



February 8, 2023

House Committee on Environment and Energy  
Vermont House of Representatives  
State Capitol  
115 State Street  
Montpelier, VT 05633-5301

**RE: Testimony in Support of H.B. 158**

Dear Chair Sheldon, and Members of the House Committee on Environment and Energy,

Thank you for the opportunity to provide testimony regarding H. 158, An Act Relating to the Beverage Container Redemption System. **Just Zero strongly supports this bill.** However, we are suggesting several amendments which will ensure the bill – and the modernized Bottle Bill system it creates – is effective and equitable.

Just Zero is a national environmental non-profit advocacy organization that works alongside communities, policy makers, scientists, educators, organizers, and others to implement just and equitable solutions to climate-damaging and toxic production, consumption, and waste disposal practices. We believe that all people deserve Zero Waste solutions with zero climate-damaging emissions and zero toxic exposures.

Just Zero strongly supports H.B. 158. Beverage container redemption systems – more commonly known as “Bottle Bills” – are highly effective at increasing recycling rates, reducing litter, creating jobs, and developing the infrastructure and consumer culture needed to establish reusable beverage systems. H.158 would provide several necessary improvements to Vermont’s existing Bottle Bill program that will see more beverage containers not just recycled, but recycled through a proven and effective system that ensures the recyclable material is kept clean and uncontaminated so it can be used circularly to manufacture new beverage containers.

This written testimony is divided into three parts. Part I discussed the benefits of Bottle Bills generally; Part II provides an overview of why Vermont should expand and modernize its Bottle Bill Program; and Part III recommends several amendments that will make H.158 stronger, fairer, and more equitable.



## I. **Understanding the Benefits of the Bottle Bill.**

Decades of evidence all points in the same direction. Bottle Bills work. The success of these programs is well documented both nationally and internationally. When fully optimized and modernized, these programs create a recycling system that is critical to developing a more environmentally responsible, circular economy. The success of these programs' rests on two primary features.

### A. Bottle Bills Incentivize Participation in Recycling Efforts and Reduce Litter.

First, the deposit placed on every container incentivizes Vermonters to recycle their empty containers. The refundable deposit creates an understanding that while you are buying the beverage, you are renting the container.

This is extremely important because beverage containers are frequently consumed on-the-go and away from home. In fact, the Container Recycling Institute estimates that 50% of the beverage containers purchased in Vermont are consumed away from home.<sup>1</sup> Given that most businesses do not offer recycling services, and too few public recycling receptacles are available many of these on-the-go containers end up in the trash or improperly discarded as litter.

In fact, reducing litter is one of the core benefits associated with Bottle Bill programs. After Hawaii implemented a Bottle Bill program in 2005, the number of beverage containers collected during Hawaii's International Coastal Cleanup fell from 23,471 in 2004 to 10,905 in 2007 – a 53.5% drop over just three years.<sup>2</sup>

Moreover, in 2020, Keep America Beautiful compared litter in states with and without Bottle Bills. Unsurprisingly, non-Bottle Bill states suffered from significantly more beverage container litter than Bottle Bill states.<sup>3</sup> The study found that non-Bottle Bill states had double the amount of beverage container litter compared to Bottle Bill states.<sup>4</sup> What's more, the study found that non-Bottle Bill states also had more non-container litter as well.<sup>5</sup>

### B. Bottle Bills Create a Steady Stream of High-Quality Recycled Material.

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<sup>1</sup> Container Recycling Institute & Vermont Public Interest Research Group, "[A Clean and Green Vermont: Environmental and Economic Benefits of Vermont's Bottle Bill.](#)" Page 3. (Feb. 28, 2013).

<sup>2</sup> Haw. Dep't of Health, Report to the Twenty-Fifth Legislature 9 (2009).

