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Testimony of Susan Collins, Container Recycling Institute
in regard to H.175 An Act related to Expanding the Bottle Bill
Vermont General Assembly, House Committee on Ways & Means
March 9, 2021

By email: Sorsha Anderson, Staff Associate, Joint Fiscal Office, sanderson@leg.state.vt.us

March 9, 2021

Dear Chair Ancel and Members of the House Committee on Ways and Means,

The Container Recycling Institute (CRI) is a national nonprofit organization and an authority on the economic and environmental impacts of beverage container recycling. We are writing **in support of H.175**, “An act relating to the beverage container redemption system,” which would update Vermont’s deposit law to include most non-carbonated beverage containers, and would raise the deposit to a dime.

1) Updating the deposit law to include non-carbonated beverages is an idea whose time has come.

When Vermont’s bottle bill was enacted in 1972, non-carbonated single-serve beverages did not exist. But times have changed, and *non-fizzy drinks now make up exactly half of the Vermont beverage market*.

CRI has estimated that in 2018, discarded non-carbonated beverage containers amounted to about 23,000 tons of glass, plastic and aluminum that must be managed via municipally-funded curbside recycling, or trash pickup and landfilling. The latter—landfilling—is much more prevalent. According to our derivations based on national recycling rates and those in the nation’s 10 states with deposit systems, the vast majority of non-carbonated beverage containers sold in Vermont (excluding liquor bottles, which have a \$0.15 deposit) are wasted: not recycled, but rather landfilled or littered. Specifically, we estimate that the non-deposit beverage container recycling rates are as low as 11% for glass, 13% for PET plastic, and 41% for aluminum cans. Contrast this to Vermont’s estimated *79% recycling rate for deposit bottles and cans*.¹

We estimate that 18,500 tons of non-deposit beverage bottles and cans were wasted in Vermont in 2018, including almost 4,200 tons of aluminum and plastic, and more than 13,000 tons of glass. The glass tonnage far outweighs the plastic and metal tonnage because wine bottles (not currently containing a deposit) are so heavy. Had those wasted bottles and cans been recycled through the deposit system, they would have generated approximately \$2.4 million in scrap revenues. Replacing them with new ones made from virgin materials generated 10,700 tons of greenhouse gas emissions, and other forms of pollution, resource depletion, and ecosystem damage.

Many of these wasted containers are *littered along Vermont roadways, parks, streams, beaches, and other public places*: posing both an aesthetic nuisance and a financial cost to citizens and businesses for cleanup.

For those reasons, CRI supports adding non-carbonated beverage containers to the deposit law.

2) Unclaimed deposits that escheat to the State of Vermont

Unclaimed deposits are those deposits that consumers do not redeem for a refund: either because they recycled their containers through curbside or other recycling programs, or because they littered them or threw them in the trash. Since the container deposit law’s inception, Vermont distributors and bottlers have kept all unclaimed deposits; on May 30, 2018, that changed when Governor Phil Scott signed S.285, making unclaimed deposits the property of the State for use on clean water programs. The change took effect on October 1, 2019, and it only affects the carbonated beverages in the deposit law (beer and soda). Since Oct.

2019, the State has kept approximately \$3 million dollars in unclaimed deposit revenue during the 4 quarters for which redemption data was collected (10/1/19-9/30/20).²

With a modernization of the bottle bill to more beverage types, and with the increase in the deposit from a nickel to a dime, **we anticipate the redemption rate to reach 85%**, after a breaking-in period of a year or two as the public adjusts to redeeming the new types of deposit containers. This would mean that 15% of the eligible containers would be unredeemed, generating approximately \$7 million of unclaimed deposit revenue annually. This would be **an annual increase of about \$4 million** over the escheated unclaimed deposits that the State has retained in the 1st 4 quarters of the new law being in effect. Again, initially the escheats would be slightly higher since it will take consumers a year or two to get used to the new system, eventually stabilizing at approximately \$7 million per year.

