

## Construction Waste and Demolition Debris (C&D)

Prioritize waste reduction and sustainable design in request for proposals

When it comes to preventing waste from construction projects through smarter design or careful “deconstruction” rather than the demolishing of buildings, the State has a tremendous opportunity to lead by example. Vermont’s Department of Buildings and General Services should give preference to bids for the planning, construction, and renovation of state buildings that excel in areas of waste reduction and sustainable design.

## Household Hazardous Waste (HHW)

Enact a framework for extended producer responsibility recycling programs

Vermont should establish a framework that would set basic requirements and guidelines by which ANR could identify product categories best suited for extended producer responsibility recycling programs, create a plan, and determine a schedule for when such recycling programs would go into effect. Establishing this type of framework creates efficiencies for ANR and solidifies the need to hold manufacturers accountable. This framework should not just consider HHW, but should include other waste categories such as packaging and printed material, tires, pharmaceuticals, and more.

## Conclusion

Vermont has a responsibility to change the way we view and manage waste in the state. Diverting materials from landfills only solves part of the problem. Rather, we must challenge the notion of waste altogether and adopt a zero waste approach that emphasizes waste prevention and closed-loop recycling. Taking this long-term view will foster sustainability and better protect our



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### NOTES

<sup>1</sup> Vermont Department of Environmental Conservation. Generation, Dispersion, and Disposal, Vermont Municipal Solid Waste. Available at <http://www.anr.state.vt.us/dec/wastediv/solid/pubs/DiversionDisposalReportTable1.pdf> (accessed on August 19, 2011).

<sup>2</sup> Vermont Department of Environmental Conservation. Generation, Dispersion, and Disposal, Vermont Municipal Solid Waste.

<sup>3</sup> United States Environmental Protection Agency. Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2009.

<sup>4</sup> United States Environmental Protection Agency. Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2009.

<sup>5</sup> Putting Waste to Work: Jobs in Vermont’s Resource Recovery Sectors. Toxics Action Center. May 2010.

<sup>6</sup> Life Beyond Garbage: Vermont Waste Prevention and Diversion Strategies. Vermont Waste Prevention Steering Committee (supported by the Vermont Agency of Natural Resources and the U.S. EPA). May 2008. Available at <http://www.anr.state.vt.us/dec/wastediv/R3/DECwpPLAN.htm> (accessed on August 26, 2011).

<sup>7</sup> United States Environmental Protection Agency. Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2009.

<sup>8</sup> Vermont Department of Environmental Conservation. Vermont Solid Waste Generation, Summary 2008. Available at <http://www.anr.state.vt.us/dec/wastediv/solid/pubs/DiversionDisposalReportSummary.pdf> (accessed on August 26, 2011).

<sup>9</sup> United States Environmental Protection Agency. Organic Materials. Available at <http://www.epa.gov/osw/consERVE/materials/organics/> (accessed on August 26, 2011).

<sup>10</sup> Vermont Department of Environmental Conservation. Vermont Solid Waste Generation, Summary 2008. Available at <http://www.anr.state.vt.us/dec/wastediv/solid/pubs/DiversionDisposalReportSummary.pdf> (accessed on August 26, 2011).

<sup>11</sup> Life Beyond Garbage: Vermont Waste Prevention and Diversion Strategies. Vermont Waste Prevention Steering Committee (supported by the Vermont Agency of Natural Resources and the U.S. EPA). May 2008. Available at <http://www.anr.state.vt.us/dec/wastediv/R3/DECwpPLAN.htm> (accessed on August 26, 2011).

<sup>12</sup> Vermont Agency of Natural Resources (prepared by DSM Environmental Services, Inc.). The Costs of Beverage Container Redemption in Vermont. June 30, 2007.

<sup>13</sup> United States Environmental Protection Agency. Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2009.

## Policies to Consider moving forward

### 1) Traditional Recyclables

- Enact a packaging prevention and waste policy
- Mandate recycling and parallel collection
- Implement Pay-As-You-Throw (PAYT)

### 2) Organics

- Expand redistribution network for perishable foods
- Promote small and large scale composting

### 3) Construction Waste & Demolition Debris

- Implement landfill bans on select C&D wastes
- Promote the development of regional reuse and recycling Markets

### 4) Household Hazardous Waste

- Establish a hazard-based chemical evaluation program to prioritize and regulate the most harmful chemicals in consumer products

# A Zero Waste Vision for Vermont

## Rethinking Our Approach to Waste

Over the last decade, waste generated by Vermont’s residents, businesses, and institutions has increased by nearly 80% while diversion rates (including reuse, recycling, and composting) have stagnated.<sup>1</sup> Despite a statewide goal to divert 50% of Vermont’s municipal solid waste (MSW) by 2005, diversion rates have plateaued at just over 30%.<sup>2</sup> Sadly, this figure is on par with the national recycling rate which is just shy of 34%.<sup>3</sup>

At the heart of this problem lies a linear approach towards the use and management of resources. Raw materials are extracted, processed into goods, consumed, and then disposed (primarily by being landfilled or incinerated<sup>4</sup>). This approach has, not surprisingly, resulted in an unsustainable system that threatens our limited natural resources and poses long-term threats to our environment.

