

# CALIFORNIA'S BOTTLE BILL



**THE PATH TO REDEMPTION**

THE STORY OF  
**STUFF**  
PROJECT

# Executive Summary

Over December 2021 and January 2022, **The Story of Stuff Project surveyed its Community members to map out the declining options available for Californians seeking to redeem the deposits on their bottles and cans.** The steady decline in beverage container redemption rates in the state, often attributed to recycling center closures, prompted us to research the extent to which California's retailers are providing the necessary points of return. While we suspected the retailers were not providing sufficient points of return, the reality is, in fact, much worse than we expected.

**This report sets out what California's deposit return system does, its importance from an environmental standpoint and some of the key causes of the system's decline.** The report draws on data and anecdotal evidence from hundreds of Californians across the state about the growing difficulty they face in accessing points of return.

While the dwindling number of recycling centers has been well established, **more problematic is the lack of redemption options at retailers across California.** While many retailers exploit a loophole that enables them to opt out of their responsibility to redeem deposits via a small payment to the state, others simply fail to comply with their responsibilities at all.

Although the responses from our Community represent a small sample size, we found **almost 48% of retailers refused to redeem deposits on bottles and cans,** despite their responsibility to do so. In response, we make a set of recommendations for immediate improvements to the program, along with a more comprehensive set of changes to ensure its long-term performance and sustainability.

*"I would love to [redeem bottles or cans] but there are no locations in my region to recycle. Everything goes into the blue bin because I have no other option."  
- Scott, Los Angeles County*



# What's a Deposit Return System (DRS)?

The California 'bottle bill' or deposit return system (DRS) **adds a small deposit on beverage containers sold in the state to incentivize their return for recycling or reuse**. The law targets bottles and cans due to their disproportionate role in driving litter<sup>1</sup> and has become an integral tool in the fight against plastic pollution. California's bottle bill is the second largest in the world by population and has prevented billions of containers from entering the state's landfills, incinerators and environment<sup>2</sup>.

## Why is DRS necessary when curbside recycling is widely available?

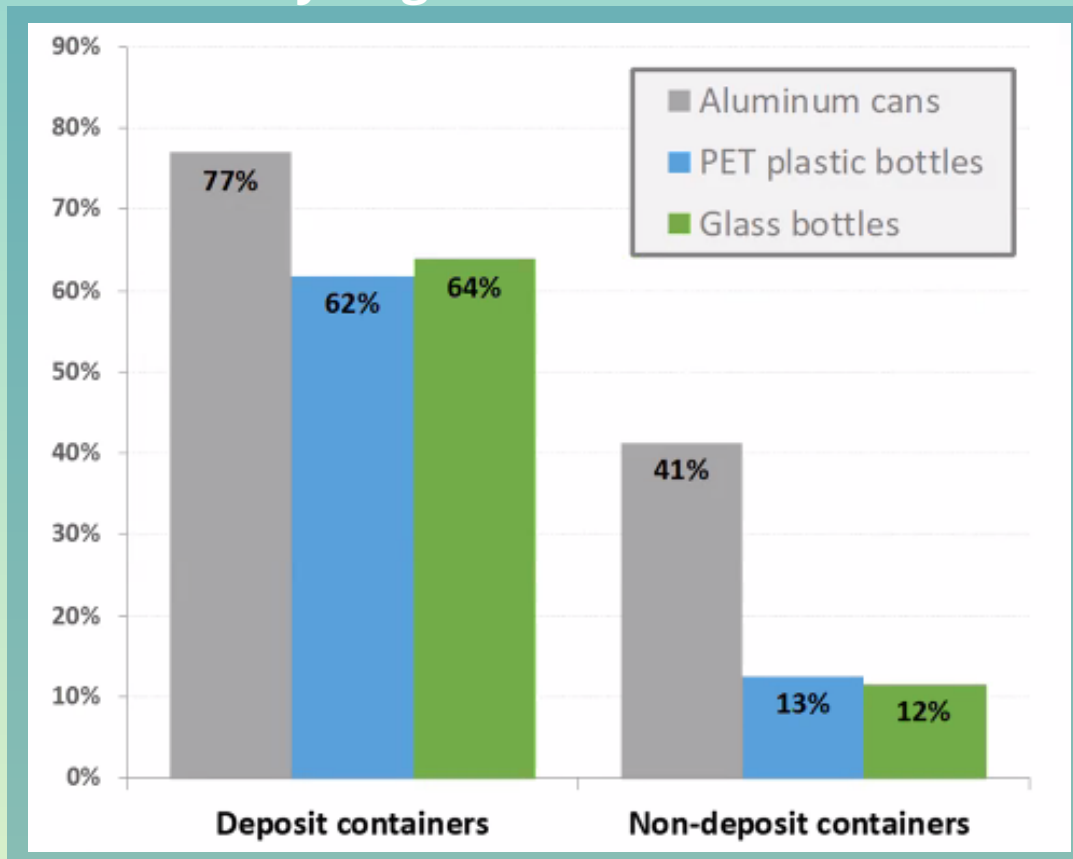
Only around 59% of US households have access to curbside recycling.<sup>3</sup> While bottles and cans can be recycled through curbside