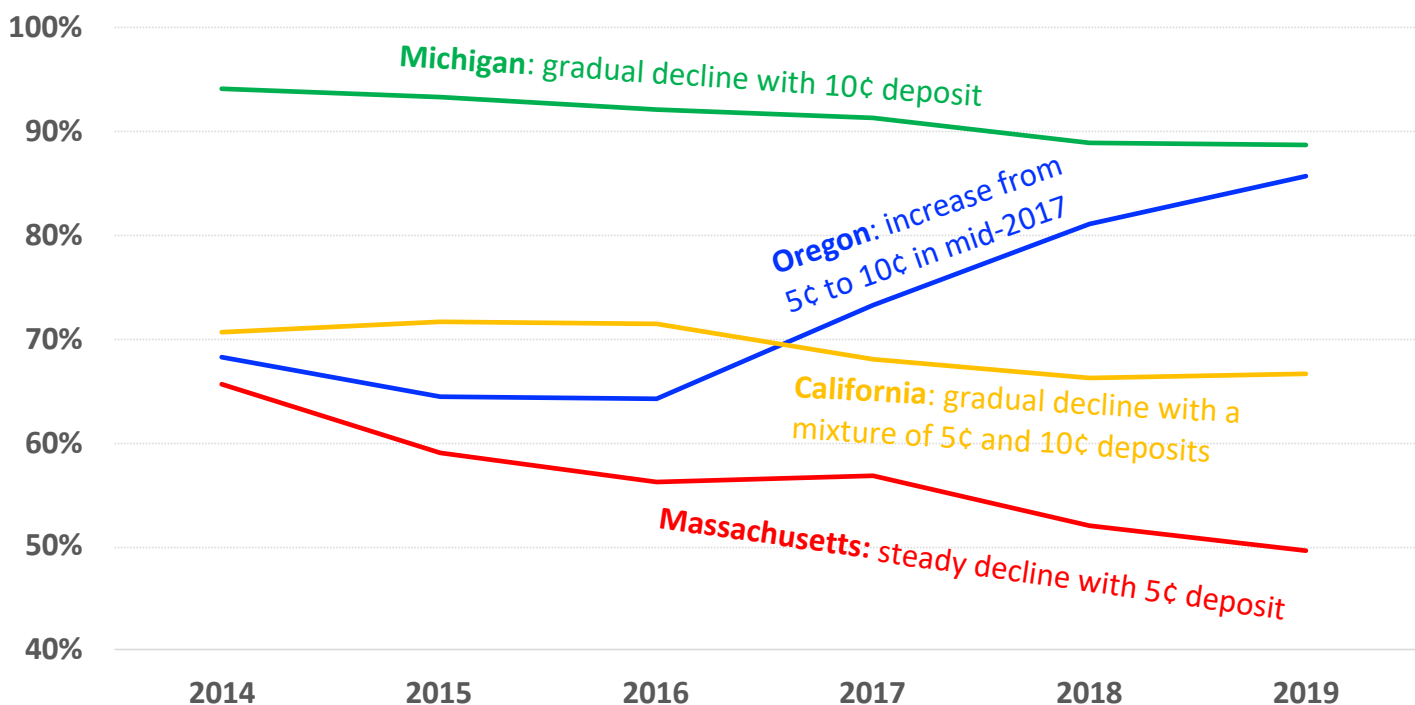
3) Raising the deposit to a dime is long overdue because inflation has eroded the value of a nickel.

When Oregon passed the country's first bottle bill in 1971, it created a 5¢ deposit system. Vermont replicated this initiative the following year. Fifty years later, this 5¢ standard is still popular in many states with deposit laws, despite the fact that *the nickel is worth less than 1% of what it was in 1971*. This decline in value creates an increasingly weak incentive for consumers to return recyclable containers and undermines deposit programs across the country.

As Figure 1 shows, the effect of the weak nickel is illustrated by Massachusetts' falling redemption rate, while **higher deposit values yield higher overall redemption rates**:

- Michigan's 10¢ deposit has produced the highest redemption rates in the United States: 89% in 2019, and averaging more than 95% over the last 45 years.
- Oregon's redemption rate rose from 64% in 2016—the last year with a 5¢ deposit, to 86% in 2019.

Figure 1. Redemption rate changes in selected deposit states, 2014-2019



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Vermont recently began tracking sales and returns for beer, soft drinks, and mineral water, and has reported an average redemption rate of 76.8% for the four quarters ending on 9/30/20. Redemption of liquor is even

higher: 83% for FY2020, due to the 15-cent deposit on liquor bottles. These combine to produce an overall redemption rate of **77%** (because liquor bottles are only 2% of deposit sales). Clearly, higher deposit values lead to higher redemption rates.

Recent waste study mischaracterizes beverage containers in Vermont wastestream

A recent waste characterization study in Vermont³ contains several methodological errors that combine to downplay the significance of wasted beverage containers in the state:

- **Undercounts sales:** by sampling in April and October, the study missed the hot summer months with high levels of beverage consumption, thereby undercounting sales and consumption.
- **Overcounts recycling:** the study estimates that there is a 67% overall recycling rate for containers in the state. *This is mathematically impossible.* We now know that there is a 77% recycling rate for deposit containers, based on four quarters of reported data.⁴ The statewide recycling rate for non-deposit containers would have to be 56% in order to produce an averaged (deposit and non-deposit containers) overall recycling rate of 67%. This is completely out of step with what CRI has calculated for non-deposit containers nationwide. Using redemption data from the 10 U.S. deposit states⁵ and national recycling rate data for the major container materials, CRI has derived recycling rates of 41% for non-deposit aluminum cans, 13% for non-deposit PET bottles, 30% for non-deposit HDPE bottles, and 11% for non-deposit glass bottles. These combine to produce an **overall non-deposit recycling rate of 24%** for the United States in 2018.⁶

The idea that Vermont is outperforming the rest of the United States by more than 2:1 in recycling non-deposit containers is unrealistic at best. We know anecdotally that Vermont does not have higher access to curbside recycling programs than other states in the region. We also know that there have been thousands of tons of collected glass that ultimately ended up in a landfill or other aggregate use, due to the poor quality and unmarketability of glass collected through single stream curbside programs. Painting an overly rosy picture of existing container recycling in Vermont in order to downplay the urgency of updating the state's deposit law is disingenuous.