<sup>3</sup> Keep America Beautiful, "[2020 National Litter Study.](#)" Page. 3. May 2021.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*



Second, Bottle Bills don't just increase the amount of containers that are returned for recycling, they also create a higher quality of recycled material which significantly increases the likelihood that the container is actually used to manufacture a new product. On average, states with Bottle Bills have double the recycling rates than those that rely solely on single-stream recycling.<sup>6</sup>

The convenience of single stream recycling comes with a cost, contamination. Single-stream recycling depends first and foremost on educated consumers making the right choice about what can and cannot go into the blue bin. From there, the burden is on Material Recovery Facilities ("MRFs") to remove any unrecyclable materials that made their way into the recycling stream while also processing and sorting the commingled recyclables into separate streams. These sorting processes are imperfect. According to the National Waste and Recycling Association, roughly 25% of what is placed into the single-stream recycling system is too contaminated to go anywhere other than a landfill.<sup>7</sup>

Additionally, the materials that are properly sorted are unlikely to be recycled as effectively as possible. The overall quality of the recycled material is the leading factor that determines what that material is ultimately used for. This difference in quality is often the difference between recycling and downcycling. Downcycling refers to using recycled material for projects and purposes that fail to capture the full environmental and economic benefits associated with recycling a product. In the case of beverage containers, the highest and best uses is bottle-to-bottle recycling, where containers are recycled directly into new beverage containers. Common examples of downcycling with beverage containers includes turning plastic beverage containers into carpet and textiles, as well as using crushed glass for road improvement projects. While this is preferential to directly landfilling the material, it still means the materials can only be used once as opposed to being recycled repeatedly.

The benefits of Bottle Bill recycling when compared to single-stream recycling is especially important when focusing on plastic. There are significant concerns that contamination levels associated with curbside recycling system make it unlikely, if not impossible, that any plastic can be used to create new food and beverage containers. This is because MRFs only sort plastic based on resin type. As a result, PET beverage containers that make it through the sorting process are baled and sold with non-beverage container PET products. Much of these products are not certified as food grade by the U.S. Food and Drug Administration. Non-food grade

<sup>6</sup> 2018 Beverage Market Data Analysis, Container Recycling Institute (2020).

<sup>7</sup> Maggie Koerth, [The Era of Easy Recycling May be Coming to an End](#), FiveThirtyEight (Jan. 10, 2019).



plastics cannot be used to manufacture new food grade products like beverage containers. What's more, because PET plastic containers are used to store many products such as household cleaners and chemicals, there is a concern that these materials may leach into the plastic, rendering them unrecyclable.

Recently, the Wall Street Journal reported that there is a shortage of recycled PET.<sup>8</sup> This shortage isn't an issue of supply, but a result of the toxicity challenged associated with single-stream recycling.<sup>9</sup> The solution is creating a better means of collecting and processing large volumes of food-grade PET, such as modern, effective Bottle Bill program.<sup>10</sup>

## II. Vermont Must Modernize and Expand the Bottle Bill Program

The Bottle Bill has been a critical part of Vermont's recycling system for nearly fifty years. It has consistently produced recycling rates of 70% or greater, even when national recycling rates have plummeted. As a result, the program has helped to reduce the pressure on the state's only landfill, increased both access and participation in recycling efforts, and reduced the amount of beverage containers littering rivers, lakes, parks, and communities across the state.

However, while the program has been extremely successful, it is in need of several long-overdue improvements. For the most part, Vermont's Bottle Bill has remained unchanged since it was first enacted in 1972. In the intervening years, a significant number of new containers have been introduced to the beverage market. Most of which are not covered by the program. Additionally, the means of redemption has not significantly changed or expanded, the deposit value has lost its economic significance, and the handling fee which compensates redemption providers has failed to fully compensate the value of their services. As a result, the system is not operating as effectively as possible.

H.158 would significantly improve Vermont's Bottle Bill program by expanding the scope of the program to include almost all beverage containers sold in the state, as well as addressing how and where redemption services are offered to make the system more efficient and accessible. Just Zero strongly supports these modernization efforts.