recycling bins, curbside infrastructure does not adequately capture the many beverages consumed 'on the go'. The Container Recycling Institute (CRI) estimates that thirty-seven percent of beverages are consumed outside of the home.<sup>4</sup>

This is where the deposit value becomes key – by providing the incentive for consumers to return the container to retrieve the deposit.

For this reason, DRS drive far higher recycling rates and reduce contamination of the recycling stream from other curbside materials, thereby improving the opportunity for true circularity.

## National Recycling Rates: DRS vs Non-DRS States



Source: Container Recycling Institute (2018)



**CRV stands for California Redemption Value** and establishes that a container is part of the statewide bottle bill

# How Does a DRS Work?

How a deposit return system **should** work:



## PURCHASE

Consumer buys a drink and pays a 5¢ or 10¢ deposit on the bottle or can, depending on the size of the container



## RETURN

Consumer finds a convenient return location to redeem deposit and get money back



## PROCESSING

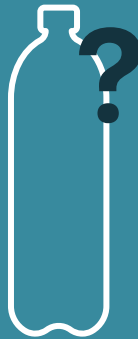
Materials sent to recyclers and processors for recycling

How California's **actually** works:



## PURCHASE

Consumer buys a drink and pays a 5¢ or 10¢ deposit on the bottle or can, depending on the size of the container



## RETURN

Dwindling take-back options result in fewer containers and deposits being returned



## PROCESSING

Greater proportion of containers go to landfill, incinerators, and the environment

# A System in Crisis

California's bottle bill, one of the state's landmark environmental laws, is in a growing state of crisis. **The redemption rate** — the number of bottles and cans returned in exchange for the deposit — **now stands at about 58%, one of the lowest rates in the program's history and one of the lowest among the ten deposit states in the nation.**<sup>5</sup>

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redemption rate  
at a historic low: **58%**

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**At the heart of the falling redemption rate lies a lack of options for consumers to return their bottles and cans.** Half of the state's **recycling centers have closed** in recent years<sup>6</sup> with some counties losing as many as 89% of their recycling centers<sup>7</sup>. This has been exacerbated by the **failure of retailers statewide to participate in the program, despite their responsibility to do so.**

The bottle bill establishes "convenience zones" that larger retailers must serve when there is no recycling center nearby. In reality, many retailers pay a nominal opt-out fee to exempt themselves from their responsibility to take back bottles and cans. Further, many retailers who are not paying the fee simply do not comply with their responsibilities to take back beverage containers at all.