Environmental benefits of an expanded deposit law and a 10¢ deposit

CRI estimates that adding the full complement of non-carbonated beverage to Vermont's deposit law, and upping the deposit to a dime, would lead to recycling **an additional 200 million bottles and cans per year**: over and above what is being recycled today. The environmental benefits of doing so include avoiding the emissions of about 8,000 tons of greenhouse gases: an amount equivalent to taking more than 1,700 cars off the road for a year. More than a quarter of these gains would be realized **just by adding wine bottles** to the deposit law. Modernizing the deposit law will also reduce litter along Vermont's streets and roadways; parks, trails, and fields; lakeshores and streams; and other public places.

Successful modernization in North America: more beverages, higher deposit values

Opponents of modernizing Vermont's deposit system argue that raising the deposit value to a dime and extending that dime to non-carbonated beverages would hurt consumers financially and would lead to decreased beverage sales. Neither of those arguments hold water (pardon the pun). Vermont's neighbors and states with similar demographics have made one or both moves with success, as Table 1 shows.

Table 1. Selected U.S. States & Canadian Provinces with Deposits of ≥ 10¢, and/or Expanded Beverages					
Location	Carbonated	Non-carbonated	Wine	Spirits (Liquor)	10¢ deposit adoption
California	5¢ for containers < 24 oz. 10¢ for containers ≥ 24 oz.		X	X	2007
Oregon	10¢	10¢	under discussion (b)		2017
Michigan	10¢	X	X	X	1978
Maine	5¢	5¢	15¢	15¢	X
Hawaii	5¢	5¢	X	X	X
Iowa	5¢	X	5¢	5¢	X
Vermont	5¢	X	X	15¢	X
British Columbia	10¢	10¢	10¢	10¢	2020
Alberta	10¢ for containers ≤ 1 liter • 25¢ for containers ≥ 1 liter				2008
Quebec	10¢	10¢	25¢	25¢	2022
Saskatchewan	10¢ - 40¢ based on size & container type				1992
Yukon Territories	10¢ - 35¢ based on container size & type			10¢	1992
Notes: California, Michigan, Hawaii: wine and spirits are not on deposit, but mixed wine and mixed spirits drinks (coolers) are. Oregon: wine and spirits are not on deposit, but hard seltzer, non-alcoholic wine, and cocktail mixers are. Vermont: wine is not on deposit, but mixed wine drinks are. Yukon Territories: 5¢ and 25¢ are returned to the consumer as a refund, respectively.					

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New York, Vermont's neighbor to the west, successfully added water bottles to their deposit system in 2009. Their redemption rate with the current nickel deposit is 64%; they, too, would benefit from a dime deposit.

Maine, Vermont's northern neighbor, has a deposit law that covers all beverages except for milk and dairy alternatives, and has an estimated redemption rate of 84%.⁷ Maine is demographically similar to Vermont, with blue-collar rural areas and liberal urban centers, and a population that is devoted to outdoor activities. Maine's deposit law is highly popular with Mainers.

"The Bottle Bill isn't just Maine's biggest recycling success story—it's a part of our culture. Many of our municipalities rely on the bottle redemption program to help them manage their municipal solid waste, and hundreds of Mainers have built their lives and businesses around the existing bottle redemption law."

- Natural Resources Council of Maine

Oregon shares demographic features with Maine as well: a large rural state with liberal urban centers and a strong outdoor ethic. While Oregon's deposit law is the nation's oldest, it too suffered from the declining value of a nickel. As redemption rates began to fall in the mid-2000s, the state passed a law requiring the deposit to go to a dime if a recycling rate of 80% could not be sustained for two consecutive years. These conditions were met, so the 10¢ deposit was introduced in late 2017. 2018 also saw the expansion of the bottle bill to all non-alcoholic non-carbonated beverages. The success of these two changes is unmistakable: the overall redemption rate has risen from 64% in 2016 to 86% in 2019.

