Draft Report
Hazardous Materials Study

City of Fort Collins, CO

City of Fort Collins

April 8, 2009

R3 Consulting Group, Inc.
Resources, Respect, Responsibility

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April 8, 2009

Ms. Susie Gordon
Senior Environmental Planner
City of Fort Collins
215 North Mason Street
Fort Collins, CA 80524

Subject: – Hazardous Materials Study – Draft Report

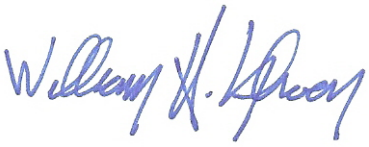
Dear Ms. Gordon:

R3 Consulting Group Inc. (R3) was engaged by the City of Fort Collins (City) to complete a Hazardous Materials Study to identify options for managing the City's Household Hazardous Waste. The attached Draft Report presents our findings and suggested next steps.

We appreciate the opportunity to be of service to the City and wish to thank you and City staff for their assistance during our review. Please do not hesitate to call me or Richard Tagore-Erwin at (916) 576-0306, or e-mail us at wschoen@r3cgi.com or rterwin@r3cgi.com if you have any questions or comments regarding our Draft Report.

Yours truly,

R3 CONSULTING GROUP INC.



William H. Schoen
Principal

Cc. Richard Tagore-Erwin

Table of Contents

R3

Table of Contents

Table of Contents

Tables

Figure

Appendices

R3

Table of Contents

Supplemental Information

(Provided Under Separate Cover)

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Executive Summary

Existing Household Hazardous Waste Management System

The capacity of the City's existing household hazardous waste (HHW) management system currently exceeds what could be considered to be the "standard" in the State of Colorado (State). There are, however, a number of limitations to the City's current HHW management system including limited curbside collection options and in-City drop-off sites, and limited retailer take-back options and locations. In addition, the City currently has no sustainable funding source.

Another fundamental limitation of the City's HHW system (and all municipal HHW management systems) is the lack of producer responsibility. Under the current system there is no requirement or incentive for producers to limit the quantity or toxicity of their products and the operational and financial burden of managing those products falls on municipal agencies and their ratepayers. While this situation is beginning to change with the move toward Extended Producer Responsibility (EPR), which is aimed at shifting the responsibility away from local governments to the producers and consumers of the products, available EPR programs are very limited.

There is nothing to indicate, however, that the improper disposal of HHW currently presents a significant immediate risk to the City's residents or the local environment. With that said, there are still quantities of hazardous waste in the waste stream that represent potential, if not immediate concerns to the City and its residents. Additionally, electronic waste (E-waste) generation is growing at three times the rate of other wastes, and the greater use of certain other items (e.g., compact fluorescent lamps) is creating new HHW management concerns.

Household Hazardous Waste Management Options

Given that there are still quantities of HHW in the waste stream and new HHW management concerns, as discussed above, the City may wish to consider additional actions to further control and properly manage HHW generated in the City. Available options include:

<u>Facility and Collection Events</u>

- Siting a permanent HHW facility within the city limits similar to the County's Permanent Household Hazardous Waste Collection Facility (PHHWCF).

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- Siting a limited material HHW collection facility within the city limits (e.g., antifreeze, batteries, oil, paint E-waste etc.) similar to the City of Loveland's drop-off site within the city limits.
- Piggy-backing a limited material or single material (e.g., oil) collection site with an existing facility within the city limits (e.g., recycling center, corporation yard, etc.), similar to the City of Longmont's motor oil and automotive battery drop off site at its public works operations yard.
- Operating temporary HHW collection events, similar to the City of Longmont's annual HHW drop-off day at the City's public works operations yard.
- Encouraging and supporting the expansion of In-Store-Return Programs (e.g., computer equipment at electronics retailers, sharps and pharmaceutical collection at hospitals and pharmacies).

Curbside Collection Programs

- Requiring licensed haulers to collect certain limited materials such as oil, oil filters, batteries, cell phones and/or paint as part of existing trash and/or recycling services.
- Requiring licensed haulers to provide and promote on-call collection of E-waste as a condition of their license.
- Collecting E-waste, batteries, fluorescent lamps, (and/or potentially other limited materials as part of a bulky waste collection program.
- Contracting for, or operating a municipal on-call door-to-door HHW collection program.

Public Education and Outreach

- Providing more aggressive promotion of available HHW management options (e.g., County's PHHWCF, In-Store-Return Programs), through existing City channels (e.g., website) or other available options (e.g., licensed hauler billing inserts, collection vehicle placards).
- Developing new public education and outreach programs (e.g., TV and radio advertising).

Legislation

- Passing additional material bans (e.g., household batteries and fluorescent tubes, sharps) similar to the City's E-waste ban.
- Supporting State and federal EPR legislation.

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- Requiring additional In-Store-Return Programs through a City "Take-back" Ordinance.

The availability of funding will largely dictate what options are or are not possible at this time. With the exception of legislative actions and certain public education activities the various hazardous waste management options listed above would require varying levels of additional, and in most cases on-going funding.

Suggested Next Steps

In considering the City's next steps with respect to HHW management it is reasonable to ask whether or not any additional action is required at this time. As stated above, the capacity of the City's HHW management system currently exceeds what could be considered to be the "standard" in the State. Additionally, there is nothing to indicate that improper disposal of HHW presents a significant immediate risk to the City's residents or local environment. With that said, the negative impacts of that the improper disposal of hazardous waste can have on public health and the environment are well established. In assessing next steps policy makers may wish to consider the Precautionary Principal, which can be summarized as follows: *"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.*[1]" With that said the Precautionary Principal does not preclude weighing potential benefits against the costs.

