

**Minutes of the Waste Prevention Steering Committee
E-Waste/HHW Subcommittee
September 10, 2007**

Attendees:

Chair: Tracey Tsugawa, VOCAL

Members: Jen Holiday, CSWD; Cathy Jamieson, DEC; Mark Buckley, Staples; John Hurd, Greater Upper Valley Waste District; Pam Clapp; Rutland County Solid Waste Alliance Communities; Bill Hochstin, Dartmouth College

DEC Support Staff: Jeff Fehrs, DEC; Gary Gulka, DEC

Waste Prevention Planning Facilitator: Jeff Edelstein

Background/Introduction

Jeff Fehrs provided background information about the Waste Prevention Steering Committee and the four sub-committees; no general background about e-waste or HHW/UHW was provided except for document from Jen (CRS Report to Congress); see end for homework/additional documents to read before the next meeting.

Objectives for the day:

- Begin to clarify e-waste and HHW definitions
- Information from DEC and waste districts (only partially achieved)
- Brainstorm issues, challenges, and possible solutions
- Put issues, challenges, and possible solutions in a matrix
- Identify information needs to inform prioritization decisions (did not complete)
- Generate criteria for prioritizing solutions (did not complete)
- Prioritize solutions (did not complete)

Elements of e-waste and HHW/UHW:

The group brainstormed elements of e-waste and HHW/UHW without limiting ourselves to certain, preset definitions (from existing statutes or documents) and came up with the following:

Household Hazardous Waste/Unregulated Hazardous Waste (from CEGs - conditionally exempt generators):

- Corrosive, flammable, toxic, reactive items
- Use motor oil/automotive items
- Paints (latex and oil-based)
- Cleaners
- Mercury waste
- Pesticides
- Batteries
- Fluorescent bulbs
- Glues/adhesives/hobby supplies

- Pool chemicals (becoming less toxic)
- Photography chemicals (diminishing due to digital photography)
- Home maintenance items
- Used gas/fuel cylinders

The group decided HHW/UHW should not include pharmaceuticals, dead animals, and medical waste because pharmaceuticals are regulated by federal law, dead animals are solid waste and perhaps better addressed as an organic material, and medical waste is covered by its own set of regulations.

E-waste:

- Anything with a display, circuit board, and/or chip
- Scientific equipment
- Computers and peripherals
- Televisions
- Cell phones
- Copiers/fax machines
- VCRs/DVDs
- Video games
- ipods/PDAs
- Video cameras
- Chargers for mobile devices
- UPCs, transformers
- Stereos
- Microwaves, household appliances
- Calculators

The group discussed whether e-waste should include “anything with a cord” or “anything with a display, circuit board, or computer chip”. The group decided to focus on the latter due to the presence of toxic metals and materials whereas some white goods (large appliances) can legitimately be managed as scrap metal.

Need for data:

Jen presented pie charts (note: need to attach) showing the relative volume and cost of the various types of HHW/UHW managed by the Chittenden Solid Waste District. DEC provided a spreadsheet (note: need to attach) showing participation in and cost of HHW collection activities by solid waste planning entity in Vermont. The group concluded data is needed on the volume, cost, and toxicity of the various types of HHW/UHW.

HHW/UHW sectors vs. types:

Jeff E. wondered if the group should focus on sectors (i.e. laboratories versus household) as opposed to types (i.e. cell phones versus TVs). No resolution was reached.

Product Stewardship Institute:

Jen introduced the Product Stewardship Institute and noted she is on the board. Current PSI projects include e-waste and latex paint. Jen suggested the group identify how Vermont can become a leader in product stewardship - such as having Legislature adopt a resolution.

Staples' Electronic Take-back Program:

Mark discussed Staples' Take-back program. The program backhauls used electronics on Staples trucks, after which they are sent to various markets. The program is a reflection of what Staples can/should do and Mark hopes other retailers/distributors will implement similar programs.

Product Design:

Mark discussed some of his views on product design that helps, including EPEAT and lifecycle design including deconstructability. He noted 100s of different types of cell phone batteries are manufactured, as opposed to 2 or 3 which would make recycling much easier.

Wide differences in VT's Infrastructure:

The group discussed the wide differences in access to HHW/UHW programs and facilities in Vermont. Four solid waste districts provide permanent collection facilities while most towns and districts/alliances offer only two collection events per year. Some provide even fewer or less convenient options.

Participation Rates:

Jen provided information on national HHW collection event/facility participation rates: more than 5% is considered "great" and more than 10% is "phenomenal". Participation rates can be misleading because they measure activity at collection events/facilities over a specific time (i.e. year), and not how much of the public participates in HHW programs.

