



The State of Waste in California

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Foreword

Even though the mantra of “Reduce, Reuse, Recycle” has been around since the 1970s, most people in the United States still don’t live by it.¹ The United States makes up only 4 percent of the global population, yet it generates more than 30 percent of the planet’s waste.² This shocking reality stems from an economy that encourages disposable consumption: half of American plastic products are designed for single use.³ Not only have we failed to reduce, but our attempts to recycle are also lacking -- 65 percent of goods in the U.S. end up in a landfill or incinerated.⁴ We need to work towards bringing that number down to zero. We can improve in all aspects of waste reduction. For items that cannot be reduced or reused, recycling remains a crucial component of how we deal with waste.

Waste systems are typically organized and funded at the municipal or county level. It’s important to measure a system’s success to know where energy must be focused. Inefficiencies in waste management can come from anywhere in the process: disposal, collection, sorting, or the after-market. The following report focuses on disposal and collection for the top fifteen most populous cities in California based on their residential recycling rates.

The recycling rate is calculated as follows:

$$\frac{\text{Waste diverted (via compost, recycling, and reuse)}}{\text{Total waste (landfill + diverted)}}$$

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Californians throw away 6 pounds of trash every day⁵, equivalent to almost 2200 pounds every year, roughly the weight of a subcompact car. These individual results more than double the state’s 2020 goal of 2.7 pounds per person per day (PPD).⁶ The California Department of Resources Recycling and Recovery (CalRecycle) measures individual disposal in terms of PPD because it considers the both recycling rate and overall disposal (recycling and compost are not counted as trash). Why? The goal is waste reduction, and an increased recycling rate doesn’t guarantee less trash if residents consume more stuff, potentially increasing trash as well as recycled and composted content.

Unfortunately, these things are getting worse, not better. Since 2012, disposal per resident has increased from 5.3 to 6 pounds while the recycling rate has decreased from 50 percent to the current 44 percent.⁷ Although California’s recycling rate remains above the national average 34.7 percent⁸, results are well below the state’s 2020 goal of 75 percent.

Every single major city in California has failed to improve their reduction of waste since 2012. The following table demonstrates how these cities stack up and how much their disposal per capita has changed since 2012.

Note: Statewide and city disposal rates are held to different standards under California laws AB 341 and AB 949, respectively. The statewide rate does not include beneficial reuse or other disposal-related activities at landfills, which may be included in diversion rates for cities under AB 939.⁹ If cities adhered to the standards of AB341, their disposal would likely be higher, given the addition of disposal-related activities.

	Change in Waste Disposal per Capita from 2012 to 2016/17	2012 Pounds per Person per Day disposal	2016/2017* Pounds per Person per Day disposal
State of California	+13%	5.3	6
Sacramento	0%	5.9	5.9
Bakersfield	+5%	4.3	4.5
Long Beach	+5%	3.7	3.9
Chula Vista	+6%	3.5	3.7
Santa Ana	+8%	4.8	5.2
San Jose	+10%	3	3.3
San Diego	+11%	5.4	6
Oakland	+13%	3.9	4.4*
Anaheim	+18%	5.6	6.6
Riverside	+23%	5.6	6.9
Los Angeles**	+23%	4.3	5.3
Irvine	+24%	5.5	6.8*
San Francisco	+28%	2.9	3.7
Fresno	+31%	3.6	4.7
Stockton	+32%	4.1	5.4

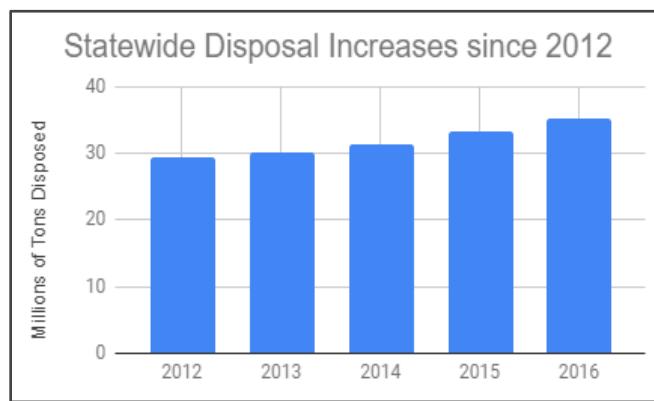
Data provided by CalRecycle.¹⁰

**Data from these cities is from 2017*

*** “Los Angeles” covers the entire Los Angeles Area Integrated Waste Management Authority*

Though certain cities have better disposal per capita amounts, each jurisdiction is held to a different standard based on their historic PPD levels in order to reach the state goal.

Reducing contamination in the waste stream is a simple action for residents that can have major impacts. A study done by CalRecycle in 2014 found that 70 percent of material taken to disposal facilities could have been recovered through a recycling or composting program--equivalent to roughly 21.8 million tons of waste, the weight of nearly 52 golden gate bridges.^{11 12 13} As Californians throw away millions more tons of trash each year (see below graph), the impact of this recovery loss becomes even greater.