The following next steps are suggested for consideration based on which constitute the most feasible and/or cost effective HHW management options for the City to implement at this time. A more detailed discussion of each of these items is provided in the "Suggested Next Steps" section on page 27 of this report along with suggested next steps related to the management of CESQG hazardous waste.

LEGISLATIVE ACTIONS FOR CONSIDERATION

1. **Pass a City EPR Resolution / Support State and Federal EPR Efforts** (Support of EPR programs is central to the development of a long-terms and sustainable HHW management system in the City)
2. **Require Local Retailer Participation in Local EPR Programs / Maximize the Number of Collection Points** (Some but not all retailers currently participate)

[1] 1998 Wingspread Statement of the Precautionary Principal.

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3. **Consider Requiring All Local Retailers to Take-Back E-Waste** (The City has banned E-waste disposal but there is no requirement that E-waste retailers provide consumers with take-back options for those materials. Some but not all retailers provide E-waste take-back services, and some provide them for free, but they are in the minority).

POSSIBLE DEVELOPMENT OF NEW PROGRAMS / FACILITIES

4. **Require All Licensed Haulers to Provide On-Call Collection of E-Waste** (Some but not all haulers currently provide for-fee service)
5. **Require Licensed Haulers to Provide Free Regularly Scheduled Curbside Collection of Used Motor Oil / Other Materials** (Successful curbside collection programs for used motor oil and filters (and other materials such as household batteries) are operating in dozens of jurisdictions throughout the country, including the City of Longmont)
6. **Work with Local Retailers to Establish New Voluntary Take-back Programs** (e.g., Compact Fluorescent Lights, Pharmaceuticals and Personal Care Products; Sharps; and/or Other targeted material types).
7. **Consider Funding Curbside Collection of HHW for Elderly and Disabled Residents** (Loveland currently provides this service)
8. **Consider Siting an In-City Limited-Material HHW Collection Facility** (e.g., antifreeze, batteries, motor oil, cooking oil, paint, E-waste, etc.). (both Loveland and Longmont have this type of facility)

DEVELOP SUSTAINABLE FUNDING SOURCE

9. **Consider Establishing HHW Trash Collection Surcharge** (A successful HHW management system needs a sustainable funding source).

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Project Objective

To prepare a comprehensive study that answers the following problem statement/question:

> ***"By analyzing the way hazardous materials are currently managed in Fort Collins, the City will identify the optimal systems and associated resources necessary to protect the health, welfare, and natural environment of Fort Collins citizens from hazardous waste impacts."***

Project Focus

The focus of this study was on hazardous waste generated by residential sources (HHW). Hazardous waste generated by conditionally exempt small quantity generators (CESQG) (i.e., businesses that generate no more than 220 pounds or 25 gallons of hazardous waste per month) was also considered.

Introduction

The Environmental Protection Agency (EPA) has estimated that Americans produce about 1.6 million tons of HHW per year. These household waste products include basic products that most families own, such as oven cleaner, turpentine, and spa and pool chemicals. Responsibility for developing programs to effectively deal with hazardous waste currently rests largely with local communities, and the City is no exception. The North American Hazardous Materials Management Association has reported that the key to an effective HHW management system is offering a convenient, wide range of services. In considering which program or programs to adopt, a key consideration for the City is that designing collection systems to manage HHW is often not as challenging as identifying a sustainable funding source to pay for the programs.

Hazardous Waste Overview[2]

Hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health and the environment. The term "hazardous waste" comprises all toxic chemicals, radioactive materials, and biological or infectious

[2] Source: EPA "Hazardous Waste in Your Community".

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waste. Hazardous wastes exhibit one or more of the following characteristics:

- ***Toxicity*** – harmful or fatal when ingested or absorbed.
- ***Ignitability*** – creates fire under certain conditions or spontaneously combusts.
- ***Corrosivity*** – contains acids or bases that can corrode metal.
- ***Reactivity*** – is unstable under "normal" conditions and can cause explosions, toxic fumes or vapors when mixed with water.

Hazardous wastes can be liquids, solids, contain gases or sludges. They can be the by-products of manufacturing processes or simply discarded commercial products like cleaning fluids or pesticides. A wide variety of facilities, common in most communities, can be hazardous waste generators. For example, small businesses such as dry cleaners and gas stations or large-scale operations such as chemical manufacturing plants might produce hazardous waste as a result of normal business operations.

Residences also produce hazardous wastes which are commonly referred to as HHW. It is estimated that the average household generates 20 pounds of HHW each year and as much as 100 pounds can be accumulated in the home, often remaining there until residents move out or do an extensive cleanout. Across Colorado this equates to over 33 million pounds of HHW discarded every year[3].

Some of the most common HHW materials include antifreeze, batteries, oil and paint (ABOP materials). ABOP materials are less toxic than many other HHW materials that are typically found in lesser quantities, such as pesticides and flammable materials. Accordingly, the strategies and methods for handling ABOP materials are different and less "burdensome" than that required for handling more toxic HHW materials. (Appendix C provides information on the health and environmental impacts associated with various types of hazardous waste)

Specific categories of hazardous waste which have received increased attention recently, particularly with respect to their generation from residential sources, are:

- Universal Waste;

[3] Colorado Department of Public Health and the Environment; Management of Hazardous Wastes from Your Home. www.cdph.state.co.us/hm/hhw/index.htm.

