

Title: 2023 Biennial Report on Solid Waste

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Executive Summary

The 2019 Vermont Materials Management Plan ([MMP](#)) maintains the state's historic goal of a 50% recycling/composting rate, and includes goals to decrease waste generation by 10% and reduce waste disposal by 25% by 2024. In the 10 years since the [Universal Recycling law](#) (Act 148, of 2012) passed, the annual tons of material recycled/composted has risen slightly, but neither disposal nor overall waste generation have consistently decreased (see [2021 Diversion and Disposal Report](#)). In addition, PFAS chemicals and unrecyclable plastic waste threaten both recycling, composting, and disposal. Upstream incentives, such as producer responsibility programs, not only sustain and grow recycling, but can reduce waste and its toxicity. With ~20 years of capacity remaining at the NEWSVT landfill in Coventry, the State must also consider how it will meet its ongoing disposal capacity needs.

In response to PFAS and microplastics concerns of [Act 170](#), the Agency will draft a report of participant recommendations on the role of depackagers in managing food waste. The Agency also sought, and was awarded, an EPA Pollution Prevention (P2) grant to test food waste streams for PFAS and microplastics and to work with food manufacturers to explore packaging alternatives.

Key Takeaways

- Without significant decreases in disposal tonnages, there is a need to both reduce waste and plan for future disposal capacity, such as researching feasible sites around the state.
- Regional/national collaboration to reduce toxic PFAS chemicals is needed to help protect both human health and the environment, as well as recycling, composting, and disposal activities.
- With increasing municipal Household Hazardous Waste (HHW) costs, producer responsibility could help manage this most hazardous portion of solid waste.
- Recycling and Bottle Redemption systems both need support to address years of high costs from market volatility, unrecyclable plastic packaging, and system inefficiencies. Without modernizing the existing collection system, Bottle Bill expansion is not feasible. In addition, there should be an evaluation of the relationship between the Bottle Bill and traditional “blue bin” recycling. Packaging and Printed Paper EPR programs, which now exist in four states, help support recycling collection and processing costs that are currently born by consumers, municipalities, businesses, and haulers.
- Rechargeable batteries are causing dangerous fires at solid waste & recycling facilities and the Agency supports their inclusion in Vermont's Battery Recycling Program.

Discussion

Vermonters want to recycle and can adapt to change quickly, like their switch from single-use plastic bags to reusable shopping bags. Nevertheless, reducing waste's toxicity and finding ways to recycle challenging materials requires thinking beyond our current waste management systems.

- **PFAS Chemical Toxicity:** Per- and polyfluoroalkyl (PFAS) chemicals are harmful at very low concentrations and found in many consumer products, from clothes and furniture to carpets and food packaging. It is extremely costly for rate payers and municipalities to treat for these chemicals in drinking water, wastewater treatment, biosolids management, landfills, recycling, and composting. The most effective means to protect public health and the environment are upstream product bans that reduce the use of these chemicals at their source. [The 7/1/2023 state law banning PFAS in food packaging and other products](#) is a good first step, however more work needs to be done at the state, regional, and national level to effectively reduce the use of PFAS.
- **Household Hazardous Waste (HHW) Costs:** HHW is the most toxic part of the solid waste stream, and improper disposal can harm humans and the environment. For more than 30 years, Vermont municipalities have collected HHW to reduce these impacts. However, contractor costs have recently increased by 50% or more. A shrinking pool of service providers and labor and supply chain shortages have increased costs to municipal solid waste districts to continue to collect and properly manage HHW. **State policy needs to find ways of supporting municipalities and decreasing costs for persons properly managing HHW. For other toxic and costly waste materials, Extended Producer Responsibility (EPR) programs have provided relief to taxpayers and municipalities.**
- **Recycling, Plastics, & Bottle Redemption Challenges:** The recycling and bottle redemption systems face longstanding challenges. Volatile recycling markets and unrecyclable packaging have increased recycling facility costs to the point where they sometimes exceed landfilling and incineration costs. [DEC estimates single-use products, paper, and packaging make up as much as 30% of MSW disposed in Vermont](#), contributing to ongoing disposal capacity needs and contaminating recycling. Similarly, as beverage types have multiplied, Bottle Bill redemption centers are struggling to sort more than 100 beverage brands. Expansion could make this job all but impossible. **Modernization of the Bottle Bill is necessary before the Bottle Bill is expanded. In addition, the State should evaluate the relationship between the bottle bill, the regular recycling system, and the potential benefits of packaging and printed paper EPR to ensure that they operate in concert and support the highest uses of recycled content and a circular economy.**
- **Rechargeable Battery Fires:** Rechargeable lithium-ion batteries will help power our clean energy future and help fight climate change, but damaged or defective batteries are responsible for dangerous fires at solid waste and recycling facilities in Vermont and the U.S. Vermont has one of the most successful single-use battery recycling EPR programs in the country, which already voluntarily includes many rechargeable batteries. **The Agency supports expanding the Vermont battery EPR law to cover the collection, recycling, and safe management of rechargeable batteries to help prevent fires and protect solid waste workers.**
- **Waste Reduction & Ongoing Disposal Needs:** The Agency is exploring waste reduction strategies with a small stakeholder group with results expected in early 2023. The Agency intends to have a broader conversation on disposal capacity within the State as a part of the revision of the Materials Management Plan in late 2024.