



Composting Association of Vermont
Reclaiming Organics For Good

February 4, 2022

Representative Sheldon, Chair
Vermont House Committee on Natural Resources, Fish, and Wildlife

Re: H501 An act relating to physical contaminant standards for residual waste, 16 digestate, and soil amendments

Dear Representative Sheldon, Representative McCullough, and members of the House Committee on Natural Resources, Fish, and Wildlife

Thank you for considering a bill that addresses the important topic of soil health and soil contamination prevention. While supportive of the intent of H501, the Composting Association of Vermont would like to raise some concerns about the language, as introduced, and proposed some amendments that will both address our concerns and maintain the intent of protecting Vermont soils.

The mission of the Composting Association of Vermont is to advance the value and production of high-quality compost through partnerships, projects, and policies. We contribute to vibrant local economies by providing education and demonstrating the use of organic byproducts as resources rather than 'waste,' increasing Vermont's collective understanding of the connection between soil health, water quality, and resilience to a changing climate. Founded 20 years ago, we're a small, member-based non-profit, located in Hinesburg. Our membership is made up of solid waste management entities, compost facility operators, farmers, community composters, organizations and businesses that share our mission, as well as concerned citizens. Through the annual [Vermont Organics Recycling Summit](#) and other educational events - we've been fostering dialog around the implementation of the Universal Recycling Law, source separation, hauling, depackaging, and the many different uses of compost (including and beyond ag land applications).

While CAV is committed to the production of high-quality compost, we do have some concerns about the introduction of standards without clarification about methodology, process, and - importantly - who would be covering the cost of the testing requirements. We believe leaving this unaddressed now could unintentionally introduce financial burdens on composters and other end-users during implementation. With an ever-increasing volume of organic materials to be managed, we need to be shoring up and expanding our composting capacity and infrastructure - while maintaining clean streams of organics as much as possible.

We hope that this Committee will consider adopting modified language from the [Senate Natural Resources Committee Bill S282](#), which has a tighter focus on depackaging. This would clarify what we understand to be the intent of H501 and would also address several of the concerns we have with the original language.

Depackaging equipment has been deployed in other states and countries, and it's a tool that is already enabling Vermont to divert a substantial portion of the solid waste stream that was previously landfilled. However, some of this material was previously being separated and sent to compost facilities, which is important to keep in mind when considering the volume now being moved through the depack facility in Williston.

Overall, we're concerned about the potential to over-rely on depackaging as a "quick fix", side-stepping the concept of source separation and focusing solely on increases in diversion capacity. And - as we're seeing play out right now - diversion for the sake of diversion is meaningless if there's not a safe, value-added end product resulting from it.

As you heard earlier this week, this technology brings with it concerns about macro-, micro-, and even nano-plastic contamination, as well as potential increases in PFAS contamination. The efficacy of depackagers varies not only among make and model, settings, volume of water, and screens used, but also from one operator to another as well as from load to load, depending on content. While we may not currently know how to best test for microplastics, or what critical loads trigger negative impacts on environmental and human health, the Composting Association believes that we do know enough to be concerned and we believe it would be prudent to halt any plans for new depack facilities while we collectively learn more about how to best use and regulate them.

We understand the desire to think of "packaging" as a single entity, as it were, but the reality is that we all know that not all packaging is the same. The Composting Association urges this committee to direct ANR to adopt some nuance when considering rules and regulations for the use of depackagers in the state. Rigid plastic lids are more likely to shatter than softer plastics; film plastics can get wrapped around the insides of the machine and cause problems. Source separating larger plastic clamshells from their food contents is very different from source separating juice boxes.

Further, we see no reason - other than convenience for the generator - to mix unpackaged fruits and vegetables with packaged foods. Much of the recent testimony about depackagers have given examples of "industrial-sized" homogenous loads being processed. The reality, however, is that co-mingled streams (that is, packaged organics mixed with never packaged organics) are also currently being managed with this technology. All the settings and possible adjustments built into this technology help the operator tune the equipment for each load so that it can be most effective at separating packaging from organic material. This works well when the loads are made up of a single type of packaged food - all pints of ice cream, for example, or bags of potato chips. This actually underscores the utility of separating unpackaged from packaged organics wherever possible.

