

DRAFT

Cambridge Recycling Advisory Committee – Zero Waste Sub Committee Meeting

March 2, 2011, Minutes taken by Jason Zogg

Attendees: Michael Arnott, George Delegas, Rob Gogan, Randi Mail, Lisa McMenemy, Jason Zogg

Mission/Vision: *The Long-Term Big Picture: “What’s Next”*

Purpose: To discover and develop advanced strategies for the City to implement in pursuit of Zero Waste (ZW), that are balanced, pragmatic, creative, and visionary. The subcommittee’s definition of ZW will be the basis for our work and function as a general indicator for measuring the value of any recommended strategies to the DPW Commissioner.

Brief Review of Existing Program

- In Cambridge, ~45,000 households, ~40 schools (public & private), ~40 city buildings.
- Nearly all residential buildings receive city recycling collection. City recycling tons include residences, schools, city buildings and houses of worship. Business recycling and trash are NOT included.
- About 32,200 households get city trash collection. Multi-family buildings can get 1x/ week city trash collection as long as the barrels do not exceed 50 gallon and do not block the sidewalk when set out.
- About 13,000 households get private service. This represents about 240 multi-family buildings that require dumpsters or more frequent service.
- There are 1000+ multi-family buildings with 6+ units
- To calculate the recycling rate, city staff use the current figure for pounds of trash per household and multiply that by the number of households with private trash collection.
- Since single stream recycling began in Novr 2010, tons recycled have increase by 10% and tons disposed have decreased by 6%. In FY10, the City collected 17,000 tons of trash. The city pays a \$90/ton disposal tip fee at the Somerville Waste Management (WM) Transfer Facility. WM decides where the trash is disposed of. Most is incinerated [Wheelabrator in Saugus, MA](#). The remainder is also landfilled at the [Turnkey Landfill in Rochester, NH](#). There are also smaller landfills in Fitchburg and Chicopee, MA.

Background

Randi reviewed GRRN’s chart of Principles of Zero Waste, which compares “principles guiding current practices”, with “guiding principles for pursuing ZW” from 7 perspectives: (see at the end of the minutes) System wide, Government Policies, Raw Material Supply, Product and Packaging Design, Manufacturing Practices, Sales & Distribution, Consumption, and End-of-Life Management.

She discussed the difference between looking at impacts/opportunities “downstream” vs. “upstream”. Downstream is the conventional view, dealing with waste after it is created. Upstream deals with looking at better design, opportunities for waste reduction, reuse, etc.

She stressed that the City is working hard to maximize recycling and the Outreach subcommittee will help support these functions. She hopes that the ZW subcommittee looks at the bigger picture.

Regarding composting, the City sells backyard compost bins (since mid 1990s), offers worm composting workshops (since 2004), collects food scraps at the Recycling Center (since 2008), implementing lunchroom composting programs (since 2008) and helped establish a market for business compost collection (began in 2006). The City hopes that new compost facilities will be develop in the Boston area, which would allow the City to consider expanding the curbside yard waste collection program. Decades ago, Cambridge residents did separate dry vs. wet waste. Wet waste or food scraps were placed an in-the-ground backyard “honey, which was emptied by City workers into a “honey wagon” aka regular garbage truck. Area farmers brought their pigs to feed on the food scraps at Danehy Park, which used to be the City landfill.

Words Which Help Frame the Conversation:

- Materials Management: (Instead of *waste*) Materials are not waste until we waste them.
- Food Scraps: Food waste is not waste until we waste it, it's food scraps.

Possible Topics for Subcommittee

- Define ZW, stay practical
- Know composition of waste stream
- Focus goals on reducing trash tonnage
- Keep abreast and involved with product stewardship activities in MA and New England
- Develop recommendations to capture reusable / bulky wastes, textiles, C&D
- Push backyard composting
- Promote deconstruction / buildings designed for disassembly
- Follow best practices in other communities
- Walk the Walk: Push green procurement and institutionalizing practices in all departments
- Discuss strategies for the City to take a leadership role on ZW with the DPW Commissioner

Our working definition of “Zero Waste”: TBD (see below)

A selection of definitions to help inform our definition:

- Zero Waste International Alliance:
ZWIA website says that it has “The only peer-reviewed internationally accepted definition”

"Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health."

This is the goal we [at ZWIA] are striving for. Measures of success in meeting this goal are outlined in the Zero Waste Business Principles and the Global Principles for Zero Waste Communities. Businesses and **communities that achieve over 90% diversion of waste from landfills and incinerators are considered to be successful in achieving Zero Waste, or darn close.**

All subcommittee members should take a look at the [ZWIA Principles for Communities](#).