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- Electronic Waste;
- Sharps; and
- Pharmaceutical and Personal Care Products.

Universal Waste

Universal Waste (U-Waste) includes batteries, pesticides, mercury-containing equipment (e.g., thermostats) and lamps (e.g., fluorescent bulbs). Universal wastes are subject to widespread use, which makes disposal of these hazardous wastes difficult to control.

Electronic Waste

Electronic Waste (E-waste) is a waste type consisting of any broken or unwanted electrical or electronic device, including televisions, computers, monitors, keyboards, phone equipment, VCRs and anything with a cord. It is estimated that E-waste accounts for 70% of the heavy metals and 40% of the lead in landfills, and that E-waste is growing at a rate three times that of other wastes.

Sharps

"Sharps" include hypodermic needles, intravenous needles, pen needles and lancets. The generators of sharps include medical facilities, retirement homes, veterinary offices, farmers and residents where they are used for injections of people and pets to treat disease. Tossing sharps in the trash or flushing them down the toilet can pose health risks to trash collectors, recyclers and others.

Pharmaceutical and Personal Care Products

Pharmaceutical and Personal Care Products (PPCPs) comprise a broad and diverse collection of thousands of chemical substances including unused or expired prescription medications, over-the-counter medications, therapeutic drugs, fragrances, cosmetics, sun-screen, diagnostic agents, natural health products, veterinary drugs and growth enhancing chemicals used in livestock operations. PPCPs were cited as a particular concern by staff of both the County's hazardous waste management program and the City's Waste Water Industrial Pretreatment Program.

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Hazardous Waste Regulation

Federal and State Regulations

The *Resource Conservation and Recovery Act* (RCRA) passed by Congress in 1976 is the primary law that governs the proper management of hazardous waste. RCRA gives the EPA specific authority to regulate the generation, transportation and disposal of hazardous waste from the point they are first created ("cradle") until they reach final disposal ("grave"). The three parties involved in the cradle-to-grave lifecycle of hazardous wastes are: generators; transporters; and treatment, storage, or disposal facilities (TSDFs).

Other major pieces of federal legislation related to hazardous waste are the *Comprehensive Environmental Response, Compensation and Liability Act of 1980* (CERCLA), or "Superfund" and the *Superfund Amendments and Reauthorization Act of 1986* (SARA). These Acts provide the EPA with both authority and funding to address threats to public health and the environment resulting from uncontrolled spills or dumping of hazardous waste.[4]

Commercial and Business Waste

RCRA regulations recognize that not all businesses produce the same quantities of hazardous waste. Since managing a larger volume of waste can present a greater risk, persons or facilities that generate larger volumes are subject to more stringent regulations. Under RCRA, EPA identifies three classes of generators based on the amount of waste they produce:

- Large Quantity Generators (LQGs);
- Small Quantity Generators (SQGs); and
- Conditionally Exempt Small Quantity Generators (CESQGs)[5].

LQGs are subject to the most stringent regulations. SQGs follow less stringent standards but also have restrictions on their waste management processes. CESQGs are subject to minimal regulation, although they are required to properly manage their hazardous wastes.

[4] Albuquerque's Environmental Story; Educating for a Sustainable Community; Milo Myers, 2008.

[5] CESQG are also referred to as Very Small Quantity Generators (VSQG).

Conditionally Exempt Small Quantity Generators[6]

CESQGs of hazardous waste are classified as generating no more than 100 kilograms (about 220 pounds or 25 gallons) of hazardous waste, and no more than 1 kilogram (about 2.2 pounds or <1 quart) of acutely hazardous waste[7] in any calendar month and never accumulating more than 1,000 kilograms of hazardous waste or 1 kilogram of acutely hazardous waste on-site at one time.

The conditional exemption does not require CESQGs to comply with several regulations specified for generators of more than 100 kg/month including:

- Obtaining an EPA identification number;
- Using a manifest when shipping hazardous waste; and
- Reporting to the EPA on a biannual basis

CESQGs are however responsible for the proper management of their hazardous wastes and have two primary responsibilities:

- They must identify all of the hazardous wastes that they generate; and
- They must ensure that these wastes are ultimately treated or disposed of at a facility that is approved to take them.

State hazardous waste regulations do not allow CESQG and other non-residential hazardous waste to be disposed of in solid waste landfills located in the State.

Household Hazardous Waste

HHW are those wastes produced in households that are hazardous in nature, but are not regulated as hazardous waste under federal and State laws. The term household waste refers to any garbage, trash, and sanitary waste from septic tanks derived from single and multiple residences and other residential units such as hotels and motels. The EPA expanded the definition of household wastes to include wastes from bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-

[6] Source: Guidelines for Developing Conditionally Exempt Small Quantity Generator/Household Hazardous Waste (CESQG/HHW) and CESQG-only Waste Consolidation Facilities. Colorado Department of Public Health and Environment; Hazardous Materials and Waste Management Division; September 2004.

[7] Acutely hazardous waste is waste that is considered to present a substantial hazard whether managed properly or not. EPA includes in this category waste shown to be fatal to humans in low doses, those shown in animal studies to have specific toxicities, and explosives.

use recreation areas. In order for household waste to be exempt from regulation, it must meet two criteria:

- The waste has to be generated by individuals on the premises of a household; and
- The waste must be composed primarily of materials found in the waste generated by consumers in their homes.