Source separation is already outlined in Act 148. The composting industry defines this as "a system by which waste generators segregate compostable materials from other waste streams at the source for separate collection". The Composting Association believes that this is, in fact, the intent of the Universal Recycling Law and - as such - this can and should be done where reasonably possible. Co-mingling downgrades the already clean streams of organics, and increases - even in best-case scenarios - some level of contamination.

Source separation demands a shift in culture that takes time and effort, but it can and is being done; composters and haulers are working together in our state to provide education and training around the importance of source separation - and are having success. While it may not be perfect and is definitely an iterative process, we've done it - and are continuing to do it. On the other hand, if we collectively decide that it just can't be done, then this will most certainly become true.

Instead of offering up depackaging as a potential default, let's use this technology selectively and in the best way we can. This would provide cleaner output that could be used on non-ag lands, while maintaining the integrity of unpackaged and easily depackaged streams for compost to be used on food-producing lands.

Hoping that an amended version of this bill does indeed move forward, the Composting Association also hopes that a collaborative stakeholder process - informed by science and data - will be embraced as part of the information-gathering process, and we would like to engage in this process. We truly believe that we can find a balance in meeting the aspirations of the Universal Recycling Law, using organic streams as resources for their best and highest use, while still protecting soils from pollution.

Thank you for hearing our concerns and suggestions. I have appended our testimony submitted to the joint hearing held last year, as well as links to other relevant resources.

Submitted, on behalf of the CAV Board, by

Natasha Duarte

Natasha Duarte, Director
Composting Association of Vermont
Natasha@CompostingVermont.org
802-373-6499

Further information:

- Recorded webinar from 2020 Vermont Organics Recycling Summit: [Contaminants of Emerging Concern: Implications for Compost Quality, Use, & Marketing](#)
- Recorded webinar from 2020 International Compost Awareness Week: [Food Waste and the Circular Economy – Experience \[with Depackaging\] from Denmark](#)
- [CAV's Soil Builders Program](#), eco-literacy for Lake Champlain Basin decision-makers, professionals and advocates. This program provides helps connect the dots between compost, soil health and water quality, and provides best management practices for a wide array of compost uses.



Composting Association of Vermont
Reclaiming Organics For Good

19 April 2021

RE: CAV position on Universal Recycling Law Legislative Review Request

Dear Representative Sheldon, Senator Bray, and members of the House and Senate Natural Resources Committees,

A letter requesting a legislative review of the Universal Recycling Law (URL) was submitted on February 16, 2021. It raises multiple concerns that deserve the attention of the legislature, the Agency of Natural Resources, and likely other agencies such as the Agency of Agriculture, Food and Markets. The Composting Association of Vermont (CAV) would like to be involved in these discussions.

CAV recognizes and celebrates the different methods utilized to address organics diversion statewide. From backyard systems to animal feeding operations, from community and commercial composting to anaerobic digestion, **all of these diversion tools play an integral role in facilitating the state and its vast array of organics diversion players in meeting their shared goals** of waste reduction, food security, landfill diversion, greenhouse gas reductions, soil building, and agricultural resiliency.

It is critical that different approaches be allowed – and encouraged – to coexist, especially as the needs in rural vs. more populated areas of the state differ. We recognize that there will always be some amount of competition for diverted organics amongst the processors in this arena. CAV believes that the state should prioritize the diversion pathways that the hierarchy established by the legislature and signed into law.

- Clarity on the enforceability of the hierarchy is necessary for businesses, farms, solid waste districts and other stakeholders in order to guide planning, investment and operational decisions. **We ask the legislature to address this issue.**

The composting industry defines **source separation** as “a system by which waste generators segregate compostable materials from other waste streams at the source for separate collection”. CAV believes that this is, in fact, the intention of this language in the URL and we are concerned that ANR’s interpretation of source separation does not hold to this standard.

Considerable investment of time and taxpayer funds have gone into the development of source-separation programs in Vermont. This work – over multiple years – has led to a higher quality resource captured for food rescue of edible food, diversion for animal feed, an increase in organics diversion, and lower contamination of feedstocks sent to composting facilities. This is an intended outcome of the URL.