- Adapted from ZW Resolutions passed by the [Oakland](#), [Fresno](#), [Irvine](#) and others in CA, and Fairfax County, VA: (via Robert Gogan)

Zero waste principles promote the highest and best use of materials to eliminate waste and pollution, emphasizing a closed-loop system of production and consumption, moving in logical increments toward the goal of zero waste through the core principles of: improving downstream reuse/recycling of end-of-life products and materials to ensure their highest and best use, pursuing upstream re-design strategies to reduce the volume and toxicity of discarded products and materials, promoting low-impact or reduced consumption lifestyles, and fostering and supporting use of discarded products and materials to stimulate and drive local economic and workforce development.

- *Grassroots Recycling Network*

Also, http://www.grn.org/zerowaste/zw_world.html (some broken links)

*Zero Waste is a philosophy and a design principle for the 21st Century. It includes 'recycling' but goes beyond recycling by taking a 'whole system' approach to the vast flow of resources and waste through human society. ZW maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace. ZW redesigns the current, one-way industrial system into a circular system modeled on Nature's successful strategies; challenges badly designed business systems that "use too many resources to make too few people more productive"; addresses, through job creation and civic participation, increasing wastage of human resources and erosion of democracy; helps communities achieve a local economy that operates efficiently, sustains good jobs, and provides a measure of self-sufficiency; **aims to eliminate rather than manage waste.***

- Other ideas which came from our discussion: View Zero Waste as a path, not a destination (there are different principles that come in to play), Zero waste is about changing mindsets.

Resources

- [MA Solid Waste Master Plan](#) for the composition of the waste stream and the goals, including reducing trash tons 30% by 2020 / 80% by 2050. Measurements and benchmarks are critical to this effort.

- City's waste audits. Anecdotally, discards in the 2010 audit included food scraps, kitty litter, diapers, furniture, Styrofoam, plastic bags, window blinds, wood, carpet, medical waste, and alkaline batteries.
- Design for Disassembly (DfD) <http://your.kingcounty.gov/solidwaste/greenbuilding/disassembly.asp>
http://www.core77.com/blog/featured_items/afterlife_an_essential_guide_to_design_for_disassembly_by_a_lex_diener_15799.asp
- Producer Responsibility/Product Stewardship: *The #1 theme on the path toward ZW*. Excellent resource: *CalCycle* (zerowaste.ca.gov), <http://www.calrecycle.ca.gov/EPR/> and the *Product Stewardship Institute (HQ in Boston)*: <http://www.productstewardship.us/>
- Nova Scotia: changing the entire structure of wasting and achieved 50% diversion in less than 5 years. <http://www.gov.ns.ca/nse/waste/strategy.asp> and <http://www.gov.ns.ca/nse/waste/swrmstrategy.asp>
- EPR (Extended Producer Responsibility) in Europe (www.pro-e.org) & Canada. Charges producers per lb based on what they put in the waste stream, and it's partially related to how recyclable it is (started with 50% of true cost of waste handling and disposal (going toward 100%))
- EPR in the US started with computers, paint, tires, batteries, mercury: www.productstewardship.us, www.productpolicy.org, www.ilsr.org/recycling/epr/index.html
- Take a look at Vermont and Maine frameworks for product stewardship
 - <http://www.maine.gov/dep/rwm/productstewardship/index.htm>
 - <http://www.productpolicy.org/ppi-press-release/first-state-producer-responsibility-framework-law-passed-maine-unanimous-bi-partis>
 - <http://bostongreen.wordpress.com/2011/02/28/waste-reduction-the-product-stewardship-institute-extended-producer-responsibility-maines-product-stewardship-bill/>
- This website has an extensive list of links, including several municipal-level zero waste plans in the U.S. about halfway down the page: <http://www.zerowaste.com/pages/Zerowaste-Backgrounder.htm>

How We Can Make Our Case: *Our Angles of Persuasion*

- Saving Money Angle:
Many ZW concepts including producer responsibility/product stewardship would reduce costs, create smaller government by taking the responsibility off the municipalities and taxpayers and back to the entities that created the "problem" in the first place, which creates a feedback loop that influences how resources are used and designed upstream
- Climate Angle (meets GHG goals)
See "Stop Trashing The Climate" report. <http://www.stoptrashingthecolimate.org/keyfindingsandpolicies.pdf>
We need to focus on what materials are affecting climate the most, what are the largest portions of the

waste stream that we are not addressing (need to make a list of priority materials in relation to climate change/GHG emissions/energy intensity), what is going to deliver us closer to 90% diversion rate

- Economic Development

City has a Green Jobs Program open to Cambridge residents who seek training opportunities to gain entry-level jobs in the green technology field, especially in the green building maintenance and energy efficiency sectors. See more at http://www2.cambridgema.gov/cdd/ed/work/wf_greenjobs.html.