Under State and federal law, hazardous waste from households, including U-waste, E-waste, Sharps and PPCPs can be disposed of in the trash. However, these products can be an environmental hazard if they are handled or disposed of improperly and find their way into the water supply or are emitted into the air.[8] Although the collection, transportation, treatment and disposal of household wastes are not subject to the hazardous waste regulations, they are subject to federal, state, and local requirements concerning the management of solid waste.[9]

Local Regulations

Although State and federal regulations allow for the disposal of HHW, including U-waste, E-waste, Sharps and PPCPs in the trash the City's Municipal Code effectively prohibits residents and businesses from disposing of hazardous waste, including HHW and specifically E-waste. The Municipal Code specifically states that:

- *"No person shall place hazardous waste in refuse containers for collection or bury or otherwise dispose of hazardous waste in or on private or public property within the City."* [Section 12-21], and
- *"No person shall place electronic equipment in refuse containers for collection or bury or otherwise dispose of electronic equipment in or on private or public property within the City."* [Section 12.22].

The City's Municipal Code also states that: *"No collector shall collect for disposal any electronic equipment, regardless of whether such electronic equipment has been placed or set out for disposal."* [Section 15-413 (e)(1)].

[8] Colorado Department of Public Health and the Environment; Hazardous Materials and Waste Management Division; Management of Hazardous Wastes from Your Home.

[9] Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document; Colorado Department of Public Health and Environment; September 1998.

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Hazardous Waste Quantity and Composition Data

Larimer County Landfill

Hazardous Waste Quantity and Composition Data

Available data on the quantity and composition of hazardous waste generated, diverted and disposed in Fort Collins is limited. The County's 2006 Waste Composition Study (Study), however, provides data that can be used as the basis for preliminary waste generation and composition estimates for the City.

Table 1 below provides the estimated quantity of Electronics and Other Hazardous Waste disposed at the County Landfill as a percentage of the total waste landfilled, and for each of the identified individual waste streams, based on that study.

Table 1
Hazardous Waste Disposed as a Percentage of Total Waste Stream

Material Category	Residential		Commercial		Self-Haul		C&D		Total	
	Pounds	% of Total Waste Stream	Pounds	% of Total Waste Stream	Pounds	% of Total Waste Stream	Pounds	% of Total Waste Stream	Pounds	% of Waste Stream
Electronics [1]	2,736,000	2.2%	710,000	0.6%	450,000	2.4%	58,000	0.1%	3,954,000	1.3%
Other Hazardous Waste	962,000	0.8%	1,372,000	1.2%	16,000	0.1%	22,000	0.0%	2,372,000	0.8%
Total	**3,698,000**	**3.0%**	**2,082,000**	**1.8%**	**466,000**	**2.5%**	**80,000**	**0.1%**	**6,326,000**	**2.1%**
% of total HW	58%		33%		7%		1%		100%	

[1] Any item that contains a circuit board including, televisions, radios, stereos, computers and cathode ray tubes (CRTs).
[2] Paints/solvents, flammable liquids, pesticides, corrosives, medical wastes and other hazardous materials not otherwise described.

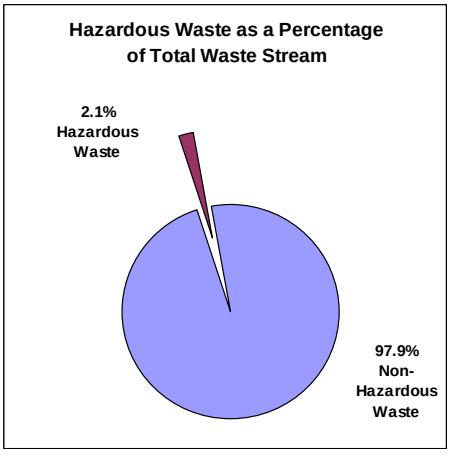
As reported:

- Hazardous waste comprised 2.1% of the waste disposed (6.3 million pounds annually).

  Note: As a point of comparison hazardous waste accounted for 1.4% of the State of California's waste stream in 2003 – the latest year for which data is available

- Of that total, Electronics (E-waste) comprised 1.3% (4.0 million pounds) and Other Hazardous Waste 0.8% (2.4 million pounds).

  Note: The percentage of E-waste is based on data prior to the enactment of the City's E-waste Ordinance. Both the County and licensed haulers have



reported observing less E-waste in the waste stream since the ordinance took effect.

- Residential hazardous waste (HHW) comprised 58% of the total hazardous waste disposed (3.7 million pounds), followed by commercial 33% (2.1 million pounds), self-haul 7% (500,00 pounds) and Construction & Demolition (C&D) 1% (80,000 pounds).

Table 2 below provides an analysis of the Electronics and Other Hazardous Waste components as a percentage of the total hazardous waste stream, and for the identified individual waste streams.