Subcommittee exercise to brainstorm issues, challenges, and solutions:

Group completed an exercise to begin to identify issues, challenges, and possible solutions related to e-waste and/or HHW/UHW. A matrix was utilized to help think about ideas: one axis included all sectors involved in the waste stream from production to consumption and disposal and the other axis involved possible tools for addressed issues and challenges, such as education/public awareness, regulations, government leadership, productivity improvements, and economic incentives.

PUBLIC AWARENESS:

- Generate website resources (both)
- Coordinated, state-wide educational efforts (both)
- Distribution of information about e-waste recycling options (e-waste)

PRODUCTIVITY IMPROVEMENTS:

- Manufacturer labels about toxic elements/components (both)
- Change design of products to reduce toxicity (both)
- Design for reuse and easy recycling (e-waste)
- Product packaging to reduce leftovers (HHW)
- Universal design standards for electronic products

REGULATIONS:

- Enact legislation about e-waste
- Ban export of waste for incineration
- Ban international export of e-waste
- Ban prison labor to recycle and/or process e-waste
- Develop environmental standards for recycling
- Use EPEAT standards as a framework for identifying solutions
- Regulations to charge manufacturers, retailers, and consumers to pay for recycling and disposal
- Ban e-waste and HHW/UHW from landfills
- Enforce bans

GOVERNMENT LEADERSHIP:

- As largest consumer/purchaser, state should lead by example (e.g., non-toxic purchases, hold retailers accountable for end-of-life solutions for toxic products, etc.) and help build infrastructure
- State leadership (staff, funding) on product stewardship
- Fully assess costs and benefits (economic, environmental, health, etc.) of waste prevention and recycling efforts
- Collect and report hard data about waste generation and recycling
- Provide funding and staff to enforce existing legislation

INFRASTRUCTURE:

- Develop convenient, accessible, efficient, economically state-wide infrastructure for collection (both)
- Training for transfer station employees (both)
- Create disassembly centers for recycling, reuse and/or repair (e-waste)
- Export working, re-usable materials

ALTERNATIVE BUSINESS MODELS:

- Develop "after markets" for re-use and exchange
- Retailers need to carry non-toxic alternatives (HHW/UHW)
- Develop take-back programs at the retail level, including "orphan waste" (both)

ECONOMIC INCENTIVES:

- Tax or charge products on front-end to fund recycling and/or disposal programs and discourage wasteful purchasing (both)
- Consolidate shipments after collection to reduce costs (both)
- Charge manufacturers of toxic waste to fund collection and disposal programs (both)

Possible criteria for prioritizing recommendations (incomplete):

This is a list of possible criteria that came up during discussion. The group will focus on the task of choosing criteria for prioritizing at a later meeting.

- Local, regional, national, and international efforts
- Rural vs. suburban needs and issues
- Most important
- Biggest impact
- Easiest to implement
- Volume of waste
- Toxicity of waste
- Cost to dispose of waste

Next Steps:

1. Our next meeting is tentative scheduled for EITHER Tuesday, October 9th, from 9:00 - 1:00, OR Friday, October 12th, from 9:00 - 1:00. The date and time will be confirmed as soon as we hear back from everyone on the sub-committee.
2. **Homework:** If you have not yet done so, please read the CRS Report to Congress "Managing Electronic Waste: An Analysis of State E-Waste Legislation" that Jen Holiday sent out via e-mail. You can also download the document at http://www.opencrs.com/rpts/RL34147_20070829.pdf. In addition, if you have time, please read the report by the Basel Action Network "Exporting Harm: The High-Tech Trashing of Asia" which you can download at <http://www.ban.org/E-waste/technotrashfinalcomp.pdf>. You may also want to look at a short document by EPS Canada about product stewardship called "Design for the Environment" and the report or executive summary on the joint Staples/EPA/Product Stewardship Institute electronics take-back pilot project. You can download these documents at http://www.epsc.ca/dfe/EPSC_brochure_Oct6.pdf and <http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=72>. Finally, if you REALLY want something substantial to read (and receive extra credit), Tracey highly recommends High Tech Trash: Digital Devices, Hidden Toxics, and Human Health by Elizabeth Grossman (Washington, D.C.: Island Press, 2006) This book covers e-waste from beginning to end: raw materials extraction (mining), the environmental and human health impact of manufacturing, the environmental and human health impact of the disposal and "recycling" of e-waste, and the politics of recycling.
3. Figure out what information we need to collect (about efforts elsewhere, about particular issues/challenges, statistical information, etc.) to help us make decisions about and prioritize recommendations.
4. Discuss in depth possible solutions/avenues of action. This would include flushing out possible solutions/avenues of action in production, distribution, retail, consumption, and disposal.
5. Set criteria for and then prioritize solutions/avenues of action.