- Pollution Prevention

Avenues of Implementation:

- Policy/Rules/Regulation: how can we move toward ZW with reasoned and politically palatable policies/regulations/rules
 - Banning a material: At the local level, there is a limited history of banning something completely, Cambridge has banned mercury thermometers in the past as an example. (styrofoam takeout containers?). Develop ideas further. However, to put a waste ban on something means there has to be an outlet to collect and process it and a demand to sell it.
 - Draft a memo that the DPW Commissioner can ask the City Manager to send out to all departments regarding City contracts, procurement, actions, and operations in relation to resource efficiency, minimum waste, materials recycling and composting. Similar to a memo that the City Manager previously sent out to all departments regarding all departments supporting the City's mission to confront climate change/energy use
 - Money is a huge part of the equation for any decisions especially in this economy, and we need to always take that into consideration. This is also a difficult political issue, and requires an element of public education. Ultimately the commissioner wants to look at our draft mission and draft list of topics to tackle.
- Expand further....

Action Items

- Take a look in the City's budget book there are graphs: it's on the [city's webpage](#). This shows waste content measurements and graphs relevant to this committee. They are by weight, not by volume.
- View the EPA presentation on "[Climaterials](#)"
- The Northeastern states are starting a regional framework for product stewardship. This committee would like to be involved in this. Investigate further.

PRINCIPLES OF ZERO WASTE

ZERO WASTE: A NEW WAY TO LOOK AT OUR NATURAL RESOURCES

	Principles Guiding Current Practices	Guiding Principles for Pursuing Zero Waste
Systemwide Principles	<ul style="list-style-type: none"> • Limitless flow of resources from nature to dumps. • Lack of producer responsibility for environmental and social impacts of products and packaging. • Focus on increasing production and productivity of labor. • Focus on large-scale, centralized, capital-intensive industries (resource extraction and waste management). • Many environmental costs and benefits not accounted for. 	<ul style="list-style-type: none"> • Flow of resources viewed as a cycle with minimized input and output. • Responsibility by producers for the life-cycle impacts of products and packaging, creating incentive to design more benign products. • Focus on increasing benefits to communities and optimizing productive use of resources. • Focus on locally owned, independent industries. • Accounting for environmental costs and benefits.
Government Policies	<ul style="list-style-type: none"> • Manage waste at taxpayer expense. • Regulate specific environmental emissions at facilities. • Subsidize virgin extraction firms and waste management firms. 	<ul style="list-style-type: none"> • Eliminate waste by holding producers responsible for impact. • Systematically optimize environmental, economic and social impacts of the production and consumption cycle. • Create level playing field or outright subsidies to promote resource conservation industries.
Raw Material Supply	<ul style="list-style-type: none"> • Emphasis on virgin resources with harvests determined by commodity cycles. • Toxic materials managed. 	<ul style="list-style-type: none"> • Emphasis on recycled material use and sustainable harvesting of natural resources. • Emphasis on use of non-toxic materials.

Chart continued on back page...

“Wasting resources wastes jobs because it removes resources from commerce.”

— Dan Knapp, Urban Ore, Inc.

	Principles Guiding Current Practices	Guiding Principles for Pursuing Zero Waste
Product and Packaging Design	<ul style="list-style-type: none"> • Guided by competitive innovation, with emphasis on marketing and sales. • Some attention to design-for-recycling, clean production, or design-for-environment where public attention is focused. • Focus on short product lifespans to maximize sales. 	<ul style="list-style-type: none"> • Guided by design-for-environment principles to reduce resource use and environmental emissions, and to minimize recycling or reuse costs. • Focus on waste minimization, durability, repairability, and recyclability. • Maximized lifespans of products.
Manufacturing Practices	<ul style="list-style-type: none"> • Companies strive to minimize compliance costs with end-of-pipe emission regulations. 	<ul style="list-style-type: none"> • Companies redesign entire operations to minimize resource use and environmental emissions and maximize product reuse and recycling. • Producing companies are responsible for end-of-life management of their products and packaging. • Producers influence Zero Waste throughout the system by adjusting specifications for suppliers and by taking responsibility for end-of-life management.
Sales and Distribution	<ul style="list-style-type: none"> • Wholesalers and retailers assume no responsibility for environmental management. • Emphasis on large-scale distribution and international trade. 	<ul style="list-style-type: none"> • Where feasible, products are leased, with ownership retained by the producer. • Wholesalers and retailers are active partners in product take-back and marketing environmentally sound products. • Emphasis on regional distribution and sales.
Consumption	<ul style="list-style-type: none"> • Consumers select products based on price and quality. 	<ul style="list-style-type: none"> • Consumers select products based on environmental performance, price, and quality. • Consumers participate in recycling and reuse programs.
End-of-Life Management	<ul style="list-style-type: none"> • Many environmental costs and benefits hidden. • Secretive and complicated accounting processes. • Taxpayers bear most costs of disposal, including landfilling and recycling. 	<ul style="list-style-type: none"> • Programs create strong incentive to maximize diversion. • Programs incorporate full cost accounting principles. • Producers bear most costs of disposal.