Table 2
Composition of Hazardous Waste Stream

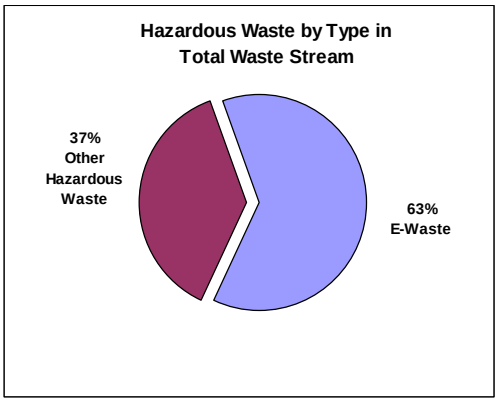
Material Category	Residential		Commercial		Self-Haul		C&D		Total	
	Pounds	% of HW Waste Stream	Pounds	% of HW Waste Stream	Pounds	% of HW Waste Stream	Pounds	% of HW Waste Stream	Pounds	% of HW Waste Stream
Electronics [1]	2,736,000	74%	710,000	34%	450,000	97%	58,000	73%	3,954,000	63%
Other Hazardous Waste [2]	962,000	26%	1,372,000	66%	16,000	3%	22,000	28%	2,372,000	37%
Total	**3,698,000**	**100%**	**2,082,000**	**100%**	**466,000**	**100%**	**80,000**	**100%**	**6,326,000**	**100%**

[1] Any item that contains a circuit board including, televisions, radios, stereos, computers and cathode ray tubes (CRTs).

[2] Paints/solvents, flammable liquids, pesticides, corrosives, medical wastes and other hazardous materials not otherwise described.

As reported:

- Electronics comprised 63% of the total hazardous waste stream with Other Hazardous Waste comprising the remaining 36%.
- Electronics comprised 74% of the residential and 34% of the commercial hazardous waste stream with Other Hazardous Waste comprising the remaining 26% and 66% of those hazardous waste streams respectively.



It should be noted that this information does not account for any hazardous waste that may be disposed by other means (e.g., illegal dumping), that may not have been able to be characterized as part of the study (e.g., uncontained hazardous liquids) or that may be recovered at the landfill prior to disposal through the County's load checking program[10].

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[10] Loads are screened at the scale house and when unloaded to check for hazardous and other prohibited materials. Even the most effective load checking programs cannot, and do not, capture all hazardous waste

Hazardous Waste Diversion

For purposes of estimating the effectiveness of the City and County's existing HHW and CESQG hazardous waste management systems, hazardous waste recovery rates were estimated. Table 3 provides estimated hazardous waste recovery rates for the identified waste streams based on the disposal tonnages reported in the Study and hazardous waste tonnages recovered through the County's PHHWCF and Business Hazardous Waste Assistance Program and Education (BHAPE) program during 2006[11].

Table 3
Amount of Hazardous Waste Diverted

Material Category	Residential		Commercial		Self-Haul		C&D		Total	
	Pounds	% of Total	Pounds	% of Total	Pounds	% of Total	Pounds	% of Total	Pounds	% of Total
Disposed										
Electronics [1]	2,736,000		710,000		450,000		58,000		3,954,000	
Other Hazardous Waste [2]	962,000		1,372,000		16,000		22,000		2,372,000	
Subtotal	3,698,000	66%	2,082,000	100%	466,000	100%	80,000	100%	6,326,000	77%
Diverted [3]										
Subtotal	1,925,334	34%	9,663	0%	0	0%	0	0%	1,934,997	23%
Total	**5,623,334**	**100%**	**2,091,663**		**466,000**		**80,000**		**8,260,997**	

[1] Any item that contains a circuit board including, televisions, radios, stereos, computers and cathode ray tubes (CRTs).
[2] Paints/solvents, flammable liquids, pesticides, corrosives, medical wastes and other hazardous materials not otherwise described
[3] Source: Larimer County Solid waste Department 2007 Annual Report (includes both hazardous and non-hazardous wastes (e.g., latex paint) collect

As shown, based on this information the County's PHHWCF diverted approximately one-third (34%) of residential hazardous waste (HHW) that may otherwise have been disposed. On the other hand, only a small fraction (0.5%) of the commercial hazardous waste was diverted through the County's BHAPE program. Assuming all the commercial hazardous waste identified through the waste composition study can be attributed to CESQG, this would indicate that, while the commercial hazardous waste stream disposed is smaller than the residential, it is still largely untapped from a recovery standpoint[12]. Appendix D provides

entering a landfill, particularly hazardous waste in compacted loads of residential and commercial waste.

[11] These estimates do not account for hazardous waste that may be disposed illegally or at other landfills or that is recovered through programs other than the PHHWCF and BHAPE program.

[12] Portions of the commercial (CESQG) hazardous waste stream may be included in the diversion figures reported for the PHHWCF as a result of small businesses representing themselves as residents and disposing of hazardous waste for free through the PHHWCF. In is also not known how much CESQG hazardous waste is recovered through private sector service providers.

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additional information on the materials recovered through the County's facility and the BHAPE Program.

National Household Hazardous Waste Data

Table 4 below provides HHW composition data from two studies. As shown in both cases paint constituted the largest material type with ABOP materials (antifreeze, batteries, oil and paint) accounting for approximately two-thirds of the total materials.

Table 4
Household Hazardous Waste Composition

AMRC[(1)] Study		University of Arizona Study	
Material Type	**%**	**Material Type**	**%**
Paint	41%	**Paint**	37%
Flammables	22%	**Batteries**	19%
Oil	17%	**Cosmetics**	12%
Batteries	11%	**Cleaners**	12%
Gas Cylinders	5%	**Automotive Products**	11%
Antifreeze	2%	**Yard Items** (pesticides, fertilizers)	4%
Hobby/Other (pool, art supplies)	3%	**Pharmaceuticals**	3%
ABOP Materials (Antifreeze, Batteries, Oil & Paint)	**71%**	**ABOP Materials** (Antifreeze, Batteries, Oil & Paint)	**66%**

[(1)] Association of Municipal Recycling Coordinators 2004; Based on a materials received at household hazardous waste management sites.