<sup>8</sup> Ryan, Carol. "Empty Plastic Bottles Go from Trash to Hot Commodity." The Wall Street Journal, Dow Jones & Company, 9 Nov. 2021, <https://www.wsj.com/articles/empty-plastic-bottles-go-from-trash-to-hot-commodity11636455644>.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*



A. Vermont's Bottle Bill Program Should All Beverage Containers with Minimal Exceptions.

Currently, only 46% of beverage containers sold in Vermont are covered by the Bottle Bill program. As a result, thousands of tons of readily recyclable beverage containers are not being recycled through this proven and effective system. H.158 would expand the scope of beverages covered under the program to include all uncarbonated and carbonated beverages sold in the state – with some specific exceptions. As a result, most beverage containers sold in Vermont would be eligible for redemption under the Bottle Bill program. This will significantly increase the states recycling rate and provide a clean stream of high-quality recycled material that can be used in the manufacturing of new beverage containers.

Additionally, expanding the scope to include most containers will also make the system more straightforward and intuitive for Vermonters. Right now, Vermonters need to identify which of the beverage containers they have are redeemable and which are not. A plastic Coca-Cola bottle is redeemable, but an identical Poland Spring bottle isn't. An aluminum can of beer is redeemable, but an identical hard seltzer isn't. This can be frustrating for consumers and likely results in many Vermonters deciding not to redeem any containers. This is especially likely given that the deposit value has not changed since the law was first enacted in 1972. Expanding the scope to cover all containers will make redemption a more automatic response for Vermonters.

Several other states have already expanded the scope of their Bottle Bill programs. Maine expanded the scope of its Bottle Bill program in 1990. Maine's program now covers all beverage containers except dairy products.<sup>11</sup> This captures 91% of all containers sold in the state.<sup>12</sup> Since expansion, Maine's program has continuously produced redemption rates above most of the other Bottle Bill states, including Vermont.

Connecticut passed a Bottle Bill Modernization law in 2021.<sup>13</sup> Similar to Vermont, Connecticut had not made any significant modernization efforts to its Bottle Bill program since it was first enacted in 1978.<sup>14</sup> The modernization effort included expanding the scope of covered containers to include hard seltzer and hard cider,

<sup>11</sup> Container Recycling Institute, [Redemption Rates and Other Features of 10 U.S. State Deposit Programs](#).

<sup>12</sup> *Id.*

<sup>13</sup> Connecticut Public Act No. 21-58.

<sup>14</sup> Megan Quinn, [Connecticut Governor Signs Bottle Bill Updates into Law Doubling Deposit Value](#), Waste Dive. (June 7, 2021).



as well as noncarbonated beverages that were not part of the existing law such as teas, sports drinks, and juices. The expansion is expected to add about 193 million containers to the state's program annually.<sup>15</sup>

California also modernized and expanded its Bottle Bill program recently. The bill passed last year one of the most substantial changes to the state's program in recent years. A central component of the new law was adding wine and hard alcohol to the program.<sup>16</sup> Less than 30% of the 500 million wine and spirit bottles sold in California each year are recycled, primarily because the cost and difficulties surrounding the curbside recycling of glass.<sup>17</sup> Something everyone in Vermont is painfully aware of given Chittenden Solid Waste District's illegal dumping of roughly 18,000 tons of glass.<sup>18</sup>

Other states have successfully expanded the scope of their programs, and Vermont must follow their lead. This expansion would result in roughly 95% of all beverages sold in Vermont being covered by the Bottle Bill program.<sup>19</sup> With a modest 70% redemption rate, this expansion would see an additional 136 million beverage containers recycled each year.<sup>20</sup> With a 90% redemption rate, this would rise to 176 million containers recycled annually.<sup>21</sup>

#### B. Wine Should be Added to the Bottle Bill Program and the Deposit Value Should be Set at 15¢

While Bottle Bills are excellent at recycling all types of beverage containers, they truly excel when it comes to glass. Glass beverage containers are both 100% recyclable and the glass can be recycled over and over again without any significant loss in quality. This means that glass has an unlimited life and can be melted and recycled endlessly to make new glass products. It is a core material for the development of a circular economy. However, this is only true if the glass is kept clean.

On average, the U.S. glass recycling rate is roughly 33%, which is significantly lower than the 90% recycling rate in Switzerland, Germany, and other European

<sup>15</sup> Connecticut League of Conservation Votes, [Modernizing the Bottle Bill](#). (2021).

<sup>16</sup> California, [Senate Bill No. 1013](#) (2022).

