club* San Bruno Mountain Park* Unincorporated Colma*</p> <p><b>Half Moon Bay:</b> Half Moon Bay</p>	<p>Corinda Los Trancos Landfill</p> <p>Newby Island</p>	<p><a href="#">Daly City 2015</a> <a href="#">Half Moon Bay 2017</a></p>
 <p>(Sources: <a href="#">SMC Sustainability Department: Curbside Collection, South SF Scavenger Residential</a>)</p>	<p>Brisbane Brisbane Quarry* California Golf Club* Country Club Park* Millbrae South San Francisco SFO*</p> <p>SFO - Census tract 9843 - is exempt from SB 1383 (San Mateo County 2021)</p>	<p>Blue Line Transfer Station</p>	<p><a href="#">Brisbane 2019</a> <a href="#">South SF 2013</a></p>

RethinkWaste covers the most area and population out of all County entities dedicated to waste management. The organizational chart below names the 11 member agencies. The West Bay

Sanitary District provides waste collection to a handful of accounts in Atherton, East Palo Alto, Menlo Park, Woodside, and Portola Valley (n.d.). RethinkWaste and San Mateo County are the only public entities that own transfer stations - Shoreway Environmental Center and Pescadero Transfer Station, respectively (RethinkWaste n.d., SMC Sustainability Department n.d.).

**Chart 1. RethinkWaste Member Agencies and Contractors**

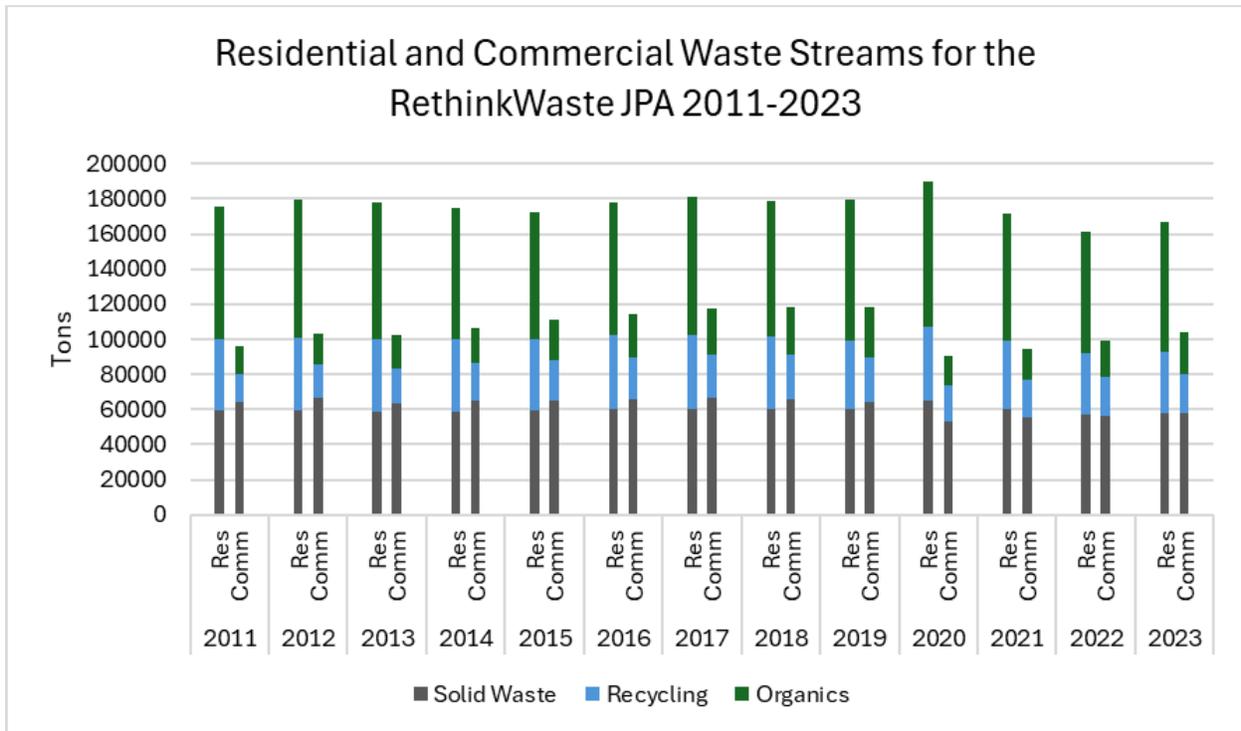


Sources: [About – RethinkWaste](#), [Curbside Collection - SMC Sustainability Department](#)

**Cities and their Properties’ Organic Waste Streams**

Historically, businesses have generated more refuse than homeowners in the County, even though the latter produces more waste overall. During and after the COVID-19 pandemic, however, single-family homes made more refuse and overall waste than businesses. From 2011-2019, homeowners in the RethinkWaste JPA diverted more organic waste tons than garbage tons sent to the landfill (Recology San Mateo County 2024, 2023, 2021). The bar chart below also demonstrates that homeowners have continuously recycled more than businesses. In 2020 and subsequent years, though, residences still diverted more waste in spite of overtaking businesses

in trash sent to landfill. Employees from Republic Services and RethinkWaste were interviewed to explain why this area of the County has this trend and how it differs from other regions.



Sources: [Recology San Mateo County Q4 2023 Report](#), [Recology San Mateo County Annual Report 2022](#), [Recology San Mateo County Annual Report 2020](#)

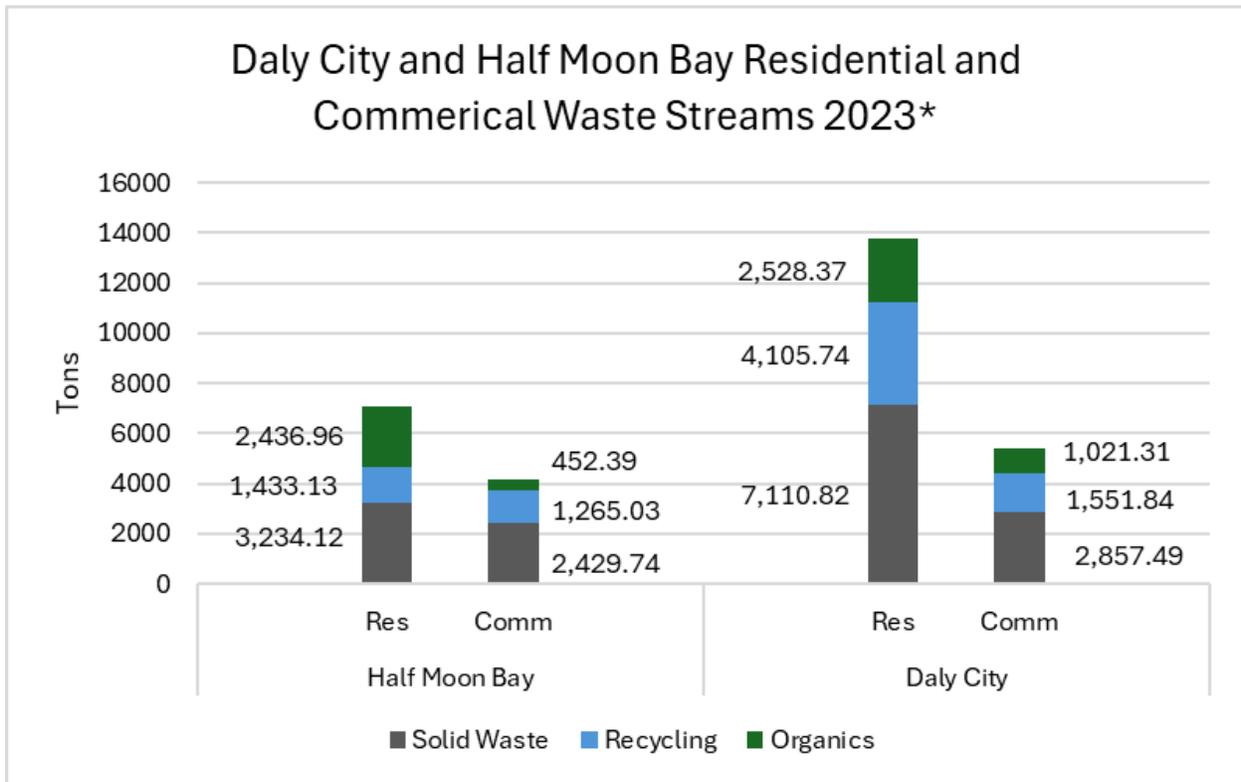
Note: Atherton was a member of RethinkWaste until January 1, 2021; years before 2021 include their tonnages.

RethinkWaste homeowners have higher diversion rates and refuse tons compared to businesses because of takeout and yard waste tonnages. A RethinkWaste representative explained, “We still have a lot of people working from home. We have a lot of businesses that continue to be remote and... are not fully staffed in the way that they were pre-pandemic” (2023). This comment partly reflects two phenomena shown on the chart above. First, it aligns with businesses diverting increased amounts of organic waste throughout the 2010s, only for tonnages to fall in 2020. Second, it accounts for the record organic waste diversion homeowners contributed in 2020.

Expanding on the RethinkWaste view, businesses constantly diverted more organic waste throughout the 2010s because people ate at restaurants more often. Similarly, falling unemployment rates during the period (U.S. Bureau of Labor Statistics 2024) meant more workers ate lunch at their jobs. Once more, the chart displays both factors at work because businesses have been steadily increasing their tons of diverted organic waste post-pandemic. As for the homeowners, the unprecedented organic waste diverted in 2020 probably came from

increased takeout from eateries and bulk purchases from grocery stores. It is obvious these activities existed before the pandemic, but food consumption alone does not explain why single-family homes eclipse businesses in regard to organic waste.

Yard trimmings inflate the weight of organic waste for single-family homes in the RethinkWaste JPA and other cities on the bay compared to coastal communities. This was noted by an official from Republic Services - a hauler covering Daly City, Colma, and Half Moon Bay. The official noted, “Even though more residents are participating in recycling, ... [Daly City does] not have the yards that, let’s say, a San Mateo or a Redwood City house [does]” (2024). The interviewee resumed, “Because diversion is calculated based on weights, they don’t have that yard waste, the grass clippings and stuff that add a lot of weight to the material” (2024). Daly City’s 2023 waste statistics support this claim, as recycling, rather than organics, is the majority of diverted material. Half Moon Bay’s single-family homes probably have greater lawn space than Daly City since the opposite is true.



Sources: Republic Services Half Moon Bay Q4 2023 Report, Republic Services Daly City Q2 FY 2023-2024 Report

\*Daly City’s data is from Q1 and Q2 of fiscal year 2023-2024 (July 1, 2023 to January 30, 2024)

Note: Data for both cities are not publicly available. Jurors received the information from Republic Services.

A lack of lawns, gardens, or yards among certain single-family homes does not mean they are stuck with low diversion rates. The Republic Services official made an observation that can apply to all property types, regardless of green space dimensions. Our interviewee stressed that cities “can throw [green] carts out at everybody,” but residents may not use them or contaminate the cart “so much that it becomes trash” (2024). Single-family homes can improve their current organic waste diversion practices just like their counterparts in multi-family dwellings. Nevertheless, Atherton, Portola Valley, and Woodside have an easier job hitting higher diversion rates because of their huge green spaces. Moreover, they are the only cities with a high diversion organic waste processing facility thanks to their hauler’s two-cart system (GreenWaste n.d.).

The table below, however, shows that neither green spaces nor a two-cart system recover all organics. Each city has 100% participation in commercial and residential accounts due to the two-cart system, which allows food and refuse in gray carts. An employee from the town of Woodside acknowledged that people “... could be putting food waste into the yard trimmings,” but if they follow the process, “there shouldn’t be contamination” (2024). Likewise, the composting facility may have “residuals that don’t compost and those go to the landfill” (2024). A similar scenario would be waste at the materials recovery facility (MRF) that is not recyclable or compostable, which also gets sent to the landfill.

