Karen Knaebel, Kim Lutchko & Bryn Oakleaf: Developing Recycling Processes To Conserve Materials And Keep Useable Goods Out Of Landfills

In 2012, a Statewide Waste Composition Study found that roughly 39% of all residential material landfilled in the state is recyclable and 28% is compostable. Almost two-thirds of everything that we discard on a daily basis are wasted resources, including paper, glass, metals, plastics, wood, electronic components, textiles, construction and building materials and organics. With the Universal Recycling law adopted in 2012, Vermont is set to dramatically alter these statistics. As it is recognized through numerous environmental benefits, recovery and reuse of materials is more than a feel good endeavor. In 2010, Vermont recycling programs diverted 205,156 tons of materials, collected 985,600 pounds of household hazardous waste and mercury-added products, and captured 1.6 million pounds of electronic material. This prevented nearly 206,500 tons of materials from being landfilled.

Wanting to learn more about recycling, I sat down with Karen Knaebel, Kim Lutchko and Bryn Oakleaf to discuss their work within the Waste Management Division of the Dept. of Environmental Conservation (DEC). All Environmental Technicians or Environmental Analysts, these three women collectively have developed and implemented various aspects of Vermont's recycling programs and legislation. We talked about Act 148, the legislation that established universal recycling of solid waste. We also discussed Vermont E-Cycles, the electronics recycling program available to all Vermonters, which stems from a separate piece of legislation that can be found here. We talked about the recovery of organic materials to be repurposed as feed for animals, processed into high-value compost, or used for energy generation rather than being lost to the landfill. "Vermont is a leader in the electronics world," Ms. Knaebel explained. "Because our state is small, we can implement programs on a smaller scale; our legislators are receptive to feedback from the public; our citizens are uniquely willing to participate; and we are able to achieve results that continually exceed expectations."

While this may be the case, our small state has a significant amount of work to do to improve our materials management efforts. With Act 148 in place, Vermont strives to be a leader in the recycling and organics recovery arenas as well. An example for where to start is by looking at the nearly 70,000 tons of organic materials being landfilled a year in Vermont. "Organic materials make up about 28% of the total residential waste streams. All of those materials could be repurposed, instead they are being thrown away," said Ms. Oakleaf. "Our work focuses on how to successfully capture useable materials so that we can benefit from those resources instead of seeing them landfilled." As implementation of Act 148 gets underway, the ease of properly managing these materials will improve and become more convenient.

It can be seen from Vermont's E-cycles program how valuable materials can be diverted from the waste stream and put to good use. With over 100 registered locations across Vermont, the E-Cycles program offers free electronics recycling for Vermonters. Based on Oregon's electronics recycling program, E-Cycles is innovative in that it is funded by the product manufacturers rather than residents or municipalities. Oversight for the program is conducted by DEC analysts and technicians whom work cooperatively with a private contractor to implement and manage the program. "I work with the manufacturers," Ms. Lutchko explained. "If they meet the elegibility requirements, they need to register with the state and pay fees. The fees come out as a percentage of actual sales."

"There is a new RFP out right now for contractors interested in managing the E-Cycles program," Ms. Knaebel said. "It is exciting – we are seeing a lot of interest and are hoping for a lot of new and innovative ideas as the bids come in, and at the same time a lot of evaluation for any potential adjustments based on what we've learned. The program has really taken off since its implementation." Indeed, the statistics support this claim. The legislation set a goal to collect 5.5 pounds per capita for the first program year and Vermont collected 7.7 pounds, which was the highest per capita rate in the nation.

I asked these three ladies to share with our readers some wisdom. What should we know about that we may not know about today? “Very few materials are truly a waste,” Ms.Oakleaf said. “Virtually everything is a reusable resource. We’re talking about a shift in perception. We live in a disposable society but we are seeing that beginning to change. People, especially Vermonters, are becoming aware of the value of efficiency and of using what we have before using something new. Vermonters tend to be very hands-on with their unwanted materials. They understand the importance of recycling materials.”

Vermont offers an impressive list of materials accepted for recycling. In addition to the collection of electronics and food scraps, there are several drop-off locations for cans, bottles, cardboard, paper, fluorescent bulbs, mercury thermostats, textiles, plastic and even construction materials like metal and wood. Materials are often processed locally rather than being shipped oversees, and reused as building materials, garden soil and new products. For a full list of reuse opportunities in your area contact your local solid waste management district.

As with all of our other interviewees, I asked the three women what everyday citizens can do. “Reuse materials” Oakleaf chimed in. “Avoid unnecessary duplication. Purchase products that are high quality and can serve multiple functions. Be efficient and think about the life-cycle of products purchased.” “Look at the packaging when you purchase something,” Lutchko shared. “Use less throw-away containers and purchase reusable bags.” “Don’t just throw things in the regular trash,” Knaeble says. “You’d be surprised that there is almost always another use for every item, another person who will find it useful, another product that can be manufactured using what we discard.” As the old adage says, ‘one man’s trash is another man’s treasure’ and in Vermont, at least, that can be very true.

Helpful links:

- Vermont E-Cycles Program: vtecycles.org or toll free at 1-855-6-ECYCLE
- Act 148 legislation full text: http://www.leg.state.vt.us/docs/2012/Acts/ACT148.pdf
- E-Cycles legislation full text: http://www.leg.state.vt.us/statutes/sections.cfm?Title=10&Chapter=166
- E-Cycles program home page: http://www.anr.state.vt.us/dec/e-waste/
- Registered E-Cycles drop off sites: http://www.anr.state.vt.us/ewaste/facilitylist.aspx
- DEC recycling home page: http://www.anr.state.vt.us/dec/wastediv/R3/WReduct.htm
- Mercury Education and Reduction Campaign home page (for recycling fluorescent bulbs and mercury thermostats): http://www.mercvt.org/