Data provided by CalRecycle¹⁴

It's time for California to reverse the current trend and refocus on reaching its 2020 goals. To do so, the state will have to contend with the effects of recent changes in international trade. For decades, the United States sent millions of tons of scrap material to China to be recycled. This past year, China effectively stopped accepting our refuse, claiming it was too contaminated and unsellable for recycling.¹⁵ The United States was unprepared for this change in policy. Without China as an export option, recyclables have been piling up in facilities throughout California. The disruption increased service costs, decreased revenue, and in some cases led recycling collectors to limit their services--Sacramento stopped collecting mixed plastics in July.¹⁶

As the saying goes, change brings opportunity. Already, recycling in California brings economic benefits in the form of over 85,000 jobs, 5,300 businesses, and \$19 billion in taxable income, sales, new products, and services.¹⁷ In the wake of China's policy changes, California has an opportunity to expand its recycling economy through better collection, sorting, and developing end-market solutions previously provided by China.

Success Stories

CalRecycle collects disposal data for all its jurisdictions, an admirable feat. The practice of data collection has not been developed so thoroughly in many states across the nation. While most states calculate a recycling rate, CalRecycle's choice to measure PPD gives a more complete picture of overall consumption and waste.

California has also been a leader in waste reduction policies, as demonstrated by a few key pieces of legislation.¹⁸

- ❖ Bans and restrictions on hard to recycle single-use plastics such as plastic bags (SB 270) and straws (AB 1884)¹⁹
- ❖ AB 2020, known as the bottle bill, gives a redemption to residents who return their beverage containers. States with bottle bills tend to experience much higher container recycling rates.²⁰
- ❖ AB 939 establishes a 50% diversion mandate for jurisdictions
- ❖ AB 341 requires the availability of commercial recycling for businesses and multi-family buildings
- ❖ AB 1826 requires local jurisdictions to have a compost program, and requires businesses which generate 4 cubic yds of organic waste per week to arrange organic waste collection

In response to China's trade restriction on recyclables, the California Department of Resources Recycling and Recovery has conducted "workshops, facilitating information sharing among jurisdictions to help guide discussions on best practices moving forward."²¹ Cities have also launched "recycle right" campaigns aimed to reduce contamination by educating residents to properly sort and clean recyclables.²²

Recommendations

(Continue to) Reduce Single-use Plastics

The best way to reduce excess waste is to remove easily replaceable single-use items from the waste stream. California has already banned single-use plastic bags and required straws be given only upon request. That said, California would benefit from ordinances restricting the use of polystyrene foam containers and requiring consumer packaging and food ware to be recyclable, compostable, or reusable.

Expand Residential Compost

Around 30 percent of household waste is compostable.²³ This includes food waste, yard waste, and contaminated paper products such as pizza boxes and paper towels. Like recycling, compost allows waste to become useable again. Compost can also be a nutrient-rich resource for gardens, parks, and agriculture. San Francisco, Los Angeles, Bakersfield, San Jose, and Oakland provide curbside options for residents. Given that AB 1826 requires it for certain business, there is infrastructure throughout the state for such an option to be expanded to residents (not

without some investment). Expanding municipal compost programs as a public service to all Californians could raise even the highest recycling rates. Doing so would also support local compost facilities and curb the greenhouse gas impact of landfills.²⁴

Increase landfill tipping fees

Waste collectors pay “tipping fees” by the ton when they dump material into landfills. Because tipping fees are so low, it can be cheaper for waste management companies to send bins of recyclable and compostable materials to landfill rather than ensuring they are diverted.²⁵ This practice may be becoming more common due to market conditions causing recyclables to pile up at sorting operations.²⁶ Increasing the cost of dumping at landfills, therefore, can encourage trash collectors to ensure these materials are handled properly. Furthermore, the revenue from a tipping fee raise can go towards improving or introducing recycling and compost infrastructure. Apart from a small increase in 2002, California’s statewide tipping fee addition of \$1.40/ton has not been adjusted in nearly two decades.²⁷

Be S.M.A.R.T: Save Money And Reduce Trash

SMART systems (also called “Pay as You Throw”) make a lot of sense.

People who request smaller trash bins (thus throwing less away) pay less for trash service. In turn, trash fees provide revenue for curbside recycling and compost collection. A nationwide study showed that the adoption of the SMART system can bring major savings, reduce waste by 14 percent, and increase recycling by over 32 percent.²⁸ The system has been successfully adopted in more than 25 communities in California, including Los Angeles, San Francisco, San Jose, and Bakersfield.²⁹

Provide State-Level Support for Recycling Programs and Facilities

In addition to local investment, the state can aid in reducing waste and increasing recycling and compost through grants and tax incentives. CalRecycle has an existing grant program with various options for funding, which cities should take advantage of as they move towards zero-waste.³⁰ The state can also provide subsidies or property tax exemptions for recycling and composting facilities and end-use manufacturers. This could incentivize business development and improve the local market for recycled materials, and would relieve our dependence on international markets.

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