Unfortunately, CalRecycle, the state agency charged with oversight for the program, has not sufficiently stepped up its enforcement responsibilities to ensure that consumers have sufficient redemption opportunities. CRI estimates that **a staggering 71% of California's four thousand convenience zones are not being served by a point of return.**<sup>8</sup>

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**71%** of California's  
'convenience zones'  
have nowhere to  
return bottles or cans

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The result is recycling deserts across the state with insufficient or no take-back opportunities. Indeed, **the difficulty of redeeming deposits means that the bottle bill has become a de facto tax** for many people. The decline in the redemption rate can be seen reflected in a huge build-up of consumer deposits in CalRecycle's reserves; indeed, at a time when many Californians are experiencing financial hardships resulting from the pandemic, **the state is reportedly sitting on as much as half a billion dollars in unclaimed deposits.**<sup>9</sup>

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**\$500,000,000**  
of unclaimed deposits  
in **CalRecycle**  reserves

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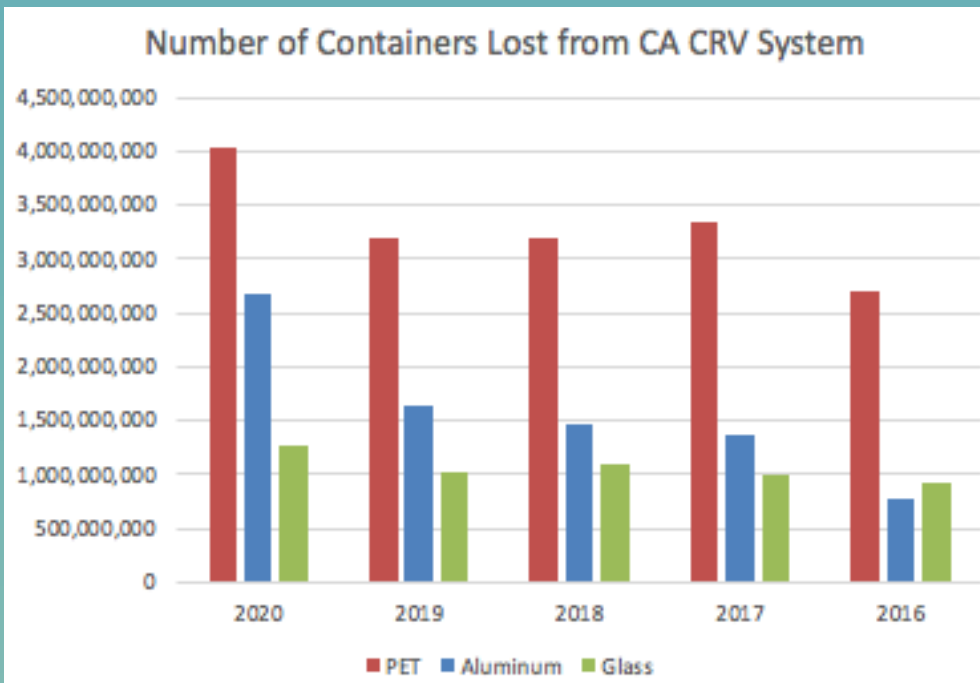
# Environmental Impact

The impact of the decline in the return rates is not limited to consumer finances. A recent assessment from the Container Recycling Institute shows that as a result of the declining redemption rate, **13.4 billion bottles and cans ended up in landfills, incinerators or the environment over the last year,**<sup>10</sup> adding both to the problem of marine pollution and to the harm experienced by the frontline communities that live nearby.

equal to the emissions of  
**160,000 cars**



Coca-Cola bottle found in the #breakfreefromplastic brand audit



An increasing number of containers are being lost year on year.

Source: CalRecycle.

\*Note the numbers of containers lost in the graph above are slightly different from those reported on by CRI. This is partly down to the use of different data sets and partly since CalRecycle includes containers that are collected by curbside recycling but end up landfilled.