**Table 3. Diverted Organic Waste and Trash: Atherton, Portola Valley, and Woodside 2023**

	<b>Atherton</b>	<b>Portola Valley</b>	<b>Woodside</b>
<b>Trash</b>	1,232.14 tons	1,996.72 tons	2,112.81 tons
<b>Food Waste Composted</b>	1,581.16 tons	2,649.88 tons	2,799.38 tons
<b>Trash</b>	94.77 tons	1.24 tons	20.35 tons
<b>Yard Waste Composted</b>	9,381.98 tons	123.4 tons	2,014.71 tons

Source: GreenWaste Annual Summary 2023

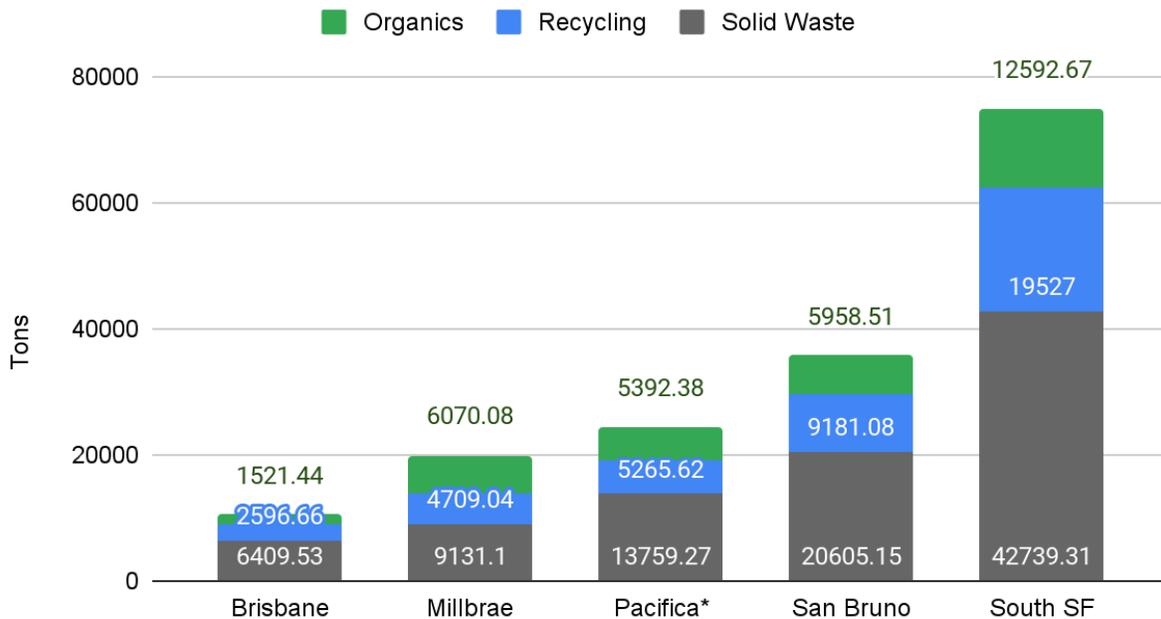
Legend: Green = Green Cart Contents, Gray = Gray Cart Contents

The exact percentage of yard trimmings or food waste that became trash due to contamination is unknown. But, improper waste sorting is a possibility even in communities with predominantly single-family housing. Atherton, Portola Valley, and Woodside only have 20, 36, and 51 commercial accounts within their boundaries respectively (GreenWaste 2023). Still, these minute figures, compared to the thousands of residential accounts, drastically affected diversion rates. Atherton’s total diversion rate stood at 87.39%, while Portola Valley and Woodside had 60.37% and 69.69%, respectively (GreenWaste 2023). After looking at these statistics, it could be

deduced that contamination exists in single-family homes and businesses, though one setting may encourage this behavior more than the other.

Yard waste may not be the sole determinant of the differences between cities' organic waste diversion. Cities in the northern part of the county have participation rates and waste streams not entirely influenced by yard waste. Daly City and the five cities in the chart below have owner-occupied housing populations above the state average (U.S. Census Bureau 2022a, 2022b). As a result, they have more single-family waste management accounts than commercial and multi-family dwellings combined (South SF Scavenger 2024, San Bruno 2024, Pacifica n.d.). Still, four out of five cities have diversion rates below 45% even though their single-family participation rates are above 90% (South SF Scavenger 2024, San Bruno 2024, Pacifica n.d.). If homeowners truly separate waste better than renters or restaurant clientele, then their efforts should have raised overall diversion rates closer to 50% at least. These cities do not separate waste streams by property type to identify if their single-family homes generate more waste than businesses or multi-family dwellings.

### Waste Streams for Northern SMC Cities 2023



Sources: San Bruno - Data on Waste and Recycling Categories 2023, South SF Scavenger 2023 Participation and Diversion Rates, and Pacifica FY 2022-2023 Diversion and Participation Rates  
 \* = Pacifica published data based on their fiscal year, which ran from May 2022 to April 2023

Indeed, giving everyone a green cart or adopting a two-cart model does not mean more organic waste will escape the landfill. Supplying homeowners, renters, and businesses with equal green cart access, and appropriate waste separation, is still important. These fixes are in our Findings and Recommendations sections. The broader point is that SB 1383 compliance works well if cities and counties modify their outreach and recordkeeping practices to bolster organic waste diversion. If San Mateo County and its cities consistently track businesses' and multi-family dwellings' waste trends, and base their outreach around this data, then organic waste diversion should be straightforward.

### **Data Discrepancies**

While not a primary focus of the investigation, the Grand Jury learned of a major discrepancy in the way South San Francisco Scavenger and its client cities compile tonnage data. Brisbane's 2022 Electronic Annual Report (EAR) to CalRecycle, which measures several compliance activities, puts the diversion rate at 64% (Edgar and Associates 2023a). The hauler contracted a consulting firm, Edgar and Associates, to prepare the report (Interview with Brisbane 2022). When the hauler gave the Grand Jury its diversion rate report for 2023, the metric stood at 39.11% (South SF Scavenger). South San Francisco's 2022 EAR had dual diversion rates of 74% and 66% (Edgar and Associates 2023b), while the hauler's 2023 document recorded 42.91% (South SF Scavenger 2024). This report based each cities' tons and diversion rates, shown in the chart above, on the hauler's data.

Inconsistent diversion rate reporting continued in other cities and communication channels. Brisbane's "Waste and Recycling" page on its official website asserts that the city diverts "76% of the waste generated by residents and businesses" (n.d.). South San Francisco Scavenger also provided conflicting data with Millbrae's 2023 diversion rates. The fourth quarter report the hauler sent the city listed a 37.65% diversion rate, but the version they gave to jurors read 54.14% (South SF Scavenger 2023). Cities in the South San Francisco Scavenger area exemplify the risks of relying on haulers too much for data collection. Having conflicting figures for waste diversion does not help cities accurately assess the progress they have made for SB 1383 compliance.

Brisbane, Millbrae, and South San Francisco should reconcile tonnage reports with their haulers to verify which figures are correct. Assuming the cities did experience a massive decline in waste diversion in a year, this occurrence would still be unusual. An investigation into diversion rates does not adversely affect the per capita disposal rates these cities send to the state. Fixing these errors is important so city governments know what proportion of all waste is organics, recycling, or garbage over time. It is highly likely these mistakes come from the sophisticated way Edgar and Associates converts the per capita disposal rates to regular diversion rates. They present their equation below.

**Equation 2. Edgar and Associates Diversion Rate Conversion from Per Capita Disposal Rates**

$$\text{Waste Generation} = \text{Target PPD} \times 2$$

Using SB 1016 to Determine Jurisdictional Diversion: CalRecycle does not convert the new SB 1016 disposal target into an AB 939 diversion rate, since SB 1016 shifted AB 939 compliance from the landfill diversion rate to the disposal target. Edgar & Associates, Inc. provides that calculation by using the CalRecycle-determined waste disposal target that is the 50% landfill diversion equivalent (and doubled the 50% disposal equivalency target to determine the waste generation on a PPD basis), multiplied by the current population. The actual disposal rate reported to CalRecycle is then divided by the waste generation rate to determine the jurisdiction's current landfill diversion rate equivalency.

$$\text{Jurisdiction Landfill Diversion Rate Equivalency \%} =$$

$$\frac{(\text{actual disposal PPD} \times \text{current population}) \times 100}{(\text{waste generation PPD}) \times \text{current population}}$$

**Calculating Diversion Rate for South San Francisco for 2022**

<b>Waste Generation (tons) =</b>	64,325 population × (6.9 Target PPD × 2) × 365 ÷ 2000 = 162,003 tons generated
<b>Waste Disposal (tons) =</b>	54,399 tons disposed
<b>Tons Diverted =</b>	162,003 tons generated – 54,399 tons disposed = 107,604 tons diverted
<b>Waste Diversion Rate =</b>	107,604 tons diverted ÷ 162,003 tons generated = 66% waste diversion rate
<b>Actual Disposal (PPD) =</b>	54,399 tons disposed ÷ 64,325 actual population × 2000 ÷ 365 = 4.6 PPD

(Source: Edgar and Associates 2023a)

Republic Services, Recology of San Mateo County, and GreenWaste have a much simpler equation that does not involve converting the per capita disposal rate. These haulers merely add the total tons of recycling, organics, and rubbish they collect to get a diversion rate.

$$[(R+O)/(R+O+S)] * 100 = \text{Diversion Rate \%}$$

**R:** Recycling tons, **O:** Organic tons, **S:** Solid Waste tons

(Sources: Republic Services 2024a and 2024b, [Recology San Mateo County Q4 2023 Report](#), GreenWaste 2023)

If the difference in calculations explains the unequal diversion rates, the simpler diversion rate formula would be preferable. Cities should negotiate with their haulers to have them compute these percentages in quarterly or annual reports separate from the EAR. Such a change reduces Edgar and Associates' EAR workload and leaves cities with one reliable waste diversion

measure. Brisbane, Millbrae, and South San Francisco will also have the opportunity to compare their metrics with fellow governments that use the same methods. The simpler method, using Scavenger's tons, should yield the same diversion rates jurors obtained in the last chart.

If diversion rates are unequal because of varying tonnage measurements from the hauler, cities should investigate Scavenger's transfer station scales. Scavenger's 2023 fourth quarter report to Millbrae had 1,116.78 tons more in its total tonnage than in the annual report it gave to jurors. Another scenario would be that the hauler gave the Grand Jury and Millbrae different data. Either way, Millbrae (and its sister cities, if applicable) should scrutinize weights measured at the transfer station to pinpoint if Scavenger furnishes contradictory data.

In the previous graph, five cities were included as not dividing their waste streams by property type. Atherton, Portola Valley, and Woodside are similar in this regard because they only divide recyclables by single-family homes and businesses (GreenWaste 2023). We recommend cities of the GreenWaste, South San Francisco Scavenger, Recology of the Coast, and Recology San Bruno areas begin dividing their data by the three property types. The County cannot continue having contradictory forms of waste generation reporting. Aggregate waste reports prevent local governments from seeing how severely economic turmoil causes businesses' diversion rates to tumble. On the same note, South San Francisco, Recology of the Coast, and Recology San Bruno cities do not know how serious renter turnover might affect multi-family diversion rates.

Cities in these hauler areas should have a comfortable transition into segregating organics, recycling, and solid waste streams by three property types. Pacifica, Atherton, Portola Valley, Woodside, and Brisbane have owner-occupied housing populations larger than the national average. Meanwhile, South San Francisco, San Bruno, and Millbrae have owner-occupied housing populations larger than the state average. In other words, these cities are mostly residential, and their haulers can discern where refuse and organic tons originate. If haulers have the technical and infrastructural capabilities to portray a waste management story, cities should not be in the dark. Jurors and cities had to ask haulers for either participation rates or diversion rates throughout the investigation.

If haulers and cities do not have the resources necessary to split waste into three property types, they can come up with a long-term plan to do so. Currently, jurisdictions must conduct "annual visual inspections" called "route reviews," in which they randomly inspect "containers for contamination on all collection routes" (CalRecycle n.d2.). Following these inspections, jurisdictions must "notify all generators on the sampled hauler routes and provide education on proper material separation" (n.d2.). In San Mateo County, Republic Services, Recology of the Coast, and South San Francisco Scavenger "lid flip" bins to check for contamination (Interviews 2024). Republic Services leaves tags on contaminated residential bins and calls businesses and multi-family dwellings about it (Interviews 2024).