Assuming a similar composition for the City's HHW waste stream, this would support a focus on ABOP materials for purposes of diverting the highest quantity of HHW materials, although not necessarily those materials that have the greatest potential negative environmental impact.

City Hazardous Waste Management Policies, Practices and Programs

The City has taken a number of significant legislative steps in support of the proper management of hazardous waste including banning the disposal of E-waste. The City's E-waste ban appears to have had had a measurable impact with both the County and licensed haulers reporting observing less E-waste in the trash

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since the ban was enacted. In fact, the City's municipal code bans the disposal of all hazardous waste in the trash:

> *"No person shall place hazardous waste in refuse containers for collection or bury or otherwise dispose of hazardous waste in or on private or public property within the City." [Section 12-21]*

The City has also taken the following actions related to hazardous waste management:

- Established Products and Services Purchasing Guidelines that include considering environmental impacts and pollution prevention; and requesting products and packaging designed to minimize waste and toxic by-products in their manufacturing, recycling and disposal;
- The City's LEED construction contract environmental goals include selecting low toxic products and materials without toxic maintenance requirements; and
- The City's 2008 Legislative Policy Agenda includes support for legislation *"…to require greater producer responsibility, such as "take-back" legislation that assists consumers to appropriately recycle electronic equipment, i.e., computers and televisions."*

The City does not, however, track any data related to hazardous materials in the community, including licensed contractor use and management of hazardous materials. In addition, while the City has in the past held temporary HHW collection events it no longer does so and relies on the County's PHHWCF as the primary HHW management option for City residents.

In its internal operations, the City tracks and manages hazardous/universal wastes (including a City organization-wide battery collection program and all-electronics recycling), in full compliance with environmental regulations and other best management practices.

Existing City Hazardous Waste Management System

Household Hazardous Waste

City residents have access to options for managing a wide range of HHW materials, many at no direct cost to the user. Larimer County's (County) Permanent Household Hazardous Waste Collection Facility (PHHWCF) is the primary HHW management

option for City residents. This facility, which is funded through tip fees, accepts a wide range of HHW materials at no charge to County residents. With the exception of promotional costs, the City does not bear any costs related to the PHHWCF.

The facility is open four days per week (Tue, Thu, Fri and Sat) from 9:00 am until 4:00 pm and also includes a Drop 'N' Swap where reusable low-toxicity products are available to residents for free. Approximately 30,000 pounds of hazardous household products are reused through the Drop 'N' Swap Program each year.

Residents also have access to a range of other options for properly managing specific HHW materials including:

- In-Store Return Programs (e.g., Ace Hardware, Home Depots stores, and Drake Hardware in Fort Collins accept compact fluorescent lights (CFLs) and mercury thermostats free of charge);
- Return-by-Mail Programs (e.g., sharps, batteries, computers);
- On-call collection of E-waste by the licensed haulers, for a fee[13]; and
- A variety of local businesses in Fort Collins (listed on the City's web pages), as well as Waste Management's Recycle America facility at the landfill also accept E-waste (Many but not all of these businesses charge a fee).

Appendix E provides a list of various local options for managing HHW. With limited exceptions, the options currently available to residents are comparable to or exceed those offered by most other jurisdictions in the State. Exceptions of particular note include the cities of Longmont and Loveland that operate municipal trash utilities (and are therefore funded with solid waste revenues):

- The City of Longmont provides on-call curbside collection of used motor oil and automotive batteries at no direct cost to residents, as well as 7-day per week drop off of these items at its Public Works operations yard. Longmont also holds annual pharmaceutical take-back events[14];

[13] Two of the three licensed residential haulers offer on-call E-waste collection for a charge, although it is not clear the extent to which these services are promoted and utilized by residents.

[14] The City of Longmont is also considering siting a City HHW Facility for limited HHW materials that would be coordinated with Boulder County's PHHWCF Facility.

- The City of Loveland supplements the services offered through the County's PHHWCF with a drop-off site for a limited number of HHW material types including batteries, motor oil and (for a fee) E-waste. The City also contracts with a private firm to provide free curbside collection of HHW for disabled and elderly residents; and
- The City of Boulder holds pharmaceutical take-back events.

There are also a number of jurisdictions that provide limited curbside collection of hazardous waste through a private contractor (Curbside Inc.). These programs are typically funded in large part by the jurisdiction with user co-pay and limit the number of participants based on available funding.

While the City's HHW management system exceeds what could be considered the "standard" in the State there are a number of limitations, including:

- Limited curbside collection options (e.g., licensed hauler E-waste collection for a fee);
- Limited in-City drop-off sites and/or the associated cost of such available options[15];
- Limited retailer take-back options and locations, and costs associated with some of those existing options (e.g., fees for returning computers and monitors to certain retailers that offer return programs);
- Limited access to options by elderly and disabled residents due to the limited curbside collection options;
- Limited City staff and resources dedicated to hazardous waste management; and
- The lack of a sustainable funding source.