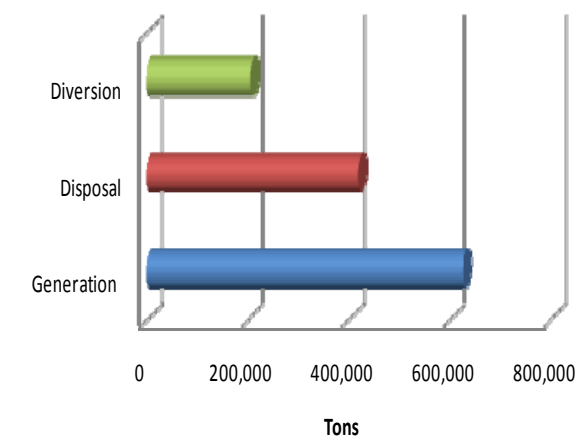
Vermont can, and should, do more to break from this mold by embracing an ambitious “zero waste” program. Zero waste is a systems approach that seeks to drastically alter the way that materials move through our society, striving for the elimination of waste, rather than the management of it. A zero waste approach considers the entire lifecycle of a product and promotes a “circular resource management system in which discarded materials are looped back into the economy to be reused, reprocessed, or composted.”<sup>5</sup> The goal of zero waste is not embodied in any single policy, but instead requires a series of targeted strategies ranging from smarter product design to the recovery of quality resources.

Moving towards zero waste requires the following steps:

- 1) Setting the goal of zero;
- 2) Prioritizing waste sectors; and
- 3) Implementing strategies to prevent waste and recover quality resources from those sectors.

This document presents a roadmap for how Vermont can move towards zero waste in the years ahead.

## 2008 Vermont Municipal Solid Waste



## Set the Goal of Zero Waste

In order to get to zero waste, Vermont must first set the goal. Although eliminating waste altogether may seem overly ambitious, it’s important to understand the influence that goals have on driving planning, policy, and spending decisions. Setting the goal of zero waste will not only guide the development and improvement of our solid waste infrastructure, but it will also incite innovative solutions to move us in the right direction.

Moving from this...



To this...



Understanding that getting down to “zero” is a long-term endeavor, it’s important for Vermont to establish short-term goals by which we can track our progress. This could include interim diversion goals for the entire waste stream as well as specific recycling goals for priority waste sectors.

## Prioritize Waste Sectors

Every day Vermonters discard a wide range of materials including food scraps, building supplies, plastics, paper, and more. In order to effectively prevent the generation of waste and divert valuable resources from landfills, we must decide which materials to prioritize.

In 2008, Vermont’s Agency of Natural Resources (ANR) facilitated a waste prevention planning process that brought together stakeholders to identify “a comprehensive set of strategies to move Vermont forward in its effort to prevent waste.”<sup>6</sup> This process, which resulted in a report entitled *Life without Garbage*, revolved around five sectors including traditional recyclables, construction waste and demolition debris, organics, electronics, and household hazardous waste.

VPIRG largely agrees that the waste sectors identified in the report are important areas of concern, and we recommend that the following categories be considered priorities moving forward.