As we recognize that contamination is still a significant issue for compost facilities throughout the state, CAV calls for clarity of messaging from the state and a strengthened commitment to outreach and education for source separation. Instead, large generators have been given the greenlight to co-mingle unpackaged organic residuals, that had been previously source separated, with packaged foods. This downgrades the potential beneficial use of the recovered materials and is in conflict with the URL due to materials not being recovered at the higher levels of the resource hierarchy.

- **CAV urges the legislature to enforce the separation of organics**, at minimum the separation of packaged from unpackaged foods.

Approximately 38% of food residuals still being landfilled are packaged (2018 Waste Composition Study). CAV recognizes the opportunity to divert these ~29,000 tons of packaged foods and supports the utility of depackaging technology. It is often impractical to separate the organic residual fraction from many packaged goods. Depackaging equipment has been deployed in other states and countries, and has been shown to increase organic residual diversion rates from landfill disposal. Depackaging technology is a powerful tool that enables Vermont to divert a substantial portion of the solid waste stream that was previously landfilled.

However, we would like to raise concerns about the potential to over-rely on depackaging as a “quick fix”, side-stepping source separation and focusing solely on increases in diversion capacity. This technology brings with it concerns over macro- and micro-plastic contamination. The efficacy of depackagers varies not only among make and model, settings, and volume of water and screens used, but also from one operator to another as well as from load to load, depending on content. It is important to note that they seem to be most effective at separating packaging from organic material when the loads are homogenous (e.g., whole loads of bagged or boxed organics, or beverages). This underscores the utility of separating unpackaged from packaged organics wherever possible.

Relative to other parts of the country where food waste composting is practiced at a larger scale, Vermont food wastes accepted by many facilities in the state have been “cleaner” than food waste streams accepted elsewhere. With the increase in participation with food waste diversion at all levels of generators, some facilities in Vermont have seen a significant increase in levels of contamination. There are instances where depackaging technologies could be utilized to substantially “clean up” contaminated organic streams to the point where the output material might produce a cleaner compost product than what would otherwise be possible. But even in these instances, relying on depackaging technologies to pre-process these contaminated streams should not be considered as the final solution, but rather be paired with continued education on the importance of source separation.

Many European countries that have adopted depackaging have concurrently adopted strict contamination rules or guidance for plastic content in compost and in agricultural soils, and some countries are, in fact, tightening these rules. The absence of this approach in Vermont creates a risk of contamination of compost products and soils in this state. Vermont is recognized as a food systems leader and soil health should be taken seriously as both a short- and long-term risk.

There is a deficit of research on the soil health, water quality and ecological impacts of greater plastic and especially microplastic contamination of soils. More research and consideration is needed to address the downstream impacts of output from depackaging in anaerobic digesters and compost facilities that ultimately have the end products applied to farm fields and home gardens.

- Criteria for acceptable contamination levels need to be established or the risk of highly variable outputs is significant. **CAV urges the legislature to learn from other countries experiences with depackaging equipment, and requests that a study group be formed to research best management practices for depackaging technologies and options for regulating this technology and the outputs they produce.**

In Summary:

- **CAV is supportive of the organics hierarchy as written into the URL** and feels that waste reduction, food recovery, feeding of animals, and soil building via composting are all critically important. CAV is supportive of depackaging as a technology in instances where these other priorities are not compromised.

- **CAV supports the industry definition of Source Separation, and urges that this be upheld in the URL.**
- **CAV supports Vermont's ongoing efforts to maximize food waste diversion in its many forms, and sees the need to improve understanding of the impacts of macro- and micro-plastics in organic processing streams.**
- **While generally supportive of depackaging as a helpful tool towards achieving shared goals, CAV would welcome regulation and standards to ensure an ongoing commitment to soil health in Vermont and beyond.** Vermont's soils are a resource that should not be degraded by adopting technologies without considering contamination risks and establishing practical rules and guidance for their use.
- Vermont is a leader in organics diversion and management. Other states continue to look to us to chart a responsible path forward that both recognizes the utility of depackaging equipment as well as the place that this technology has in utilizing organic residuals for their highest and best value.

Thank you for considering CAV's perspective on these important issues.

Sincerely,



Natasha Duarte, Director



Robert Spencer, CAV President

Submitted on behalf of the CAV Board of Directors