Waste evaluations are conducted at least in two distinct seasons of the year [per 14 CCR section 18984.5(c)]” (CalRecycle n.d2.). If jurisdictions find more than 25% contamination in any container type, they can perform “a targeted route review of containers... to determine sources of contamination (n.d3.). Later, they notify and provide education to those generating contamination” (n.d3.). Local governments should increase the frequency of waste evaluations, specifically on routes with high levels of contamination. Jurisdictions will use their outreach capabilities more efficiently this way.

All documentation of route reviews must be stored in the state’s Implementation Record (CalRecycle n.d2.). Some of the information included are Notices of Violation and penalty order copies. These documents must be accompanied by a list of dates acknowledging entities have complied with warnings or sanctions (CalRecycle n.d2.). Jurisdictions must include “a description of the hauler route and addresses covered by a route review” (n.d2.).

Instead of simply preserving time sensitive data, the Grand Jury suggests jurisdictions analyze past and current contamination trends in problem routes. Cities that struggle splitting diversion rates and waste tons by property type can use this method to track their progress at minimizing organic waste contamination. Perhaps cities will improve their organic waste diversion results if they implement these changes.

Local governments cannot leave their residents in the dark as well. If citizens pay for waste collection service, they have the right to know how well each property type separates waste. None of the entities interviewed, except RethinkWaste, had copies of annual or quarterly waste reports on their government websites. Brisbane, Woodside, and Pacifica are some examples of cities that had no idea why their haulers do not separate waste by three property types (2024). Jurors propose cities publish any past, present, and future waste statistics on their government websites following this report’s release.

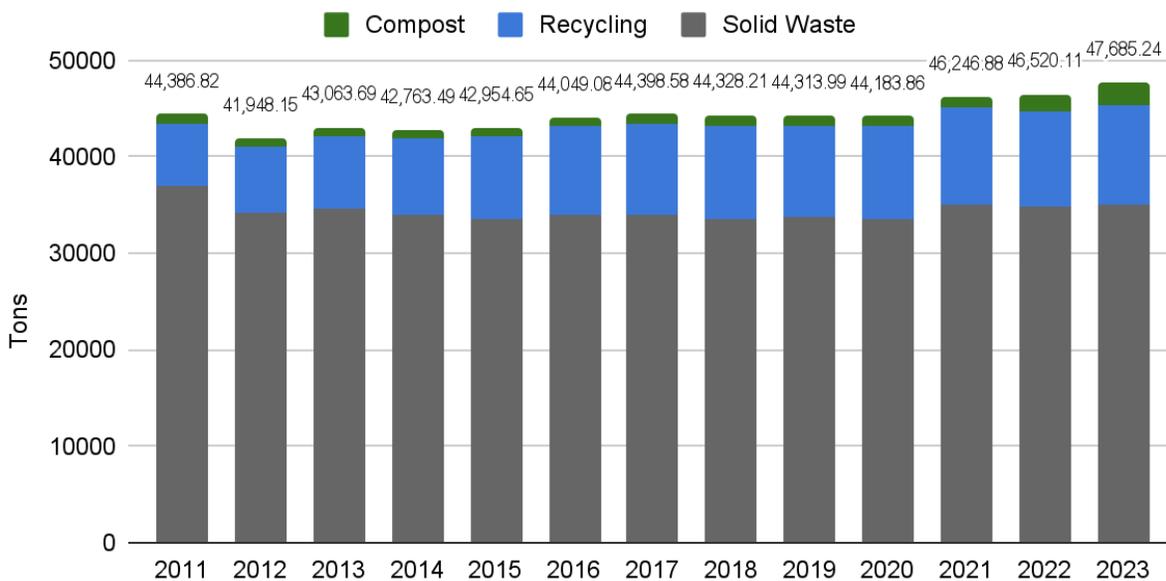
The Civil Grand Jury recommends setting a waste reporting standard across the County. Without a common measurement, cities might not reduce 75% of organic waste disposal from 2014 levels by 2025. Jurors understand the state imposed this goal on itself and not on individual jurisdictions. Nonetheless, if the County adopts a mentality of consistently increasing diversion rates, citizens will reap the social savings. If cities keep increasing the price of garbage collection (DiNapoli 2024, Mata 2024) for the same amount of landfill tons, then methane emissions will not abate.

### **Barriers Exclusive to Businesses and Multi-Family Dwellings**

Multi-family dwellings and businesses cannot match the participation and diversion rates of single-family homes due to socioeconomic and infrastructural problems. One Sustainability

Department official said since “tenants sometimes cycle in and out every year... the resources involved to do... outreach [for] a multi-family building” is very “intensive” (2024). Another important component is that residents who live in apartments with trash chutes “have to find different ways to compost or set up bins in separate areas” (2024). Meanwhile, businesses may welcome irregular clients who “don’t know what the rules are” (2024). In spite of these disadvantages, multi-family dwellings in the RethinkWaste area have steadily increased their compost and recycling tons over the last decade (Recology San Mateo County 2024, 2023, 2021). Some city governments have even worked around these problems altogether.

### RethinkWaste JPA: Multi-Family Dwellings Waste Streams 2011-2023



Sources: [Recology San Mateo County Q4 2023 Report](#), [Recology San Mateo County Annual Report 2022](#), [Recology San Mateo County Annual Report 2020](#)

Rising recycling and organic tons for multi-family dwellings over the years indicate that tenants strive to segregate waste properly. Unlike businesses, waste generation in multi-family dwellings does not rise and fall based on economic booms or busts. Crucially, renter turnover has not created drastic ebb and flow patterns for tonnage. Aside from landlord willingness, building age is very likely to be multi-family dwellings’ greatest barrier to increasing green bin participation. According to the U.S. Census Bureau, 65.36% of existing renter-occupied housing units are from before 1980 (2022c). Cities must consider the difficulty of setting up green bins among older apartment buildings using trash chutes.

San Bruno pursues a novel strategy for multi-family dwellings' organic waste collection compared to other cities. A Recology of San Bruno official finds that larger apartment complexes have a harder time complying. The hauler works with landlords to find the best location for green carts "to make it very simple for the residents" (2024). Better yet, the local government treats "multi-family as residential, and there is no cost for the multi-families in San Bruno to participate" (2024). Including green bin service in the price of standard refuse collection has brought 73% of multi-family dwellings in compliance with SB 1383 (San Bruno 2024). As of March 13, 2024, 109 multi-family dwellings remain non-compliant (Recology of San Bruno).

Interviews with several cities confirm that they require new property developments to provide enough space for the three-cart system. Pacifica, Daly City, Millbrae, and all RethinkWaste cities have their planning departments partner with haulers to review building plans (2024). A South San Francisco city employee stated that the city and hauler reviews waste enclosure spaces for new businesses but not multi-family dwellings (2024). Given that Woodside does not have multi-family dwellings, the city scrutinizes building plans for new commercial properties only (2024). City officials from Brisbane and Half Moon Bay were uncertain about how municipal departments handle new development reviews (2024).

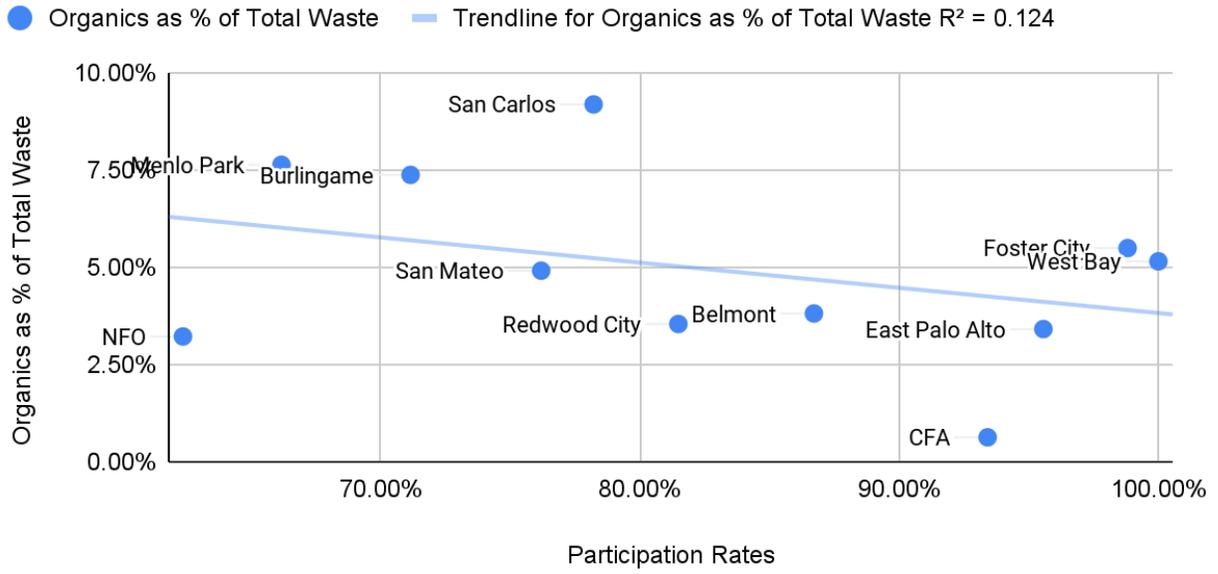
If cities can prepare future infrastructure with the waste enclosures they need, it should be possible for them to start doing the same for existing, non-compliant multi-family dwellings. RethinkWaste is already ahead of the curve on this front and hopes to build on the San Bruno model. On March 14, 2024, RethinkWaste's Technical Advisory Committee (TAC) announced that Recology of San Mateo "was open to a town hall format" to increase participation. At the next TAC meeting, the agency declared it will send invitational emails to businesses and multi-family dwellings for "virtual or in-person" SB 1383 compliance presentations held in June (2024). It is unknown at this point if any landlords or business owners have accepted such invitations or if the agency has begun holding these meetings.

RethinkWaste presently makes phone calls and letters to non-compliant property types (2024). City employees from Brisbane, South San Francisco, and Daly City have disclosed that outreach activities include releasing newsletters, emails, and social media posts (2024). A Half Moon Bay staff member reported that the city received a grant from CalRecycle to give non-compliant businesses green bins across downtown (2024). A Recology of the Coast official says they distribute flyers and mailers and work with a compliance officer in Pacifica (2024).

The Civil Grand Jury appreciates the massive resource and labor mobilization from haulers and cities to perform these activities. Yet, these actions have consumed significant time in relation to meaningful effects. The scatter plots and tables below for jurisdictions inside and outside the RethinkWaste area describe the unfinished participation progress for multi-family dwellings and

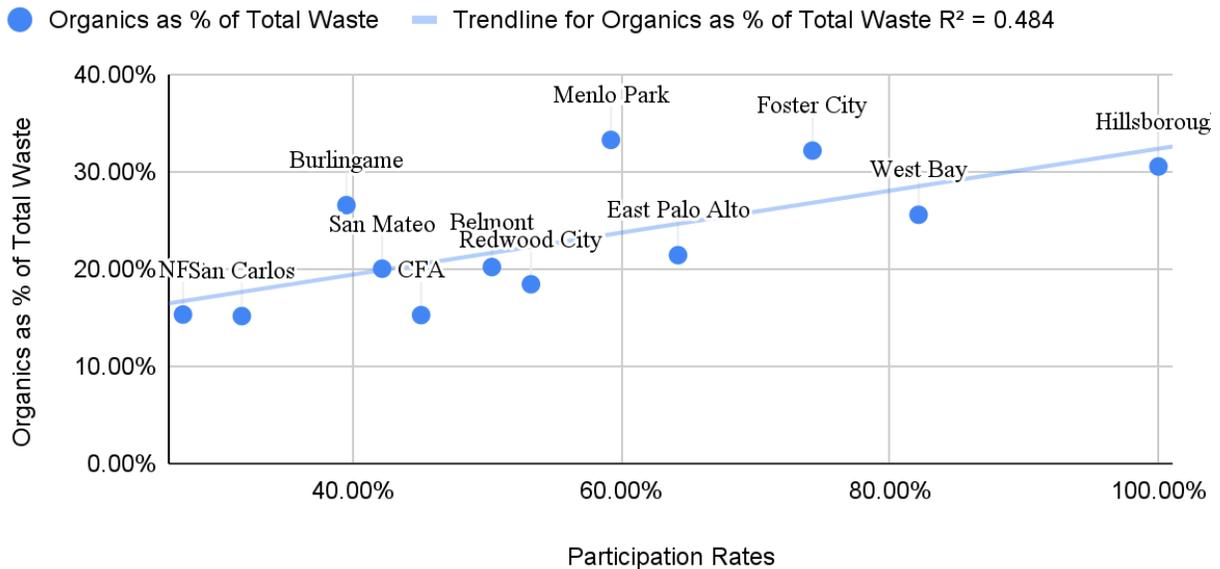
businesses. Even if the visual data included properties with waivers, hauler data reveals that many properties are still without organics collection. Daly City, Half Moon Bay, and their hauler, Republic Services, did not give the Grand Jury reliable participation rate data.