In climate terms, an estimated three-quarters of a million tons of greenhouse gases were emitted to replace the bottles and cans our state failed to collect with ones made from scratch, adding the equivalent carbon emissions of more than 160,000 cars on California's roads.<sup>11</sup>

# Our Community Weighs In

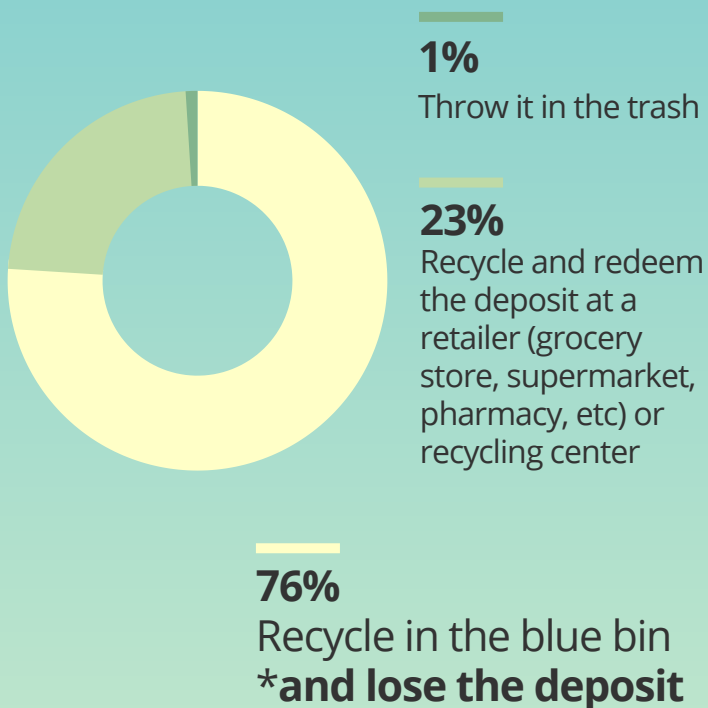
We surveyed our Story of Stuff Project California Community:

## Did you know that you can redeem empty bottles and cans for a 5¢ or 10¢ deposit?

Yes 81%

No 19%

## What do you do with your empty bottles and cans?



Just **23%** of our Community redeems deposits.

*\*We suspect our Community skews towards higher participation than the average Californian given involvement in an organization tackling plastic pollution*

**60%** of Californians would be more likely to return containers if it was more convenient.

**Source:** *Genie in a bottle: Unlocking the full potential of California's bottle bill (2020)*

**Methodology and Scope:** This report builds on the real-world experiences encountered by the Story of Stuff Community members across the state of California. We surveyed 221 individuals to understand their participation and experiences with the bottle bill. Subsequently, they were asked to provide feedback on their available points of redemption nearby and attempt to redeem the deposits they had paid on bottles and cans at a retailer designated to be participating in the program by CalRecycle. We make no claim that the survey participation is entirely reflective of the state demographics, however many of the opinions expressed by our community members seem to support the overriding data about the system's decline.

# California Left in the Dust

**The two most important factors that drive high return rates are the deposit value and the convenience of returning bottles and cans.** The deposit provides the motivation and convenience, the means. The core weakness in California's system is its lack of convenient return options. Until such time as this improves, raising the deposit value would be unfair to Californians given the roadblocks associated with redemption.

**One of the best metrics to measure convenience is the ratio of people to redemption locations.** The more people that have to use a single return point, the less convenient it is to redeem deposits on bottles and cans. It's here that California's crisis becomes evident. In the most effective DRS, each return point serves several hundred people. In California, each return point has to serve 32,000 people (see table below). Michigan, for example, has forty-four times more redemption locations per capita than California.