Another fundamental limitation of the City's HHW system (and all municipal HHW management systems) is the lack of producer responsibility. Under the current system there is no requirement or incentive for producers to limit the quantity and/or toxicity of materials that they produce and sell to consumers and no responsibility for the proper management of those materials after they have reached their useful life. Both the financial and operational burden of managing HHW generally falls on local municipalities, with the financial burden transferred to taxpayers

[15] While there are a variety of in-City drop off options for a range of materials (Appendix E) in many cases those options are limited to certain retailers and/or there is a fee (many companies that accept computers for recycling charge a fee). Ideally all retailers would offer free return of products they sell.

and ratepayers rather than the consumers of the individual products. This situation is beginning to change, however, with the move toward Extended Producer Responsibility (EPR) / Product Stewardship legislation. EPR legislation is aimed at developing a long-term solution to the management products by shifting the responsibility away from local governments and general taxpayers and garbage ratepayers to the producers and consumers of the products.

EPR systems address the following three major issues:

- Sustainable funding;
- Convenient to the consumer; and
- Equity of who pays to manage HHW at end of life.

EPR is discussed in more detail in the Extended Producer Responsibility / Take Back Programs section of this report below.

Conditionally Exempt Small Quantity Generator Waste

Hazardous waste management options for CESQGs in the City include privately operated collection services, as well as the County's BHAPE program. The BHAPE Program, which is operated at the Household Hazardous Waste Facility located at the County Landfill, provides disposal/recycling options for CESQGs for a fee

To use BHAPE a business must:

- Operate and generate hazardous waste in the County;
- Be classified as a CESQG; and
- Generate waste that is meets the BHAPE criteria.

Examples of businesses that participate in BHAPE include:

- Auto repair shops with cleaning solvents and used oil;
- Woodworkers with solvents, varnish and stains; and
- Exterminators with pesticides and herbicides, etc.

In 2007, the BHAPE program received 226 visits from 154 customers, 74 of which were first-time users of the program. Total hazardous waste collected through the business program for the year was 11,892 pounds, (up from 9,663 pounds in 2006), with the non-hazardous total at 43,722 pounds (down from 46,609 pounds in 2006).16

[16] Some liquid wastes, such as latex paint, are non-hazardous but still not accepted for disposal at the landfill.

The BHAPE program serves a variety of business types. Government agencies, including City, County and federal entities, are the largest group of customers. Construction companies, property management firms and laboratories also rank among the top groups dropping off waste through the program.17

Extended Producer Responsibility / Take-Back Programs

Overview

Extended Producer Responsibility (EPR) and Product Stewardship (PS) are terms used interchangeably to describe a long-term solution to manage waste products by shifting the responsibility for collection, transportation, and management for those products away from local governments and general taxpayers to the manufacturers. There are many different levels of responsibility that manufacturers can assume for their products on the path to taking full responsibility for their products. Any movement on the path to manufacturers taking full responsibility is in keeping with EPR.

Since 1991, EPR policies have been broadly adopted in Europe and in other countries such as Canada, Japan, Australia, Taiwan, and Korea. Most recently, EPR policies have been adopted in the United States, some voluntarily by the manufacturers, and some mandated at the state and local level. At the federal level, however, there has only been consideration of development of new EPR policies but to date there is no mandatory EPR legislation.

Voluntary EPR programs include:

- The **Rechargeable Battery Recycling Corporation (RBRC)**, which collects rechargeable batteries and cell phones**.** RBRC operates in the US and Canada and started collecting rechargeable batteries in 1996 and over time has expanded the program to also collect cell phones;
- The **Thermostat Recycling Corporation (TRC)**, which started in 1998 and actively promotes the collection and recycling of mercury thermostats from older Heating Ventilation and Air Conditioning (HVAC) systems. Collections occur at the HVAC wholesalers where HVAC contractors return older units for recycling; and

[17] Larimer County Solid Waste Department; 2007 Annual Report.

- The most recent voluntary EPR effort is the **National Vehicle Mercury Switch Recovery Program**, the objective of which is to remove mercury-containing switches from scrap vehicles. The program became effective in August of 2006 and is promoted by EPA.

Several states have chosen to mandate EPR programs for various products, including:

- ***California***
  - Auto Lead-Acid Batteries Take-Back (1989)
  - Cell Phone Take-Back (2004)
  - Rechargeable Battery Take-Back (2005)
- ***Maine***
  - E-waste Recycling Act -Producer Pays (2005)
  - Mercury Products Law – Producer Take-Back (2006)
- ***Maryland***
  - Computer Recycling Producer Take-Back (2005)
- ***Massachusetts***
  - Mercury Containing Products - Producer Pays (2006)
- ***Washington***
  - E-waste Recycling Bill – Producer Take-Back (2006)

Various local governments have also passed EPR and "take-back" policies relating to E-Waste and Universal Waste. Take-back programs require local retailers to take-back various HHW materials (E-waste, batteries, sharps, fluorescent lights) from consumers at no charge. It is important to note that ***EPR is NOT mandatory retailer take-back programs***, which do not engage the producer. Take-back programs are a local response to lack of engagement by producers to help collect products. Through mandatory take-back programs jurisdictions can place pressure on the retailers to pressure the producers to change product design and packaging and to start EPR collection programs.

Appendix F includes additional information on EPR and Take-Back Programs including copies of ordinances and resolutions.

City Extended Producer Responsibility / Take-Back Program Options

The City has a variety of options available to support EPR efforts including:

- Promoting existing EPR and take-back programs, including:
  - Thermostat Recycling Corporation;
  - Rechargeable Battery Corporation; and
  - ACE Hardware's Compact Fluorescent Light (CFL) and Mercury Thermostat Recycling Program.
- Encouraging local businesses to implement voluntary take-back programs (e.g., PPCP and sharps collection at pharmacies)
- Passing a resolution supporting EPR at the federal, State and local level
- Establishing/strengthening City EPR purchasing polices
- Implementing a local mandatory take-back ordinance

As a point of reference, the Sonoma County (California) Waste Management Agency (Agency) recently prepared an EPR Implementation Plan (Plan), with R3's assistance. The Plan was undertaken in response to the enactment of the State's Universal Waste Rule, which banned several materials from disposal, including household batteries, and mercury containing lamps.