## RethinkWaste 2023: Multi-Family Participation Rate vs. Organics as % of Total Waste



Sources: [Recology San Mateo County Q4 2023 Report](#), Recology San Mateo County February 2024 Participation Rate Tables (see Appendix)

## RethinkWaste 2023: Commercial Participation Rate vs. Organics as % of Total Waste



Sources: [Recology San Mateo County Q4 2023 Report](#), Recology San Mateo County February 2024 Participation Rate Tables (see Appendix)

Both scatter plots affirm the assumption that high participation rates to organic waste collection does not increase the share of organic waste in total tonnages. The weak coefficients of determination ( $R^2$ ) tell us that green bin enrollment explains less than 50% of changes in organic waste proportions for businesses and multi-family dwellings. Multi-family dwellings in the RethinkWaste area have the most alarming statistic: less than 10% of their total waste tons are organic waste. It would appear that cities may have consciously or unconsciously prioritized one property type over another. For instance, San Mateo County enrolled twice as many multi-family dwellings for green cart service in the County Franchised Area (CFA) than its businesses.

The scatter plots also reveal that San Mateo County has stranded North Fair Oaks in the SB 1383 compliance process. Businesses and multi-family dwellings in the community have the lowest participation rates and organic waste proportions in the entire RethinkWaste JPA. It is unacceptable for a County tract with a compact area to have less resources than its neighbors. At the Discussion’s onset, the hurdles unincorporated regions pose for compliance were described. North Fair Oaks has similar participation statistics like its coastal counterparts in the Granada Community Services District (GCSD) and Montara Water and Sanitary District (MWSD). RethinkWaste and San Mateo County can combine their resources to level the playing field within the JPA.

**Table 4. Recology San Bruno Participation Rates 2023**

Business	Total	MFD	Total
Total # Subject to SB1383	469	Total # Subject to SB1383	583
Total # Compliant	144	Total # Compliant	427
Total Exceptions	56	Total Exceptions	47
% Participation	31%	% Participation	73%
Total # Non Compliant	269	Total # Non Compliant	109

NOTE: Compliant = Subscribed for organics service. Exceptions = City-issued waivers.

Source: Recology of San Bruno Interview

**Table 5. Brisbane, Millbrae, and South San Francisco Participation Rates**

Row Labels	Column Labels		Count of Compliant?2		Total Count ( Total Count (	
	NO	YES	NO	YES		
<b>BRIS</b>	61	1,503	3.90%	96.10%	1,564	100.00%
Residential	11	1,294	0.84%	99.16%	1,305	100.00%
Multi Family	3	49	5.77%	94.23%	52	100.00%
Commercial	47	160	22.71%	77.29%	207	100.00%
<b>MILL</b>	254	5,804	4.19%	95.81%	6,058	100.00%
Residential	34	5,527	0.61%	99.39%	5,561	100.00%
Multi Family	91	139	39.57%	60.43%	230	100.00%
Commercial	129	138	48.31%	51.69%	267	100.00%
<b>SSF</b>	1,489	15,515	8.76%	91.24%	17,004	100.00%
Residential	505	14,570	3.35%	96.65%	15,075	100.00%
Multi Family	276	281	49.55%	50.45%	557	100.00%
Commercial	708	664	51.60%	48.40%	1,372	100.00%
<b>Grand Total</b>	<b>1,804</b>	<b>22,822</b>	<b>7.33%</b>	<b>92.67%</b>	<b>24,626</b>	<b>100.00%</b>

Source: Source: South SF Scavenger 2023 Participation and Diversion Rates

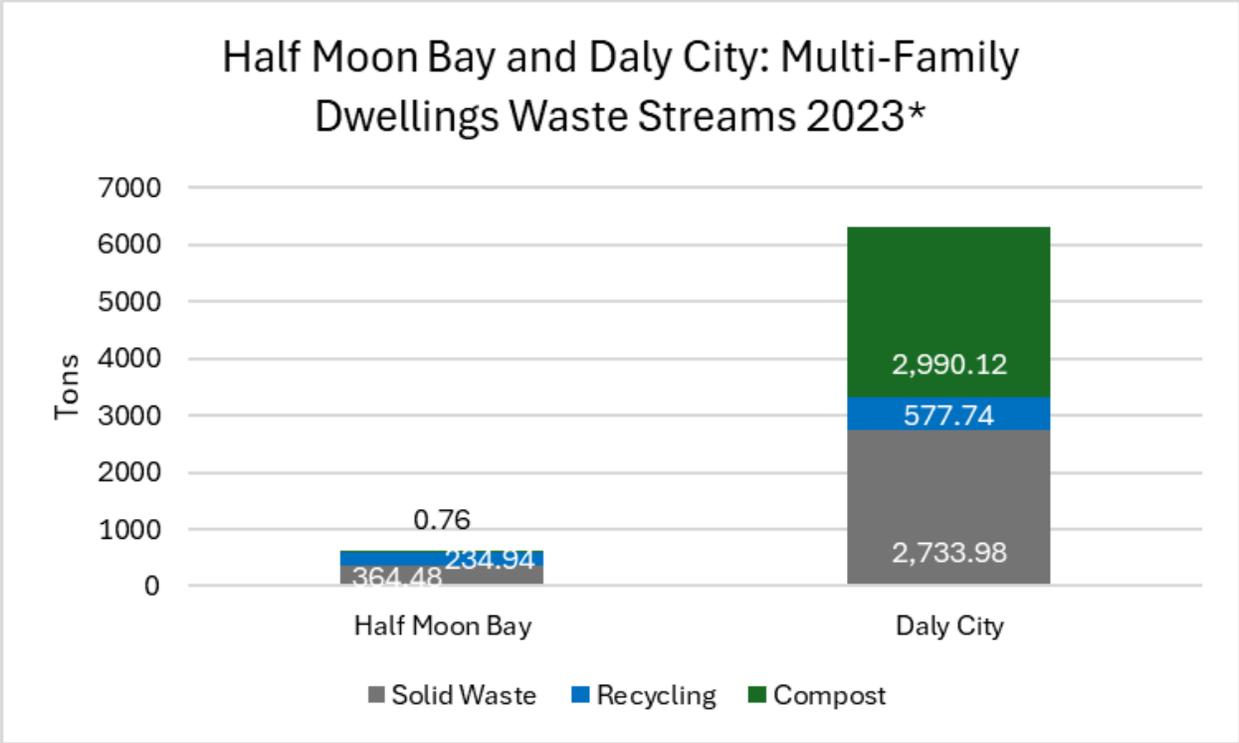
**Table 6. Recology of the Coast Participation Rates FY 2022-2023**

	Pacifica	Granada	Montara
Total Residential Subscribers	11,293	2,060	1,849
Total Residential Subscribers with Organics Service	11,184	2,022	1,820
Participation Rate	99%	98%	98%
Total Commercial* Subscribers	574	131	56
Total Commercial* Subscribers with Organics Service	275	68	8
Participation Rate	48%	52%	14%
* NOTE: Commercial includes multi-family			

Source: Recology of the Coast Interview

One recommendation is that RethinkWaste and non-JPA cities have a mass enrollment summit for multi-family dwellings and businesses. Solving the problem means holding these meetings at regular intervals until there is 100% green cart participation rate for both property types. On-site enrollment, rather than virtual presentations, holds property managers and business owners accountable. Public agencies need to receive input from the parties to address the troubles keeping them from enrolling. Cities, the County, and RethinkWaste can advise these individuals on cost-effective green cart adoption. Jurisdictions should explicitly state that monetary penalties are inevitable unless they attend these green bin enrollment summits.

If renters perfectly segregated their waste, a high percentage of the stream would be organic material, much like that of homeowners. Daly City’s multi-family dwellings, surprisingly, were the only ones in the County to have higher diversion rates than single-family homes thanks to thousands of diverted tons of organic waste. Multi-family dwellings diverted 57% of their waste while single-family homes diverted 48% (Republic Services 2024a). When interviewed, a representative from Republic Services said that an arduous program explained the phenomenon. Presently, the hauler pulls “organics out of the trash,” which is “not a very good” and “costly system” (2024). The representative predicted the “program is likely going... away, so we’ll be doing something different with our multifamily” (2024).



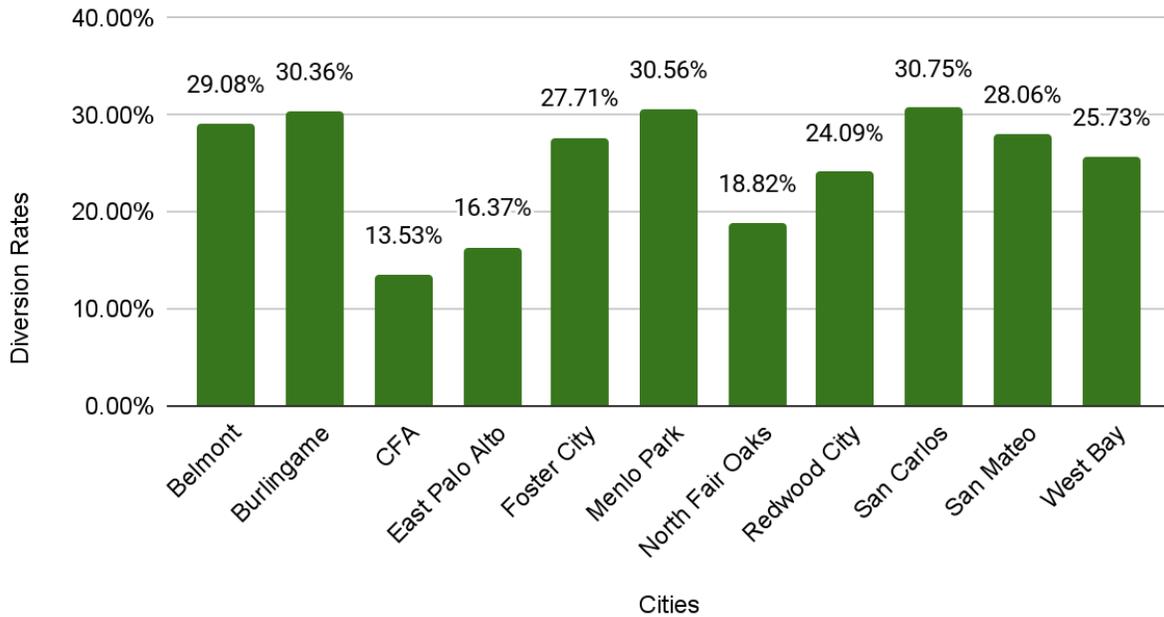
Sources: Republic Services Half Moon Bay Q4 2023 Report, Republic Services Daly City Q2 FY 2023-2024 Report

\*Daly City’s data is from Q1 and Q2 of fiscal year 2023-2024 (July 1, 2023 to January 30, 2024)

Note: Data for both cities are not publicly available. Jurors retrieved the information by requesting it from Republic Services.