System	Norway	Lithuania	Germany	Michigan	California
Return rate (2019)	89%	92%	98%*	89%	60%**62
Redemption locations	15,000	2,500	130,000	13,500	1,219 <sup>63</sup>
Population (2019)	5.33m	2.79m	83.02m	9.99m	39.51m
Redemption point to consumer ratio	1 : 355	1 : 1,117	1 : 638	1 : 739	1 : 32,411

Source: TOMRA Key Elements of High-Performing Deposit Return Systems: #4 - Convenient Redemption System for Consumers (2021). California's data is from 2019

## We asked Californians about their experience redeeming deposits:

*"It's become harder to redeem for bottle deposits, so recyclables that have value unfortunately go in the blue bin." - Justin, Santa Clara County*

*"I used to collect and redeem the CRV but my town got rid of the redemption center so I would have to drive really far to do it now which is not worth it! No stores take them." - Karina, Mendocino County*

*"There isn't a convenient location and I don't have the space for storing large amounts of empty bottles and cans, I instead toss them in the blue bin. Very frustrating to literally throw money away." - Kelsey, San Diego County*

*"I put them in the blue bin...I have no idea where recycling machines are now. They all went away." - Eric, San Bernardino County*

*"I've wanted to redeem cans for cash, but it's a pain to find a place to accept them. The one place I knew of near me closed a couple years ago." - Meagen, Los Angeles County*

*"I used to bring my cans and bottles in for recycling, but all of the services disappeared from my local grocery stores and small recycling centers. Now I would have to drive half an hour -- not worth the gas or the \$ return. It's such a shame". Gia, Los Angeles County*

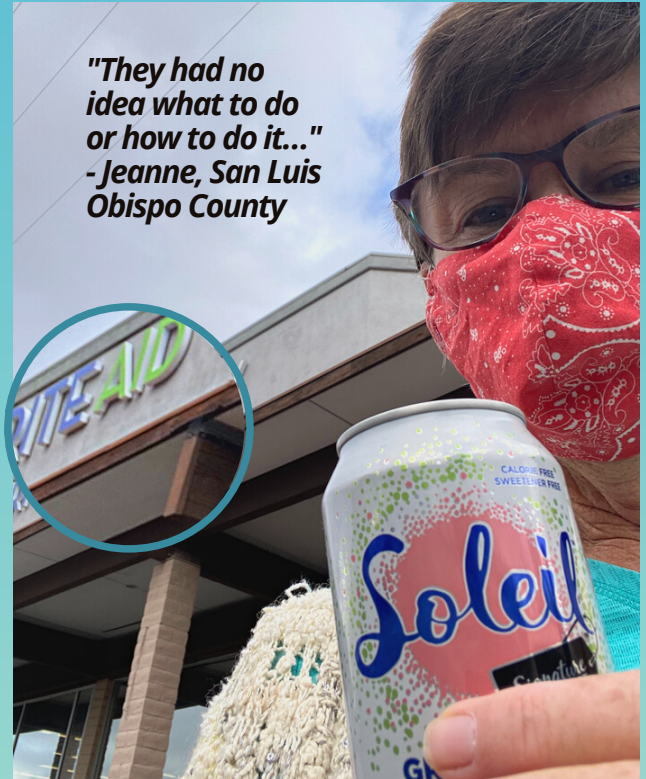


# The Mirage of Return to Retail

California's bottle bill uses a system of 'convenience zones' establishing a half-mile radius around large supermarkets and grocers. If there is no recycling center in that convenience zone, all retailers within the zone are required to accept empty containers. In reality, however, the system offers grocers the option of paying \$100 per day to be exempted from the program, while others are exempted without paying. The result is that **it's very difficult for consumers to know which grocers will accept returns.**

In addition to the retailers that opt-out, many retailers listed as willing and able to accept beverage containers on [CalRecycle's website](#) are not actually complying with the system and doing so. **Story of Stuff Project's own survey revealed that a staggering 48% percent of retailers responsible for taking back bottles and cans failed to do so.**

CalRecycle must step up enforcement and penalize non-compliant retailers to ensure that the system has reliable return to retail options for Californians.