<sup>17</sup> Luz Rivas - Chair of the California Assembly Committee on Natural Resources, [Bill Report on Senate Bill No. 1013](#), California Legislature. (June 27, 2022).

<sup>18</sup> Haley Rischar, [Vermont Municipality to Pay \\$400,000 to Settle Glass Dumping Case](#), Waste Today. (Dec. 30, 2020).

<sup>19</sup> Elizabeth Balkan, [Testimony in Support of H.175](#), ReLoop America, pg. 1. (Mar, 24, 2022).

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*





countries.<sup>22</sup> This difference is not a result of a lack of technology but our continued reliance on single-stream systems to manage glass containers. In fact, nationally, only 40% of glass placed into the single-stream recycling system actually gets recycled, the rest is landfilled.<sup>23</sup>

Like all recyclables managed through single-stream systems, there is no guarantee that the glass that comes out of the system is clean, uncontaminated, and furnace ready for use by glass manufacturers. This severely limits the market for the material. Moreover, collecting and transporting all this glass, which ultimately may not have a viable end market is expensive and inefficient. Conversely, nearly all glass collected through the Bottle Bill program is purchased by glass recycling companies and sold to bottle manufacturers or fiberglass manufacturers.<sup>24</sup>

The limits of Vermont's single-stream glass recycling system and markets were unfortunately on public display when it emerged that Chittenden Solid Waste District illegally dumped roughly 18,000 tons of glass.<sup>25</sup> Even when glass is not being illegally dumped, the unrecyclability of glass processed through the curbside system comes with a cost to Vermonters. Glass processed through the Bottle Bill is four times more likely to be recycled into a new containers. This saves taxpayers money through diversion of materials from landfills. When this material is landfilled after the glass is processed through the single-stream recycling system, the value of the container isn't the only aspect lost, the costs associated with collecting, transporting, and processing the glass is also lost.

Therefore, to manage this highly recyclable material more effectively, Vermont's Bottle Bill should include all glass beverage containers. This includes Wine. Just Zero strongly supports the decision to include wine in Vermont's Bottle Bill program. However, given the clear benefits associated with managing glass through the Bottle Bill program, we urge the committee to amend H.158 to remove the requirement that the Department of Environmental Conservation study and recommend a container deposit amount for glass wine bottles.<sup>26</sup> Instead, the bill should set the deposit value for glass wine bottles at 15¢. Vermont already set the deposit value for liquor and spirits at 15¢. Wine bottles are similar in thickness and material and therefore the deposit value should be identical. This will increase the

<sup>22</sup> Mitch Jacoby, [Why Glass Recycling in the US is Broken](#), Climate & Energy News. (Feb. 11, 2019).

<sup>23</sup> *Id*

<sup>24</sup> Bryn Oakleaf, [Letter to Vermont Department of Environmental Conservation On Glass Recycling](#), Glass Packaging Institute. (Mar. 29, 2013).

<sup>25</sup> Amanda Gokee, [Chittenden Solid Waste District to Pay \\$400,000 to Settle Glass Dumping Case](#), VT Digger. (Dec. 29, 2020).

<sup>26</sup> H.158, Section 8(a)(2). Page 23.



likelihood that Vermonters will redeem their wine bottles, thus increasing the likelihood that these bottles will actually be recycled.

C. Vermont Should Expand Access to Redemption Services to Make the System More Efficient and Equitable

Just Zero strongly supports the emphasis H.158 places on ensuring that Vermonters have access to convenient points of redemption. An effective and successful Bottle Bill program must make redeeming containers as seamless as possible. A Lack of access to redemption services can deter Vermonters from participating in the system. This is especially true if the deposit value remains at five cents which is unlikely to provide a strong economic incentive for Vermonters to redeem containers in the first place. Redemption shouldn't feel like a burden, it should be as seamless as purchasing the beverage container was in the first place.

H.158 requires the newly created Producer Responsibility Organization to ensure that Vermonters have convenient opportunities to redeem beverage containers. Specifically, by locating points of collection in areas with high population density. The bill contains important requirements for how these services are developed and expanded which includes minimum redemption points at the country, municipality, and community basis. This tiered approach will ensure that no communities are left behind without access to convenient means of redemption.