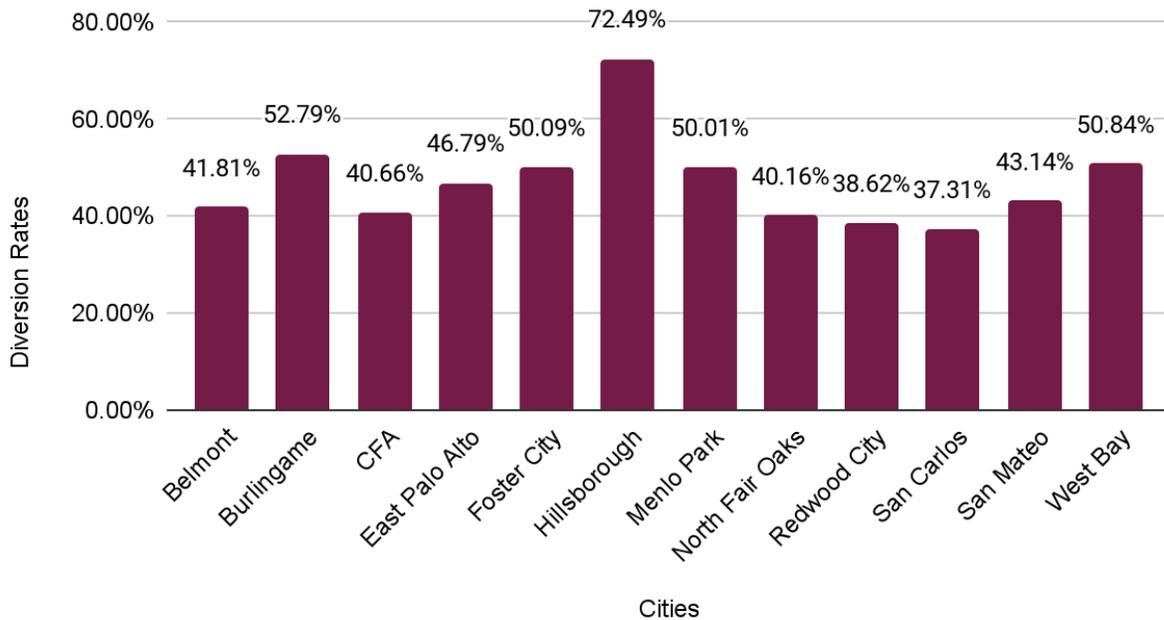
Despite this inefficient system causing high diversion rates for multi-family dwellings, it proves that tenants generate more organic waste than rubbish. Jurisdictions should not consider getting renters to sort waste properly a lost cause, for this data proves that contamination is responsible for low diversion rates. High subscription rates for green cart service and apartment buildings with distant waste enclosures contribute to low participation rates. The Sustainability Department interviewee remarked, “Sometimes these landlords...vary in how easy they are to implement things like [organic waste collection]” (2024). The official added, “especially if it hits their bottom line about increased costs for adding compost to recycling service” (2024). It is highly recommended that haulers put signage on green carts if they do not have this practice already.

## RethinkWaste 2023: Multi-Family Dwellings Diversion Rates



Sources: [Recology San Mateo County Q4 2023 Report](#)

## RethinkWaste 2023: Commercial Diversion Rates



Sources: [Recology San Mateo County Q4 2023 Report](#)

## **FINDINGS**

**F1.** High green cart enrollment costs and insufficient bin space are the dominant contributors to low participation rates among multi-family dwellings and businesses.

**F2.** Green bin contamination among compliant multi-family dwellings and businesses prevents them from diverting more organic waste.

**F3.** City, County, and RethinkWaste compliance outreach efforts for multi-family dwellings and businesses could improve because a significant portion of these properties remain non-compliant.

**F4.** Multi-family dwellings and businesses produce a significant amount of the County's organic waste.

**F5.** Citizens cannot conveniently access reliable diversion and participation rates because JPAs and cities do not make the information available on their government websites.

**F6.** Assessing progress on organic waste diversion in Atherton, Brisbane, Millbrae, Pacifica, San Bruno, South San Francisco, and Woodside is difficult because they and their haulers do not separate waste tons by property type on their annual or quarterly reports.

**F7.** An alternate and reliable method to separating waste tons by property type would be analyzing contamination statistics from route audits and waste evaluations.

**F8.** Brisbane, South San Francisco, and Millbrae cannot properly track their waste trends since their hauler and contractor have contradictory diversion rate formulas and tonnage measurements.

## **RECOMMENDATIONS**

**R1.** Beginning March 1, 2025, cities, the County, and RethinkWaste should host regular in-person green cart enrollment summits for non-compliant businesses and multi-family dwellings, and identify other new compliance strategies.

**R2.** Beginning January 1, 2025, Brisbane, South San Francisco, and Millbrae should investigate their Electronic Annual Report contractor's diversion rate conversion formulas and their hauler's waste scales.

**R3.** By July 1, 2025, Brisbane, South San Francisco, and Millbrae should begin using the simpler diversion rate calculation the report mentioned or develop a contingency plan if their hauler’s scales are inaccurate.

**R4.** Beginning November 30, 2024, cities should publish quarterly or annual waste reports with diversion and participation rates on their government websites.

**R5.** Beginning December 31, 2024, cities should separate waste tons and diversion rates into the three (or two) property types (business, residential, multi-family) in their annual or quarterly reports.

**R6.** Starting April 1, 2025, cities that cannot separate waste tons and diversion rates by property type should conduct waste evaluations on highly contaminated routes more often.

**R7.** Starting May 1, 2025, cities that cannot separate waste tons and diversion rates by property type should analyze problematic routes’ past and present contamination trends to track their progress.

**R8.** By February 1, 2025, jurisdictions should develop and implement new ways to make green bins usable in multi-family dwellings’ and businesses’ narrow or small waste enclosures.

## REQUESTS FOR RESPONSES

Pursuant to Penal Code 933.05 the Grand Jury requests responses from the following governing bodies.

Jurisdiction	Findings	Recommendations
Town of Atherton	2, 4, 5, 6, 7	4, 5, 6, 7
City of Brisbane	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8
City of Daly City	1, 2, 3, 4, 5, 7	1, 4, 8
City of Half Moon Bay	1, 2, 3, 4, 5, 7	1, 4, 8
City of Millbrae	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8
City of Pacifica	1, 2, 3, 4, 5, 6, 7	1, 4, 5, 6, 7, 8
RethinkWaste JPA	1, 2, 3, 4, 5, 7	1, 4, 8

City of San Bruno	1, 2, 3, 4, 5, 6, 7	1, 4, 5, 6, 7, 8
San Mateo County	1, 2, 3, 4, 5, 7	1, 4, 8
City of South San Francisco	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8
Town of Woodside	2, 4, 5, 6, 7	4, 5, 6, 7

The governing bodies indicated above should be aware that the comment or response of the governing body must be subject to the notice, agenda, and open meeting requirement of the Brown Act.

## RESPONSE REQUIREMENTS

California Penal Code Section 933.05 provides the following regulations (emphasis added).

- 1.) For purposes of subdivision of Section 933, as to each Grand Jury finding, the responding person or entity shall report one of the following:
  - a.) The respondent **agrees** with the finding.
  - b.) The respondent **disagrees** wholly or partially with the finding; in which case the response **shall specify the portion of the disputed finding and shall include an explanation of the reasons.**
  
- 2.) For purposes of subdivision of Section 933, as to each Grand Jury recommendation, the responding person or entity shall report one of the following actions:
  - a.) The recommendation has been implemented, **with a summary regarding the implemented action.**
  - b.) The recommendation has yet to be implemented but will be implemented in the future, **with a timeframe for implementation.**
  - c.) The recommendation requires further analysis, **with an explanation and the scope and parameters of an analysis or study and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall be at most six months from the Grand Jury report's publication date.**
  - d.) The recommendation will not be implemented because it is not warranted or is not reasonable, **with an explanation therefore.**

## GLOSSARY

### **CalRecycle (California Department of Resources Recycling and Recovery)**

State department formed in 2010 that manages recycling and waste management programs to reduce waste and reuse all materials. Enforces the Integrated Waste Management Act and Beverage Container Recycling and Litter Reduction Act so Californians can use less, recycle more, and take resource conservation to higher and higher levels. (Source: [About Us CalRecycle](#))

### **County Service Area**

County Service Areas (CSAs) are entities that provide government services by counties within unincorporated areas. It allows communities to fund a service by charging a direct assessment or property-related fee for services such as water and/or sewer service, road and/or drainage maintenance, street lighting, fire protection and/or landscaping. The County Board of Supervisors acts as the governing body for the County Service Areas. (Source: [Special Districts in San Mateo County](#))

### **Disposal-Related Activities**

<p><u>Alternative daily cover (ADC) and Alternative intermediate cover (AIC)</u></p> <p>The use of materials to cover disposed waste in a landfill cell at the end of the landfill operating day (daily cover) or at some other interval (intermediate cover) to control odors, fire, vectors, litter, and scavenging. Green and non-green ADC exist.</p>	<p>Engineered Municipal Solid Waste (EMSW), waste-tire derived fuel, and other beneficial reuse (construction or landscaping) at landfills (such as construction activities, landscaping, and erosion control).</p>	<p><u>Transformation</u></p> <p>The use of incineration, pyrolysis, distillation, or biological conversion to combust unprocessed or minimally processed solid waste to produce electricity. Transformation does not include gasification, composting, or biomass conversion.</p>
---	---	---

(Source: [State of Disposal and Recycling in California for Calendar Year 2022](#))

### **Franchise Area**

Franchised areas are communities where municipalities or special districts have used their bulk purchasing power to negotiate rates with a hauler to provide waste collection services. (Source: [Curbside Collection - SMC Sustainability Department](#))

### **High Diversion Organic Waste Processing Facilities (HDPFs)**

“High diversion organic waste processing facility” means a facility that is in compliance with the reporting requirements of Section 18815.5(d) and meets or exceeds an annual average mixed waste organic content recovery rate of 50 percent between January 1, 2022 and December 31, 2024, and 75 percent after January 1, 2025 as calculated pursuant to Section 18815.5(e) for organic waste received from the “Mixed Waste Organic Collection Stream” as defined in Section 17402(a)(11.5). (Source: [Short-Lived Climate Pollutants, California Code of Regulations \(West\) title 14, § 18982](#))

### **Joint Powers Authority (JPA)**

A joint powers agency (JPA) consists of two or more public agencies that jointly exercise any power common to both through a joint powers agreement or contract. The agreement may set up a governing board composed of representatives of the contracting agencies and defines the JPA's governance and functions. (Source: [Joint Powers Agencies Providing Municipal Services in San Mateo County](#))

### **Milton Marks “Little Hoover” Commission**

The Little Hoover Commission, formally known as the Milton Marks “Little Hoover” Commission on California State Government Organization and Economy, is an independent state oversight agency created in 1962. The Commission’s mission is to investigate state government operations and policy, and – through reports and legislative proposals – make recommendations to the Governor and Legislature to promote economy, efficiency and improved service in state operations. In addition, the Commission has a statutory obligation to review and make recommendations on all proposed government reorganization plans. (Source: [About the Commission](#))

### **Organic Waste**

“Organic waste” means solid wastes containing material originated from living organisms and their metabolic waste products including, but not limited to, food, green material, landscape and pruning waste, organic textiles and carpets, lumber, wood, paper products, printing and writing paper, manure, biosolids, digestate, and sludges. (Source: [Short-Lived Climate Pollutants, Cal. Code Regs. tit. 14 § 18982 \(2020\)](#))

### **RethinkWaste (South Bayside Waste Management Authority)**

In 1982, eleven local governments (Belmont, Burlingame, East Palo Alto, Foster City, Hillsborough, Menlo Park, Redwood City, San Carlos, San Mateo, San Mateo County and the West Bay Sanitary District) in San Mateo County formed RethinkWaste, AKA the South Bayside Waste Management Authority (SBWMA). It is a joint powers authority that owns and manages the Shoreway Environmental Center in San Carlos, California. The site receives all the

recyclables, green waste and garbage collected from the Member Agencies. Other responsibilities include supporting and managing service providers that collect, process, recycle and dispose of materials on behalf of the JPA. (Source: [About RethinkWaste](#))

## BIBLIOGRAPHY

Brisbane, Cal., n.d. “Waste and Recycling.” Accessed June 10, 2024.  
<https://www.brisbaneca.org/publicworks/page/waste-and-recycling>.