Quebec, Vermont's other northern neighbor, has had a deposit system on carbonated beverages in place since 1984, and currently enjoys a 74% return rate with mixed deposit values: most containers have a deposit value of 5¢, while it is 10¢ for refillable beer bottles, and 20¢ for larger containers (>450 ml). In late 2022, the system will be expanded to include sparkling water, juice, wine and spirits, and other non-carbonated beverages. At the same time, the deposit value will increase to 25¢ for wine and spirits bottles, and 10¢ for all other beverage containers.⁸

British Columbia: In BC's deposit program, all ready-to-serve beverages—including milk and dairy alternatives—are covered by deposits. Most containers had a 5¢ deposit until October 2020; now all beverages are subject to a 10¢ deposit. The 2018 overall redemption rates were 89% for beer and hard cider, and 81% for everything else.⁹

Alberta has one of the most modernized deposit systems in North America. Like British Columbia, it includes all sealed ready-to-serve beverages, including milk and dairy alternatives. Even better, it has a two-tier deposit value of 10¢ and 25¢ based on container size, and had an **85%** redemption rate in 2019.¹⁰

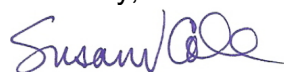
The high quality container materials recovered in these deposit states and provinces have strong economic markets. Because they do not pass through a MRF combined with other many other materials collected through single-stream recycling programs, they are not contaminated; they can be made into new aluminum cans, new glass bottles and fiberglass, and new plastic bottles and fiber products. They fetch a higher market price, and are not downcycled into road base, aggregate, or daily landfill cover. They are also not dumped on site without a permit, as were almost 18,000 tons of glass collected by the Chittenden Solid Waste District (CSWD) between 2016 and 2018. CSWD was ordered to pay more than \$400,000 in penalties for doing so.¹¹ In contrast, glass from the Northeast Kingdom Waste Management District is kept source separated, and is shipped to Quebec for use in fiberglass manufacturing.¹²

In fact, the Chittenden Solid Waste District's own outreach and communications director, Michele Morris, appears to be in favor of expanding the Vermont deposit law to cover wine and other containers. "[The bottle bill is] a better stream for glass. Let's get it where it has the best likelihood of having its value retained and being made back into new glass."¹³

In conclusion, the bottle bill is Vermont's most successful recycling program, and its estimated 77% redemption rate for deposit containers is among the highest in the United States. Updating Vermont's deposit law to include non-carbonated beverages, and to have a 10¢ deposit, would help secure Vermont's position as a recycling leader.

Please let me know if you have any questions about CRI's support of H.175.

Sincerely,



Susan Collins
President, Container Recycling Institute

¹ 75% recycling rate estimated for 2013-2018, derived from data provided by the Vermont Department of Liquor & Lottery, and the Vermont Department of Environmental Conservation. CRI estimates that an additional 4% of deposit beverages sold are recycled through curbside and drop-off programs.

² ["Unclaimed bottle deposits will now fund Vermont clean water programs," Brian Wallstin, MyChamplainValley.com, May 31, 2018](#), and [Link to enabling legislation S.285](#), and personal communication from Rebecca Webber, Administrator, Vermont Beverage Container Law, July 15, 2019.

³ "2018 Vermont Waste Characterization." DSM Environmental Services, Inc.

⁴ Redemption rate of 77% derived from data provided by Rebecca Webber, Administrator, Vermont Beverage Container Law, Aug. 28, 2020 and Feb. 16, 2021, and Vermont Department of Liquor Control Annual Reports: <https://liquorcontrol.vermont.gov/about-us/annual-reports>.

⁵ Deposit states are: CA, CT, IA, HI, MA, ME, MI, NY, OR, and VT.

⁶ "2018 Beverage Market Data Analysis," The Container Recycling Institute, 2020. National recycling rate figures obtained from the Aluminum Association, NAPCOR, the American Chemistry Council, and the U.S. EPA.

⁷ Letter from Newell Augur, Maine Beverage Association, to Maine State Sen. Tom Saviello and State Rep. Ralph Tucker, Jan. 18, 2018.

⁸ "Who Pays What: an Analysis of Beverage Container Collection and Costs in Canada." CM Consulting, Nov. 2020.

⁹ "Encorp Pacific 2018 Annual Report." Encorp Pacific, 2018; "BRCCC's 2019 Annual Report to the Ministry (covers 2018 calendar year)." BC Brewers' Recycled Container Collection Council (BRCCC), 2018.

¹⁰ "Global Deposit Book 2020: An Overview of Deposit Systems for One-Way Beverage Containers." ReLoop Inc. Dec. 15, 2020.

¹¹ Gokee, Amanda. "Glass-dumping settlement draws criticism from Northeast Kingdom towns." VTdigger.org, Feb. 2, 2021.

¹² Gokee, Amanda. "Those recycled bottles? Odds are, they will have no second act." VTdigger.org, Dec. 13, 2020.

¹³ Gribkoff, Elizabeth. "Glass dumping violation points to poor glass recycling market." VTdigger.org, May 29, 2019.