To bolster these requirements, Just Zero urges the committee to amend H.158 to require large box stores to provide redemption services. These stores are generally located along public transit routes which will make redemption convenient and equitable for those without cars. It also will make redemption more intuitive given that many people purchase groceries, including beverages, from these stores. Therefore, Vermonters can redeem their containers during the same trip they take to purchase new ones. This will reduce the need for additional trips or stops to redeem empty containers. This requirement will also help ensure a diversity of redemption options. Large box stores are generally located in densely populated areas and within a fifteen-minute drive of a large portion of the population. Therefore, this requirement will help meet the other redemption standards in the law and allow the PRO to focus on developing and providing redemption services in other, more remote areas of the state. Additionally, generally speaking, these stores have ample space, including parking spaces, which can host redemption services such as reverse vending machines which should make compliance straightforward.





### III. Vermont's Modernization Effort Should Not Give Complete Control Over to the Beverage Industry.

While Just Zero is supportive of H.158, we are concerned that the modernization of Vermont's Bottle Bill program comes with a significant caveat. H.158 would essentially shift the control of Vermont's most successful and impactful recycling program away from the Department of Environmental Conservation ("DEC" or the "Department") to a beverage-company controlled Producer Responsibility Organization ("PRO"). While there are benefits associated with having the beverage companies take more ownership and control over the program, this control cannot come without necessary checks and balances. The bill must set very clear, enforceable requirements which the PRO is responsible for meeting. Failure to meet these requirements should come with penalties. Moreover, it is critical that the Department continue to actively participate in the oversight, monitoring, and enforcement of the program.

Therefore, Just Zero is recommending several amendments to the bill to balance the competing interests of giving the PRO the flexibility to administer and run the program, with the need for strong oversight and enforcement by the state. This balance will benefit Vermont's by ensuring the program is administered in a fair, transparent, and effective manner.

#### A. The Redemption Rate Goals Should be Amended into Enforceable Minimum Redemption Rates which the PRO is Responsible for Meeting.

As currently drafted, H.158 establishes minimum redemption rate goals for the state. Despite being realistic and achievable, these goals are ultimately unenforceable and have no actual impact on system performance.

The goals should be amended to establish minimum redemption rates which the PRO is responsible for achieving. High-performing Bottle Bill programs can and have achieved redemption rates of 90% and above. A report from Eunomia on Bottle Bill programs in Europe found that the redemption rates vary between 84% and 96%, with a median rate of 91%.<sup>27</sup> Therefore, it is clear that the redemption goals established in H.158 are achievable, and should not be unenforceable goals, but mandatory requirements.

<sup>27</sup> Eunomia, [PET Market in Europe State of Play: Production, Collection, and Recycling Data](#), pg. 14. (2020)



Failure to achieve the minimum redemption rate for two consecutive years should result in the deposit value being increased from five cents to ten cents. This would provide an in-statute fail safe that would automatically increase the deposit value if the redemption rate decreased from the statutorily mandated rate. A lack of redemption means that either there are not enough points of redemption for Vermonters or that the value of the deposit is not high enough to incentivize participation.

Oregon adopted this approach and it has proven to be extremely successful. In 2011, the Oregon legislature adopted language that would require the deposit value to increase from five cents to ten cents if the redemption rate fell below 80% for two consecutive years.<sup>28</sup> The redemption rate dropped to 64.5% in 2014, and only rose to 68.3% in 2015.<sup>29</sup> As a result, the deposit value increased, and the redemption rate skyrocketed to 90% in 2018.<sup>30</sup> Including an identical measure in Vermont's Bottle Bill law will provide a necessary check on the system that can automatically address falling redemption rates without the need for new legislation.

After triggering the deposit value increase, if the minimum redemption rate is not met, the PRO should be responsible for submitting a revised stewardship plan that outlines how the organization will get the system back on track. If the revised plan does not result in the achievement of the minimum redemption rate within two years, the PRO should be fined and the money generated from the fines should be deposited into the Solid Waste Management Assistance Fund for system improvements.