Browning, Corey. 2022. “New Compost Requirements in San Mateo County.” *San Mateo Daily Journal*, August 11, 2022. [https://www.smdailyjournal.com/news/local/new-compost-requirements-in-san-mateo-county/article\\_8baa7ce6-45f6-11ec-9be7-8325579e56c6.html](https://www.smdailyjournal.com/news/local/new-compost-requirements-in-san-mateo-county/article_8baa7ce6-45f6-11ec-9be7-8325579e56c6.html).

California Air Resources Board. 2023. “California Greenhouse Gas Emissions from 2000 to 2021: Trends of Emissions and Other Indicators.” Released December 14, 2023.  
[https://ww2.arb.ca.gov/sites/default/files/2023-12/2000\\_2021\\_ghg\\_inventory\\_trends.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf).

California Air Resources Board. 2019. “Aerial methane survey finds a fraction of point sources responsible for more than a third of California’s methane emissions.” Released November 6, 2019. <https://ww2.arb.ca.gov/news/aerial-methane-survey-finds-fraction-point-sources-responsible-more-third-californias-methane#:~:text=According%20to%20the%20survey%2C%20just,of%20California's%20total%20methane%20emissions>.

California Department of Finance. 2024. “E-1 Cities, Counties, and the State Population and Housing Estimates with Annual Percent Change - January 1, 2023 and 2024.” Released May 1, 2024. <https://dof.ca.gov/forecasting/demographics/estimates-e1/>.

California Department of Finance. 2022. “E-4 Population Estimates for Cities, Counties, and the State, 2011–2020, with 2010 Census Benchmark.” Last Revised May 2022.  
[https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Demographics/Documents/E-4\\_2010-2020-Internet-Version.xlsx](https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Demographics/Documents/E-4_2010-2020-Internet-Version.xlsx).

California Department of Finance. 2012. “E-4 Population Estimates for Cities, Counties, and the State, 2001–2010, with 2000 & 2010 Census Counts.” Last Revised November 9, 2012.  
[https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Demographics/Documents/E4\\_2000-2010\\_Report\\_Final\\_EOC\\_000.xlsx](https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Demographics/Documents/E4_2000-2010_Report_Final_EOC_000.xlsx).

California Health and Safety Code § 39711 (2014).

[https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article=](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article=).

California Health and Safety Code § 39730.6 (2016).

[https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=HSC&sectionNum=39730.6](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=39730.6).

California Public Resources Code § 41780 (1989).

[https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=PRC&sectionNum=41780](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=41780).

California Public Resources Code § 42652.5 (2022).

[https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=PRC&sectionNum=42652.5](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=42652.5).

CalRecycle. 2024. “State of Disposal and Recycling in California for Calendar Year 2022.” Released February 8, 2024. <https://www2.calrecycle.ca.gov/Publications/Download/1907>.

CalRecycle. 2022a. “2021 Disposal Facility-Based Waste Characterization Data Tables.” Released November 2022. <https://www2.calrecycle.ca.gov/Docs/Web/122544>.

CalRecycle. 2022b. “Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report.” Accessed May 9, 2024.

<https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal>.

CalRecycle. 2021. “State of Disposal and Recycling in California for Calendar Year 2020.” Released December 28, 2021. <https://www2.calrecycle.ca.gov/Publications/Download/1754>.

CalRecycle. 2020. “State of Disposal and Recycling in California for Calendar Year 2018.” Released April 6, 2020. <https://www2.calrecycle.ca.gov/Publications/Download/1453>.

CalRecycle. n.d1. “Department-Approved Waivers for Reporting Entities.” Accessed May 5, 2024. <https://calrecycle.ca.gov/organics/slcp/waivers/approved/#LPWcities>.

CalRecycle. n.d2. “Jurisdiction Enforcement.” Accessed June 21, 2024. <https://calrecycle.ca.gov/organics/slcp/enforcement/jurisdiction/>.

CalRecycle. n.d3. “New Statewide Mandatory Organic Waste Collection.” Accessed May 19, 2024. <https://calrecycle.ca.gov/organics/slcp/collection/>.

DiNapoli, Alyse. 2024. "Garbage rates are set to jump in San Mateo." *San Mateo Daily Journal*, April 18, 2024. [https://www.smdailyjournal.com/news/local/garbage-rates-are-set-to-jump-in-san-mateo/article\\_87aa257e-eb21-11ee-a6a5-2f28cac97939.html](https://www.smdailyjournal.com/news/local/garbage-rates-are-set-to-jump-in-san-mateo/article_87aa257e-eb21-11ee-a6a5-2f28cac97939.html).

D'Souza, Shereen. "Hearing on Organic Waste Recycling (Part 3), September 8, 2022." Milton Marks Commission interview, 28:31-28:44. <https://www.youtube.com/watch?v=CJbMlCaI9lc>.

Edgar and Associates, Inc. 2023a. "City of Brisbane Annual Report 2022." Published August 1, 2023.

Edgar and Associates, Inc. 2023b. "City of South San Francisco Annual Report 2022." Published August 1, 2023.

Granada Community Services District. n.d. "Sewer Authority Mid-Coastside." Accessed June 11, 2024. <https://granada.ca.gov/sewer-authority-mid-coastside>.

GreenWaste. 2023. "2023 Annual Summary." Accessed March 19, 2024.

GreenWaste. n.d. "Base Services and Example Service Scenarios." Accessed April 5, 2024.

Kunz Valley Trash. n.d1. "Pricing Increase/Franchise Addition." Accessed June 11, 2024. <https://www.kunzvalleytrash.com/flyer.pdf>.

Kunz Valley Trash. n.d2. "Services." Accessed June 11, 2024. <https://www.kunzvalleytrash.com/services.asp>.

Mata, Ana. 2024. "Redwood City set to hike garbage rates." *San Mateo Daily Journal*, March 7, 2024. [https://www.smdailyjournal.com/news/local/redwood-city-set-to-hike-garbage-rates/article\\_2926b68c-d6b5-11ee-9986-9f933c36af5a.html](https://www.smdailyjournal.com/news/local/redwood-city-set-to-hike-garbage-rates/article_2926b68c-d6b5-11ee-9986-9f933c36af5a.html).

Pacifica. n.d. "Below are the tonnages collected by Recology from May, 2022 through April 2023." Released April 30, 2024.

Recology San Mateo County. 2024. "Quarterly Report to the SBWMA for 4th Quarter 2023." Released December 30, 2024.

Recology San Mateo County. 2023. "Annual Report to the SBWMA for Year 2022." Released February 14, 2023. <https://rethinkwaste.org/wp-content/uploads/2023/04/RSMC-Annual-Report-2022.pdf>.

Recology San Mateo County. 2021. “Annual Report to the SBWMA for Year 2020.” Released February 14, 2021. <https://rethinkwaste.org/wp-content/uploads/2021/02/Recology-Annual-Report-2020.pdf>

Republic Services. 2024a. “Quarterly Report for the City of Daly City Second Quarter Fiscal Year 2023/24.” Released January 30, 2024.

Republic Services. 2024b. “Quarterly Report for the City of Half Moon Bay Fourth Quarter Calendar Year 2023.” Accessed April 2, 2024.

RethinkWaste. 2024. “SBWMA Technical Advisory Committee Meeting.” May 9, 2024. <https://rethinkwaste.org/wp-content/uploads/2024/05/RethinkWaste-TAC-Packet-05092024.pdf>.

RethinkWaste. 2024. “SBWMA Technical Advisory Committee Meeting.” March 14, 2024. <https://rethinkwaste.org/wp-content/uploads/2024/03/RethinkWaste-TAC-Packet-03142024.pdf>.

RethinkWaste. n.d. “About.” Accessed May 5, 2024. <https://rethinkwaste.org/about/rethinkwaste/about/>.

San Bruno. 2024. “City of San Bruno Data on Waste and Recycling Categories.” Released March 13, 2024.

San Mateo County. 2021. “Low Population Waiver Application for Unincorporated Portions of Counties (Special Districts Providing Solid Waste Collection Services): 9843 and 6138.” Signed December 21, 2021.

San Mateo County Civil Grand Jury. 2019. “Planning for the County’s Waste Management Challenges.” Released July 30, 2019. [https://www.sanmateo.courts.ca.gov/system/files/waste\\_management.pdf](https://www.sanmateo.courts.ca.gov/system/files/waste_management.pdf).

San Mateo County Sustainability Department. 2024. “Disposable Food Service Ware Ordinance.” Updated April 2024. <https://www.smcsustainability.org/waste-reduction/foodware#start-dates>.

San Mateo County Sustainability Department. 2022. “Frequently Asked Questions.” Updated July 2022. <https://www.smcsustainability.org/waste-reduction/foodware/facilities/faq/>.

San Mateo County Sustainability Department. n.d. “Curbside Collection.” Accessed May 14, 2024. <https://www.smcsustainability.org/waste-reduction/curbside-collection/>.

San Mateo Local Agency Formation Commission (LAFCo). n.d. “Joint Powers Agencies Providing Municipal Services in San Mateo County.” Accessed May 18, 2024. <https://www.smcgov.org/lafco/joint-powers-agencies-providing-municipal-services-san-mateo-county>.

Short-Lived Climate Pollutants, California Code of Regulations (West) title 14, §§ 18982, 18984.2, 18984.9, 18984.11, 18984.12, 18993.1, 18993.3, 18997.2 (2020). [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IB9B3A3D35B4D11EC976B000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)&bhcp=1](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IB9B3A3D35B4D11EC976B000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)&bhcp=1).

South San Francisco Scavenger. 2024. “2023 Participation and Diversion Rates.” Compiled March 16, 2024.

South San Francisco Scavenger. 2023. “Quarterly Report: Period Ending December 31, 2023.” Accessed April 2, 2024.

U.S. Bureau of Labor Statistics. 2024. “Unemployment Rate [UNRATE], retrieved from FRED, Federal Reserve Bank of St. Louis.” Last Updated May 3, 2024. <https://fred.stlouisfed.org/series/UNRATE>.

U.S. Census Bureau. 2022a. “ACS Demographic and Housing Estimates: San Mateo County, California.” Accessed May 16, 2024. <https://data.census.gov/table?g=050XX00US06081&y=2022>.

U.S. Census Bureau. 2022b. “Total Population in Occupied Housing Units by Tenure by Year Householder Moved Into Unit: San Mateo County, California.” Accessed May 22, 2024. <https://data.census.gov/table/ACSST1Y2022.B25026?q=san%20mateo%20county%202022&t=Year%20Householder%20Moved%20Into%20Unit>.

U.S. Census Bureau. 2022c. “Physical Housing Characteristics for Occupied Housing Units.” Accessed June 9, 2024. <https://data.census.gov/table/ACSST1Y2022.S2504?q=san%20mateo%20county&t=Year%20Structure%20Built&y=2022>.

West Bay Sanitary District. n.d. “Areas of Coverage.” Accessed June 11, 2024. <https://westbaysanitary.org/about-us/areas-of-coverage/>.

Wagoner, Rachel Machi. "Hearing on Organic Waste Recycling (Part 3), September 8, 2022."  
Milton Marks Commission interview, 57:00-57:11.  
<https://www.youtube.com/watch?v=CJbMlCaI9lc>.