**"They had no idea what to do or how to do it..."**  
- Jeanne, San Luis Obispo County

Rite Aid, 2424 Spring Street, Paso Robles. One of the retailers that failed to redeem CRV deposits.

**48%** of the retailers to which our members attempted to return bottles and cans did **NOT** fulfill their legal obligation to do so

## Who's Shirking Their Take-Back Responsibility?

**Fairfax Market** 2040 Sir Francis Drake Blvd, Fairfax

**California Fresh Market** 771 E Foothill Blvd, San Luis Obispo

**Safeway** 6688 Alhambra Ave, Martinez

**Gelsons** 8330 Santa Monica Blvd, West Hollywood

**Grocery Outlet** 2800 Riverside Ave, Paso Robles

**Smart & Final** 9062 Adams Ave, Huntington Beach

**Food 4 Less** 1465 Creston Rd, Paso Robles

**Stater Bros** 10114 Adams Ave, Huntington Beach

**Rite Aid** 2424 Spring St, Paso Robles

**Stumps Family Marketplace** 3770 Voltaire St, San Diego

48% of survey respondents across the state were unable to return bottles and cans to retailers responsible for taking back bottles and cans as determined by CalRecycle. The above list represents just a fraction of the likely thousands of retailers not fulfilling their redemption obligations across the state.

# Recycling Deserts

While the number of people served by each point of return is insufficient across California, some areas of the state are almost completely unserved, including San Francisco, Marin, Sonoma, West Los Angeles, San Diego and stretches of the north and northwest of the state. In the rural locations, the distances are unreasonable for people to recover small deposits; in the case of high-density populations, the combination of distance and insufficient capacity for the population served, makes redeeming deposits unfeasible. **The result is that Californians in these areas are effectively being taxed.** Below are testimonies of these experiences, along with the distance to their nearest redemption point.

## [N/A] Carol, Humboldt County

*"There are no facilities near my location and there have been none in all of Humboldt County for the duration of the pandemic."*

## [25 Miles] Mandi, Butte County

*"We used to have several buy back locations in our community but they have all closed in the last 5 years and now the closest redemption center is 25 miles away. All of them were closed because it did not make sense financially to operate them under the current structure of the state's bottle program. To my knowledge, most grocery stores and retailers are not participating either and it's very challenging, usually impossible, to redeem containers through them."*

## [10 Miles] Gayna, Yolo County

*"I contacted the City of Davis recycling coordinator. She told me that retailers can pay a \$100.00 fee do avoid taking in any CRV. That seems to be the gap that needs to be filled."*

## [5 Miles] Debra, Tuolumne County

**[6 Miles] T.L., Alameda County**  
*"Three nearby spots... inconvenient to get to and require a separate trip from our usual outings in a different direction. Local retailers don't want to deal with the bottles/cans."*

## [15 Miles] Jim, Imperial County

## [11 Miles]

**Joan, Marin County**

## [5 Miles]

**Alice, Los Angeles County**

## [8 Miles] C.S., San Diego County

*"I have in the past redeemed our recycling at a recycling center. However, it recently closed and the next nearest one is ~8 miles away so now I am not able to!! I was not aware supermarkets etc. were legally responsible for taking back recyclables. None take any back in my area so far as I am aware. Taking back recycling MUST be enforced!"*

Distance From Nearest Deposit Return Location



# Recommendations for Reform

Deposit return systems on beverage containers are undergoing a global renaissance, with an estimated one billion people expected to be covered by the systems globally by 2030.<sup>12</sup>

DRS are proven to reduce one of the most significant sources of ocean-bound plastic and create a steady, high-quality stream of recycled feedstock for new beverage containers as envisioned in California's recycled content law for plastic beverage containers (AB793). DRS also provides the infrastructure required to scale the utilization of reusable containers, further reducing beverage companies' demand for virgin plastic production, which is a growing catalyst for climate change.