#### B. The Department of Environmental Conservation Should Retain Control Over the Handling Fee.

Just Zero also recommends that H.158 be amended to provide more oversight in how redemption service providers are compensated. Currently, H.158 would shift the responsibility of determining how redemption service providers are compensated from the state over to the PRO. The PRO, through the submission of a stewardship plan would be required to ensure "fair compensation to redemption centers."<sup>31</sup> Compensation to redemption centers and other redemption service providers should not be delegated to the PRO. Instead, the Department should be

<sup>28</sup> Talia Richman, Oregon Bottle Deposit Will Go From Nickle to Dime Next Year, Oregon Live. (Jan 9, 2017). Available at [https://www.oregonlive.com/portland/2016/08/oregon\\_bottle\\_deposit\\_will\\_go.html](https://www.oregonlive.com/portland/2016/08/oregon_bottle_deposit_will_go.html)

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> [H.158, §1532\(2\)](#). Page 13.



responsible for completing a study to evaluate how these operators should be compensated for the services they provide.

Bottle Bills are a form of producer responsibility. Companies that sell and distribute beverages in beverage containers are required to pay for the cost of managing those containers. This is traditionally done by having the beverage companies and distributors pay redemption centers and retailers that offer redemption services a fee on a per-container basis to compensate them for the process of collecting, sorting, and baling these beverage containers. This fee is essential to covering the labor and overhead costs of keeping the system running.

The PRO, which is essentially a beverage-industry controlled system operator should not be responsible for setting the amount of compensation they owe redemption service providers. They have a direct financial incentive to keep that cost as low as possible given that the members of the PRO are the ones responsible for paying the compensation.

It is a clear conflict of interest to give them control over this compensation. This is a fundamental component of the system that must remain with the Department. It is clear that Vermont needs to identify a fair and equitable system that both fairly compensates redemption providers while minimizing the sorting of containers and automating the system to reduce system costs. However, the Department, not the PRO should be responsible for evaluating the existing system and setting up the compensation level with input from the public, the PRO, and redemption providers.

C. H.158 Should Begin Studying How Vermont Can Transition Vermont's Bottle Bill Program to Include Reusable Beverage Containers.

Finally, the increased recycling rates associated with a modernized and expanded Bottle Bill program are extremely important. However, it shouldn't be the end goal of the program. Bottle Bill programs establish both the infrastructure and consumer culture needed for the development of reusable and refillable beverage systems. In fact, before the introduction of one-way disposable containers, beverage companies relied on consumers to return bottles to be refilled. Glass bottles were expensive to manufacture and refilling them saved costs. To incentivize refilling, beverage companies utilized a deposit-return program to ensure glass containers were brought back and refilled.

We can use the Bottle Bill program to return to this approach. Oregon is currently exploring this. In 2018, Oregon begun utilizing its existing deposit return infrastructure to launch a statewide refillable bottle system. This system utilized approximately 245,000 refillable beer bottles which are primarily made from recycled glass and can be refilled up to 40 times. The bottles are designed to be easily separated from the rest of the glass



collected through the state’s Bottle Bill program. Once separated, the bottles are not processed for recycling, but sent to a cleaning facility where they are sterilized and sent back to participating beverage companies for refilling. For the customer, nothing has changed. Since launching in 2018, 410,155 bottles have been diverted from recycling for reuse.

Reusable containers avoid the environmental impacts and energy requirements associated with producing and recycling single-use containers. Given that Vermont is still not meeting its solid waste diversion goals, at a minimum, H. 158 should be amended to include a study for how to best integrate refillables into the Bottle Bill program.

#### **IV. Conclusion**

Bottle Bills have lasted as long as they have and are continuing to be adopted in new jurisdictions because of their proven track record at increasing redemption and recycling. The modernization and expansion components of H.158 are long overdue and will significantly increase the number of beverage containers recycled in Vermont. Moreover, the bill will help make sure that these containers are actually recycled. For these reasons, Just Zero strongly supports H. 158, and urges its passage.

Thank you for your time and consideration of this testimony.

Respectfully submitted,

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