## **APPENDIXES**

- A. GreenWaste Annual Summary 2023
- B. Republic Services Daly City Q2 FY 2023-2024 Report
- C. Republic Services Half Moon Bay Q4 2023 Report
- D. San Bruno - Data on Waste and Recycling Categories 2023
- E. South SF Scavenger 2023 Diversion Rates
- F. Pacifica FY 2022-2023 Diversion Rates
- G. Recology San Mateo County February 2024 Participation Rate Tables

# Appendix A

## GreenWaste Annual Summary 2023



### 2023 Annual Summary - Confidential Business Information

Atherton Town Diversion & Tonnage Summary 2023												
Material	Q1 2023			Q2 2023			Q3 2023			Q4 2023		
	Collected	Trash	Recycled									
CURBSIDE RECYCLABLES 1	163.50	31.70	131.80	283.80	68.82	214.98	299.79	78.10	221.69	298.14	74.09	224.05
CURBSIDE RECYCLABLES 2	76.09	24.59	51.50	25.49	10.30	15.19				16.88	6.99	9.89
CURBSIDE RECYCLABLES 3	85.31	38.60	46.71									
CURBSIDE RECYCLABLES 4												
OFFICE RECYCLABLES 1												
OFFICE RECYCLABLES 2	5.90	1.91	3.99	10.21	4.13	6.08	27.90	12.11	15.79	56.34	23.33	33.01
OFFICE RECYCLABLES 3	1.60	0.72	0.88							0.94	0.55	0.39
OFFICE RECYCLABLES 4	2.40	1.40	1.00									
ELECTRONICS - IN												
PROCESSED COMPOSTABLES 2	714.48	341.31	373.17	670.23	281.83	388.40	680.38	291.75	388.63	748.21	317.25	430.96
HDPE INBOUND	1.38	0.04	1.34	0.42	0.01	0.41						
ELECTRONICS - IN				3.64	1.18	2.46						
TRASH / MSW 2												
TRASH / MSW 5												
BULKY ITEMS	3.40	3.40	-	8.57	5.14	3.43	10.15	6.09	4.06	7.34	4.40	2.94
YARDWASTE - IN	2,693.85	26.94	2,666.91	2,308.25	23.08	2,285.17	2,007.65	20.08	1,987.57	2,467.00	24.67	2,442.33
<b>Quarterly Tonnage Total</b>	<b>3,747.91</b>	<b>470.61</b>	<b>3,277.30</b>	<b>3,310.61</b>	<b>394.50</b>	<b>2,916.11</b>	<b>3,025.87</b>	<b>408.13</b>	<b>2,617.74</b>	<b>3,594.85</b>	<b>451.29</b>	<b>3,143.56</b>
<b>Quarterly Diversion Rate</b>		<b>87.44%</b>			<b>88.08%</b>			<b>86.51%</b>			<b>87.45%</b>	

Account Type	Total Accounts (3-Cart System)	No Current Service	Mixed Compostables Cart	Recyclables Cart	Yard Waste Cart
Residential	2368	9	2359	2348	2323
Commercial/City	20	0	19	18	5

GWR-APVW000001



2023 Annual Summary - Confidential Business Information

Portola Valley Town Diversion & Tonnage Summary 2023												
	Q1 2022			Q2 2022			Q3 2022			Q4 2022		
	Collected	Trash	Recycled									
Curbside RECY 1	103.32	20.03	83.29	203.64	49.38	154.26	203.59	53.04	150.55	218.45	54.28	164.17
Curbside RECY 2	39.80	12.86	26.94	5.32	2.15	3.17	2.80	1.22	1.58	5.32	2.20	3.12
Curbside RECY 3	50.69	22.94	27.75	1.63	0.92	0.71	0.86	0.52	0.34	2.83	1.64	1.19
Curbside RECY 4												
Office RECY 1												
Office RECY 2	20.20	6.53	13.67	38.15	15.42	22.73	38.59	16.76	21.83	36.01	14.91	21.10
Office RECY 3	5.60	2.53	3.07									
Office RECY 4	8.40	4.89	3.51									
Electronics				1.70	0.55	1.15	1.14	0.38	0.76	1.11	0.40	0.71
Processed Compostables 2	1,238.70	591.73	646.97	1,136.66	436.82	699.84	1,071.79	459.58	612.21	1,199.45	508.59	690.86
Bulky Items	0.17	0.17	-	3.32	1.99	1.33	2.09	1.25	0.84	1.87	1.12	0.75
Trash/MSW												
Yard Waste - In	22.85	0.23	22.62	40.33	0.40	39.93	23.15	0.23	22.92	38.31	0.38	37.93
Quarter Tonnage Total	1,489.73	661.91	827.82	1,430.75	507.64	923.11	1,344.01	532.99	811.02	1,503.35	583.53	919.82
Quarter Diversion Rate		55.57%			64.52%			60.34%			61.18%	

Portola Valley Town

Account Type	Total Accounts	3-Cart System*	2-Cart System**	Mixed Compostables Cart	Recyclables Cart	Yard Waste Cart
Residential	1485	1303	182	1485	1484	996
Commercial	36	34	0	34	33	7

\*3-Container System Offered to all Residential & Commercial Curbside Customers (Mixed Compostables, Recyclables, Yard Waste)

\*\*2-Container System Offered to Residential-Limited Accessibility/On-Premises Service Customers (Mixed Compostable & Recyclables)

Portola Valley County

Account Type	Total Accounts (2 Cart System)	Mixed Compostables Cart	Recyclables Cart	Yard Waste Cart***
Residential	238	238	206	147
Commercial	4	4	3	0

\*\*\*Yard Waste Container Offered Upon Request

GWR-APVW000002



2023 Annual Summary - Confidential Business Information

Woodside Town Diversion & Tonnage Summary 2023												
	Q1 2023			Q2 2023			Q3 2023			Q4 2023		
	Collected	Trash	Recycled									
Curbside RECY 1	160.68	31.16	129.52	309.25	74.99	234.26	319.95	83.35	236.60	330.89	82.23	248.66
Curbside RECY 2	89.70	28.99	60.71	16.43	6.64	9.79	4.45	1.93	2.52	15.28	6.33	8.95
Curbside RECY 3	97.55	44.14	53.41	0.77	0.44	0.33				1.32	0.77	0.55
Curbside RECY 4	6.06	3.53	2.53									
Office RECY 1				45.90	18.55	27.35	35.13	15.25	19.88	15.05	6.23	8.82
Office RECY 2	26.55	8.58	17.97									
Office RECY 3	7.20	3.26	3.94									
Office RECY 4	10.80	6.28	4.52									
HDPE Inbound	2.06	0.05	2.01									
Electronics	1.80	0.47	1.33				1.15	0.39	0.76	1.08	0.39	0.69
Metal	1.99	0.05	1.94				1.99	0.07	1.92	1.02	0.03	0.99
Processed Compostables 2	1,401.50	669.50	732.00	1,251.90	480.23	771.67	1,113.00	477.25	635.75	1,145.79	485.83	659.96
Bulky Items	2.12	2.12	-	2.67	1.60	1.07	3.94	2.36	1.58	2.86	1.72	1.14
Trash/MSW 2												
Yard Waste - In	581.52	5.82	575.70	483.23	4.83	478.40	449.30	4.49	444.81	521.01	5.21	515.80
<b>Quarter Tonnage Total</b>	<b>2,389.53</b>	<b>803.94</b>	<b>1,585.59</b>	<b>2,110.15</b>	<b>587.29</b>	<b>1,522.86</b>	<b>1,928.91</b>	<b>585.10</b>	<b>1,343.81</b>	<b>2,034.30</b>	<b>588.73</b>	<b>1,445.57</b>
<b>Quarter Diversion Rate</b>		<b>66.36%</b>		<b>72.17%</b>			<b>69.67%</b>			<b>71.06%</b>		

Woodside Town

Account Type	Total Accounts	3-Cart System*	2-Cart System**	Mixed Compostables Cart	Recyclables Cart	Yard Waste Cart
Residential	1841	1646	195	1841	1814	1345
Commercial	51	44	7	41	34	7

\*3-Containers Offered to all Residential & Commercial Curbside Customers (Mixed Compostables, Recyclables, Yard Waste)

\*\*2-Containers Offered to Residential-Limited Accessibility/On-Premises Service Customers (Mixed Compostable & Recyclables)

Woodside County

Account Type	Total Accounts (2-Cart System)	Mixed Compostables Cart	Recyclable Cart
Residential	352	352	348
Commercial	13	13	11

GWR-APVW000003

# Appendix B

## Republic Services Daly City Q2 FY 2023-2024 Report



### Tonnage Summary

LOB	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Year to Date Total	
	DALY CITY	BROADMOOR	DALY CITY	BROADMOOR						
Commercial MSW	1,445.34	17.99	1,412.15	21.29	0.00	0.00	0.00	0.00	2,857.49	39.28
Commercial Recycling	700.60	7.58	851.25	7.84	0.00	0.00	0.00	0.00	1,558.84	15.42
Commercial Organics	427.07	0.00	594.25	1.77	0.00	0.00	0.00	0.00	1,021.31	1.77
Total Commercial Tons Collected	2,573.01	25.57	2,857.64	30.91	0.00	0.00	0.00	0.00	5,436.65	56.47
Total Commercial Tons Diverted	1,247.67	7.58	1,445.49	9.61	0.00	0.00	0.00	0.00	2,573.16	17.19
Commercial Diversion Rate	44%	30%	51%	31%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	47%	30%
MFD MSW	1,301.61	0.00	1,432.37	0.00	0.00	0.00	0.00	0.00	2,733.98	0.00
MFD Recycling	309.11	0.00	268.63	0.00	0.00	0.00	0.00	0.00	577.74	0.00
MFD Organics	1,637.06	0.00	1,353.07	0.00	0.00	0.00	0.00	0.00	2,990.12	0.00
Total MFD Tons Collected	3,247.77	0.00	3,054.08	0.00	0.00	0.00	0.00	0.00	6,301.84	0.00
Total MFD Tons Diverted	1,946.16	0.00	1,621.70	0.00	0.00	0.00	0.00	0.00	3,567.86	0.00
MFD Diversion Rate	60%	0%	53%	0%	#DIV/0!	0%	#DIV/0!	0%	57%	0%
Industrial MSW	2,246.99	0.00	1,865.22	0.00	0.00	0.00	0.00	0.00	4,112.21	0.00
Industrial Recycling	423.38	0.00	131.60	0.00	0.00	0.00	0.00	0.00	554.98	0.00
Industrial Organics	162.36	0.00	85.87	0.00	0.00	0.00	0.00	0.00	248.23	0.00
Total Industrial Tons Collected	2,832.73	0.00	2,082.69	0.00	0.00	0.00	0.00	0.00	4,915.42	0.00
Total Industrial Tons Diverted	585.74	0.00	217.47	0.00	0.00	0.00	0.00	0.00	803.21	0.00
Industrial Diversion Rate	21%	0%	10%	0%	#DIV/0!	0%	#DIV/0!	0%	16%	0%
Residential MSW	3,588.70	251.13	3,522.12	256.83	0.00	0.00	0.00	0.00	7,110.82	507.96
Residential Recycling	2,092.76	151.50	2,012.98	138.15	0.00	0.00	0.00	0.00	4,105.74	289.66
Residential Organics	1,252.54	113.21	1,275.83	121.30	0.00	0.00	0.00	0.00	2,528.37	234.51
Total Residential Tons Collected	6,934.00	515.85	6,810.93	516.28	0.00	0.00	0.00	0.00	13,744.93	1,032.12
Total Residential Tons Diverted	3,345.30	264.71	3,288.81	259.45	0.00	0.00	0.00	0.00	6,634.11	524.16
Residential Diversion Rate	48%	52%	48%	50%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	48%	51%
Total MSW Tons	8,582.64	269.12	8,231.86	278.12	0.00	0.00	0.00	0.00	16,814.50	547.24
Total Recycle Tons	3,525.84	159.08	3,264.46	145.99	0.00	0.00	0.00	0.00	6,790.30	305.08
Total Organics Tons	3,479.02	113.21	3,309.02	123.07	0.00	0.00	0.00	0.00	6,788.04	236.28
Total Tons Collected	15,587.50	541.41	14,805.34	547.18	0.00	0.00	0.00	0.00	30,392.84	1,088.59
Total Recycling Residual Tons	636.67	28.00	566.69	26.49	0.00	0.00	0.00	0.00	1,203.36	55.99
Total Organics Residual Tons	993.51	13.59	838.50	14.77	0.00	0.00	0.00	0.00	1,832.02	28.35
Total Diverted Tons*	5,374.68	229.81	5,168.28	257.34	0.00	0.00	0.00	0.00	10,542.96	457.61
Diversion Rate	34%	42%	35%	47%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	35%	42%
Service Area MSW Tons	8,851.76		8,509.98		0.00		0.00		17,361.74	
Service Area Recycle Tons	3,684.93		3,410.45		0.00		0.00		7,095.38	
Service Area Organics Tons	3,592.23		3,432.08		0.00		0.00		7,024.31	
Service Area Total Tons Collected	16,128.92		15,352.52		0.00		0.00		31,481.43	
Service Area Diversion Rate	45%		45%		#DIV/0!		#DIV/0!		45%	
Service Area Diverted Tons*	5,604.49		5,425.62		0.00		0.00		11,030.58	
Service Area Diversion Rate*	35%		35%		#DIV/0!		#DIV/0!		35%	