California's bottle bill was landmark environmental legislation when it was passed in 1986, but the crisis afflicting it is both structural and undeniable. Numerous deposit return systems are achieving recycling rates above 90% by establishing ambitious and binding returns targets, a deposit value sufficient to motivate consumer behavior, alongside convenient opportunities for citizens to return their bottles and cans.

## California can and must do better.

The legislature, Governor, CalRecycle and stakeholders must work together to save California's bottle bill.

## We recommend the following action:

**"Bottle deposit reform is the simplest and easiest way to dramatically reduce California's carbon footprint, yet it has been the most overlooked."**  
- Susan Collins, Executive Director of Container Recycling Institute



## Immediate Improvements:

- **Remove 'option b' payments** to ensure large retailers fulfill their obligation to redeem deposits on bottles and cans
- **Improve CalRecycle's oversight and enforcement of retailers obligated** to participate in the program
- **Support and modernize redemption infrastructure** by using CalRecycle's surplus funds to invest in reverse vending machines, bag drop centers and provide funds to establish more recycling centers, particularly in regions with the least coverage

## Building a Best in Class System:



- **Establish a stewardship model** holding the beverage industry responsible for achieving clear targets
- **Create enforceable targets** for returns, convenience and refillable containers
- **Ensure 'return to retail'** is built into the system
- **Ensure robust oversight** and enforcement of program performance from CalRecycle
- **Increase the deposit amount** subject to improved convenience for consumers

# Endnotes and Further Readings

## Endnotes

1. [A 2018 study by the 5 Gyres Institute showed that numerically, bottles and caps account for as much as 30% of the ocean-bound plastic.](#)
2. <https://www.calrecycle.ca.gov/bevcontainer>
3. <https://www.statista.com/statistics/1256447/us-recyclable-material-generation-households-volume/#:~:text=An%20estimated%2059%20percent%20of,recycling%20services%20as%20of%202019.>
4. [https://www.nrcm.org/wp-content/uploads/2015/12/CRIstudy\\_bottlebill.pdf](https://www.nrcm.org/wp-content/uploads/2015/12/CRIstudy_bottlebill.pdf)
5. <https://www.consumerwatchdog.org/energy/state-obscures-extent-half-billion-dollar-surplus-unredeemed-crv-deposits-redemption-rate>
6. <https://www.container-recycling.org/index.php/issues/the-california-crisis>
7. <https://consumerwatchdog.org/sites/default/files/2019-11/CRITheBiggestLosersOct22.pdf>
8. [Container Recycling Institute: Background on California's Convenience Zone Structure and Current Status 5/5/2020](#)
9. <https://www.container-recycling.org/images/stories/PDF/CRI%20Memo%20CalRecycle%20FY%202019-20%20Q4%20Qtrly%20Rpt%20vs%20SCO%20year%20end%20reports.pdf>
10. <https://www.consumerwatchdog.org/energy/failure-bottle-deposit-program-costing-californians-750000-tons-greenhouse-gases-equivalent>
11. <https://www.consumerwatchdog.org/energy/failure-bottle-deposit-program-costing-californians-750000-tons-greenhouse-gases-equivalent>
12. <https://resource-recycling.com/recycling/2019/10/06/international-embrace/>

## Further Reading

- *Genie in a Bottle, Unlocking The Full Potential of California's Bottle Bill*. Changing Markets and National Stewardship Action Council
- *Reform for a Sustainable Future, The Time is Now California's Beverage Container Program*. Eunomia
- *Global Deposit Book 2020, An overview of deposit systems for one-way beverage containers*. ReLoop
- *International Embrace*. Container Recycling Institute
- *California in Crisis*. Container Recycling Institute
- *Rewarding Recycling: Learning from the World's Highest-Performing Deposit Return Systems*. TOMRA
- *Talking Trash, The corporate Playbook of false solutions to the plastic crisis*. Changing Markets