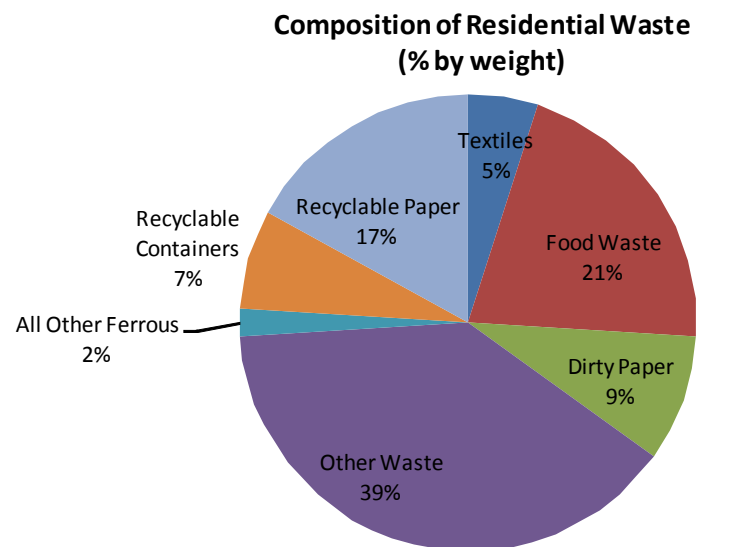
- 1) **Traditional Recyclables** – Recyclable materials such as paper, glass, and aluminum comprise a sizeable portion of our waste stream. According to the EPA, paper, glass, metals, and plastics comprised over 50% of municipal solid waste (MSW) generation in the United States in 2009.<sup>7</sup> That’s significant, especially considering that MSW accounts for roughly 69% of solid waste generated in the state.<sup>8</sup>
- 2) **Organics** – According to the EPA, organic materials (including yard trimmings, food scraps, and more) make up the largest segment of our trash.<sup>9</sup> Keeping these materials out of landfills not only saves space, but also decreases the generation of methane (a powerful greenhouse gas).
- 3) **Construction Waste and Demolition Debris (C&D)** – Construction and Demolition waste includes wood, plaster, shingles, insulation, and other materials that result from the construction or demolition of buildings and other structures. In 2008, C&D and wood comprised over 20% of Vermont’s solid waste generation, second only to municipal solid waste.<sup>10</sup>
- 4) **Household Hazardous Waste (HHW)** – Household Hazardous Waste includes batteries, fluorescent light bulbs, and other products disposed of by households that contain hazardous substances. In 2002, data suggests that 83% of HHW went to landfills with just a small percentage diverted for recycling.<sup>11</sup>



## Develop Strategies to Prevent Waste and Recover Resources

Moving towards zero waste requires the development of specific strategies to not only prevent the generation of waste, but to also enable the recovery and reuse of valuable resources. These strategies should be guided by the following principles:

- **Focus on closed-loop recycling of materials** – Collection is not the same as recycling. Depending on the recycling program, materials can be contaminated or broken. As a result, these



Vermont Department of Environmental Conservation (prepared by DSM Environmental Services). *Vermont Waste Composition Study*. June 2002.

materials may end up in landfills or may be “downcycled” (used for a one-time purpose that likely cannot be repeated). Vermont must focus on the recovery of quality material and place a premium on closed-loop recycling in which materials can be continuously made and remade back into products.

- **Consider all points of generation** – Waste recovery strategies must focus on all points of generation including residential, commercial, and institutional sources. This includes consideration of “away-from-home” programs to capture materials that are consumed and disposed of outside of these areas.
- **Promote producer responsibility** – Under our current system, municipalities and taxpayers are responsible for the costs of recycling products, but have no input on product design or longevity. Producers must be responsible for financing the cost of recycling their products. Doing so creates a powerful incentive for manufacturers to design their products to last longer and to exclude the toxic and unnecessary materials that make recycling so difficult and expensive.
- **Consider the entire lifecycle of the product when establishing priorities and strategies** – Not all materials and products are created equally. In order for policies to have the intended environmental impact, we have to consider the entire lifecycle of a product including but not limited to greenhouse gas emissions and energy consumption.

## Extended Producer Responsibility in Vermont

Vermont already has several producer responsibility recycling programs that target the following product categories:

- Beverage containers
- Mercury thermostats
- Electronic waste
- Fluorescent light bulbs

## Specific Strategies for Vermont

With these principles in mind, Vermont must establish specific waste reduction strategies for each priority sector. While there are many policy options that can and should be considered, this document identifies policies that we believe should be immediate priorities for Vermont. Borrowing heavily from the *Life Beyond Garbage* report, we also list several policy options that could be considered in the years ahead.

### Traditional Recyclables

#### Update Vermont’s Bottle Bill to include non-carbonated beverage containers

Wasting beverage containers has devastating impacts on the environment. This is not only because these containers will ultimately be littered, landfilled, or incinerated, but also because new containers will be produced using limited virgin materials and astounding amounts of energy.

Vermont’s Bottle Bill is the most effective recycling program in the state, achieving an 85% recycling rate for beverage containers covered under the program. Updating the law to include water bottles and other non-carbonated beverage containers could potentially keep more than 82 million containers out of our landfills and off of our roadsides every year. That’s enough bottles and cans to stretch from Vermont to Honolulu and back!

#### Use unclaimed deposits to support recycling

Under current law, unclaimed deposits (totaling roughly \$2 million annually in Vermont) are returned to the beverage industry.<sup>12</sup> Seven out of the ten states that have bottle bills retain all or part of the deposit left unclaimed by consumers. The State of Vermont should do the same and use the funds to support other recycling programs.

### Organics

#### Mandate diversion of organics for all generators

According to the EPA, “organic material continues to be the largest component of MSW.”<sup>13</sup> Throwing this material into landfills not only limits space and generates methane, but also wastes an opportunity to turn these resources into compost. Vermont should implement a landfill ban on organic material for all residents, businesses, and institutions in the state.

**Collection is not the same thing as recycling.**