\*Includes residual rate reduction

## Appendix C

### Republic Services Half Moon Bay Q4 2023 Report



#### 16.03.4 - Diversion Data

LOB	1st Quarter Total Jan-March	2nd Quarter Total April-June	3rd Quarter Total July-Sept	4th Quarter Total Oct-Dec	Year to Date Total CY2023
Commercial MSW	671.48	604.33	585.56	568.37	2,429.74
Commercial Recycling	323.40	326.41	321.30	293.92	1,265.03
Commercial Organics	109.26	106.34	129.63	107.16	452.39
<b>Total Commercial Tons Collected</b>	<b>1,104.14</b>	<b>1,037.08</b>	<b>1,036.49</b>	<b>969.46</b>	<b>4,147.16</b>
<b>Total Commercial Tons Diverted</b>	<b>432.66</b>	<b>432.75</b>	<b>450.93</b>	<b>401.08</b>	<b>1,717.42</b>
<b>Commercial Diversion Rate</b>	<b>39%</b>	<b>42%</b>	<b>44%</b>	<b>41%</b>	<b>41%</b>
Industrial MSW	444.06	395.63	349.86	387.54	1,577.09
Industrial Recycling	22.50	59.07	4.62	0.00	86.19
Industrial Organics	7.32	0.00	5.60	4.79	17.71
<b>Total Industrial Tons Collected</b>	<b>473.88</b>	<b>454.70</b>	<b>360.08</b>	<b>392.33</b>	<b>1,680.99</b>
<b>Total Industrial Tons Diverted</b>	<b>29.82</b>	<b>59.07</b>	<b>10.22</b>	<b>4.79</b>	<b>103.90</b>
<b>Industrial Diversion Rate</b>	<b>6%</b>	<b>13%</b>	<b>3%</b>	<b>1%</b>	<b>6%</b>
Multi-Family MSW	98.09	92.96	87.99	85.44	364.48
Multi-Family Recycling	61.84	57.35	58.34	57.41	234.94
Multi-Family Organics	0.18	0.21	0.19	0.18	0.76
<b>Total Multi-Family Tons Collected</b>	<b>160.11</b>	<b>150.53</b>	<b>146.52</b>	<b>143.02</b>	<b>600.18</b>
<b>Total Multi-Family Tons Diverted</b>	<b>62.02</b>	<b>57.56</b>	<b>58.53</b>	<b>57.59</b>	<b>235.70</b>
<b>Multi-Family Diversion Rate</b>	<b>39%</b>	<b>38%</b>	<b>40%</b>	<b>40%</b>	<b>39%</b>
Residential MSW	812.95	844.54	794.05	782.57	3,234.12
Residential Recycling	388.02	320.87	348.00	376.23	1,433.13
Residential Organics	545.27	687.23	646.72	557.74	2,436.96
<b>Total Residential Tons Collected</b>	<b>1,746.24</b>	<b>1,852.65</b>	<b>1,788.78</b>	<b>1,716.54</b>	<b>7,104.20</b>
<b>Total Residential Tons Diverted</b>	<b>933.29</b>	<b>1,008.10</b>	<b>994.72</b>	<b>933.97</b>	<b>3,870.09</b>
<b>Residential Diversion Rate</b>	<b>53%</b>	<b>54%</b>	<b>56%</b>	<b>54%</b>	<b>54%</b>
<b>Total MSW Tons</b>	<b>2,026.58</b>	<b>1,937.46</b>	<b>1,817.46</b>	<b>1,823.92</b>	<b>7,605.42</b>
<b>Total Recycle Tons</b>	<b>795.76</b>	<b>763.71</b>	<b>732.26</b>	<b>727.56</b>	<b>3,019.29</b>
<b>Total Organics Tons</b>	<b>662.03</b>	<b>793.78</b>	<b>782.14</b>	<b>669.87</b>	<b>2,907.82</b>
<b>Total Tons Collected</b>	<b>3,484.37</b>	<b>3,494.95</b>	<b>3,331.86</b>	<b>3,221.35</b>	<b>13,532.53</b>
<b>Diversion Rate (includes residual)</b>	<b>42%</b>	<b>45%</b>	<b>45%</b>	<b>43%</b>	<b>44%</b>
<b>Total Recycling Residual Tons</b>	<b>127.05</b>	<b>119.59</b>	<b>117.15</b>	<b>118.69</b>	<b>482.49</b>
<b>Total Organics Residual Tons</b>	<b>66.20</b>	<b>79.38</b>	<b>78.21</b>	<b>66.99</b>	<b>290.78</b>
<b>Total Diverted Tons*</b>	<b>1,264.53</b>	<b>1,358.52</b>	<b>1,319.04</b>	<b>1,211.75</b>	<b>5,153.84</b>
<b>Diversion Rate*</b>	<b>36%</b>	<b>39%</b>	<b>40%</b>	<b>38%</b>	<b>38%</b>

\*Includes residual rate reduction

## Appendix D

### San Bruno - Data on Waste and Recycling Categories 2023

#### City of San Bruno Data on Waste and Recycling Categories

Quantity Data (tons)	
	January - December 2023
Solid Waste	20,605.15
Recycling	9,181.08
Compost (or organics)	5,958.51
<b>TOTAL</b>	<b>35,744.74</b>

*Note: Tons shown are tons collected by Recology San Bruno only, excluding construction and demolition debris.*

Participation Data for 3-Cart System (%)	
Commercial Buildings or Sites	31%
Multi-Family Residential Buildings or Sites	73%
Single-Family Residential	100%

*Note: Subscription % is percentage of Recology San Bruno customers that have organic services. Customers that have organics services are likely to have trash and recycling service as well.*

Source: Recology San Bruno, March 13, 2024

## Appendix E

### South SF Scavenger 2023 Diversion Rates

Year		2023			
Month		(All)			
Master Category		(Multiple Items)			
Sum of Net TN		OT Label (Adj)2	OT Label (Adj)		
MT Label (Adj)2	MT Label (Adj)	270-South San Francisco	290-Millbrae	250-Brisbane	Grand Total
Solid Waste	1-TRASH / GARBAGE / REFUSE	42,459.69	9,131.10	6,409.53	58,000.32
	24-WTE	279.62			279.62
<b>Solid Waste Total</b>		<b>42,739.31</b>	<b>9,131.10</b>	<b>6,409.53</b>	<b>58,279.94</b>
Recycling	2-RECYCLE	5,995.88	2,299.14	613.98	8,909.00
	3-OCC / CARDBOARD	5,020.25	222.28	1,109.35	6,351.88
	6-C&D - 65% MIN DIVRSN	4,335.51	971.50	272.83	5,579.84
	7-CLEAN METAL	196.21	132.42	2.47	331.10
	8-CLEAN WOOD WASTE	639.13	174.80	139.55	953.48
	9-DIRT/ ROCK/ CONCRETE	2,150.96	907.38	453.32	3,511.66
	21-AGP - ALUM/PLASTIC/GLASS	781.97	1.52	0.73	784.21
	22-MP - MIXED PAPER	407.11		4.43	411.54
<b>Recycling Total</b>		<b>19,527.00</b>	<b>4,709.04</b>	<b>2,596.66</b>	<b>26,832.69</b>
Compost	4-CLEAN GREEN WASTE	285.41	134.29	70.45	490.15
	5-FOOD WASTE	6,258.38	2,638.49	904.37	9,801.23
	17-ORGANICS - AD	3,593.38	1,798.71	34.42	5,426.51
	18-ORGANICS - BLT	2,455.51	1,498.59	512.19	4,466.29
<b>Compost Total</b>		<b>12,592.67</b>	<b>6,070.08</b>	<b>1,521.44</b>	<b>20,184.18</b>
<b>Grand Total</b>		<b>74,858.98</b>	<b>19,910.22</b>	<b>10,527.62</b>	<b>105,296.81</b>

## Appendix F

### Pacifica FY 2022-2023 Diversion Rates

<b>Pacifica</b>	
<b>Below are the tonnages collected by Recology from May, 2022 through April 2023</b>	
<b>MSW</b>	13,759.27
<b>Organics</b>	5,392.38
<b>Recycling</b>	5,265.62
Total Residential Subscribers	11,293
Total Subscribers with Recycling Service	11,277
Percentage	99%
Total Subscribers with Organic Service	11,184
Percentage	99%
Total Percentage with three cart system	99%
Total Commercial Subscribers	574
Total Subscribers with Recycling Service	551
Percentage	96%
Total Subscribers with Organic Service	275
Percentage	48%
Total Percentage with three cart system	48%
NOTE: multi family included with either residential or commercial totals	

## Appendix G

### Recology San Mateo County February 2024 Participation Rate Tables

Recology San Mateo County				
<b>BELMONT</b>		<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
	Total Customers	6762	173	270
	Customers With Organic Service*	6678	150	136
	Participation Rate	98.76%	86.71%	50.37%
<b>BURLINGAME</b>		<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
	Total Customers	6595	558	832
	Customers With Organic Service*	6541	397	329
	Participation Rate	99.18%	71.15%	39.54%
<b>EAST PALO ALTO</b>		<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
	Total Customers	4242	225	137
	Customers With Organic Service*	4205	215	88
	Participation Rate	99.13%	95.56%	64.23%
<b>FOSTER CITY</b>		<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
	Total Customers	6744	419	132
	Customers With Organic Service*	6246	414	98
	Participation Rate	92.62%	98.81%	74.24%
<b>HILLSBOROUGH</b>		<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
	Total Customers	3772	0	6
	Customers With Organic Service*	3733	0	6
	Participation Rate	98.97%	0.00%	100.00%

Recology San Mateo County

<b>MENLO PARK</b>	<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
Total Customers	7774	538	574
Customers With Organic Service*	7659	356	340
Participation Rate	98.52%	66.17%	59.23%
<b>REDWOOD CITY</b>	<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
Total Customers	17606	988	1083
Customers With Organic Service*	16865	805	577
Participation Rate	95.79%	81.48%	53.28%
<b>SAN CARLOS</b>	<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
Total Customers	8586	257	882
Customers With Organic Service*	8523	201	280
Participation Rate	99.27%	78.21%	31.75%
<b>SAN MATEO</b>	<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
Total Customers	20759	1323	1384
Customers With Organic Service*	20164	1008	584
Participation Rate	97.13%	76.19%	42.20%
<b>COUNTY OF SAN MATEO (NORTH FAIR OAKS)</b>	<b>SFD</b>	<b>MFD</b>	<b>Commercial</b>
Total Customers	2675	93	391
Customers With Organic Service*	2623	58	107
Participation Rate	98.06%	62.37%	27.37%

Recology San Mateo County

COUNTY OF SAN MATEO (OTHER)	SFD	MFD	Commercial
Total Customers	5141	91	102
Customers With Organic Service*	5129	85	46
Participation Rate	99.77%	93.41%	45.10%

WEST BAY SANITARY	SFD	MFD	Commercial
Total Customers	2226	3	28
Customers With Organic Service*	2213	3	23
Participation Rate	99.42%	100.00%	82.14%

\*For Multi-Family Dwelling (MFD) and Commercial customers, includes customers who have subscribed for service, as well as customers with shared service.

Release Date: July 11, 2024  
2023-2024 San Mateo County Civil Grand Jury