The Plan addressed various options, including those listed above, through a two-phase approach. The Agency's preference was to initially try to manage the wastes through a voluntary and collaborative approach (Phase 1) instead of a mandatory policy (Phase 2). However, due to the significant volume, toxicity, and cost to collect and manage Universal Wastes, there is limited time for a voluntary solution to be developed that will prevent many of these materials from continuing to be landfilled, or the cost of collection for the Agency from becoming unsustainable. Accordingly, the Plan acknowledged that if Phase 1 efforts do not result in significant improvements in household battery, mercury lamp, and mercury thermostat collection and management, funded by parties other than the Agency within a one-year period, then consideration would be given to the implementation of a mandatory take-back ordinance for local sellers of those products.

Hazardous Waste Management Options

Household Hazardous Waste

Jurisdictions use a variety of methods to collect (manage) household hazardous waste, with many using a combination of methods. Common collection methods include:

- Permanent Household Hazardous Waste Collection Facilities;
- Permanent Limited-Material HHW Collection Facilities (e.g., ABOP (anti-freeze, batteries, oil and paint) or E-waste);
- Temporary HHW Collection Events;
- Curbside HHW Collection Programs:
  - As part of regularly scheduled trash and recycling services (e.g., used motor oil, oil filters, batteries and cell phones)
  - As part of bulky waste collection programs (E-waste)
- On-Call Door-to-Door HHW Pickup Service;
- In-Store-Return Programs (e.g., used motor oil, batteries (car & alkaline), E-waste, fluorescent light bulbs, PPCPs and sharps); and
- Return-by-Mail Programs (e.g., sharps, batteries and computers).

A brief description of each of these options is provided below. Appendix G provides a matrix of these options along with their relative costs and diversion potentials, which are also summarized below.

As the City considers which, if any of these options to implement there is an important factor to keep in mind. While new City run facilities or collection services would be expect to result in increased diversion, some (potentially significant) portion of the recovered materials are likely to simply be shifted from the County's PHHWCF (and/or other existing programs). As a result, the City will be incurring the cost to manage any such materials, which is now borne by the County through the landfill tip fees (or by other programs through their funding mechanisms).

Permanent Household Hazardous Waste Collection Facilities (PHHWCF)

A PHHWCF is a permanent facility designed to accept small quantities of HHW materials from the general public (e.g., fewer than 10 gallons or 100 pounds per resident). Service to residents can be by appointment or unscheduled during posted hours. There is often no charge for residents to use the facility. PHHWCF can also be designed to provide services to Conditionally Exempt Small Quantity Generators (CESQG). Services to CESQGs are often on a scheduled basis and charge a fee.

Typical types of HHW accepted include paints, oils, pesticides, cleaning products, pool chemicals, and fertilizers. Certain types of hazardous materials such as explosives, ammunition, asbestos, medical waste, radioactive waste, or commercial grade chemicals are not typically accepted at PHHWCFs. PHHWCFs can be either stand-alone operations or located on the same site as a landfill, transfer station, recycling facility, or public works facility. A high level of planning and permitting is required to site a PHHWCF.

Diversion Potential - A PHHWCF has a relatively high diversion potential since users can typically dispose of a wide range of materials *(Larimer County's PHHWCF diverted 1.9 million pounds of material in 2007) (Curbside Inc. average waste/resident at drop-off is 125+lbs)*

Cost - $0.30 / pound (not including capital costs)

Permanent Limited Household Hazardous Waste Material Collection Facilities

Limited HHW Material Collection Facilities accept small quantities of specific HHW, including anti-freeze, batteries, oils, paint and/or E-waste, from residential customers. A limited-material facility can be either a stand-alone operation or located on the same site as a landfill, transfer station, recycling facility, public works facility, fire station, police station or other approved facility. The limited types of materials accepted and the lower hazardous risks associated with their handling requires a lower level of planning and permitting.

Diversion Potential – A Limited HHW Material Collection Facility can have a relatively high diversion potential given the prevalence of the materials typically targeted (The amount of oil collected through the City of Longmont's drop-off facility (200 gallons/week) was reported by city staff to be much greater than through its on-call curbside collection service).

Cost - < $0.30/pound (not including capital costs)

Temporary HHW Collection Events

Temporary collection events collect HHW on a limited number of days (e.g., a single day or weekend) at a location that can be used temporarily for a collection event (e.g., a large parking lot, public works yard, transfer station, or landfill). Temporary events require the host jurisdiction or coordinator of the event to set up a temporary receiving operation for the day of the event. The coordinator needs to arrange for all necessary equipment such as traffic control devices, tables, tents, storage containers, and staffing to safely receive, package material for shipment, and remove all material and equipment at the end of the event. Appendix H provides a number of Temporary HHW Collection Event case studies.

Diversion Potential – 50 - 100 pounds/participant

Cost - $0.70/pound

Curbside Collection Programs

Collection of select HHW can be incorporated into existing curbside recycling or trash collection services. Materials collected as part of curbside recycling programs include oil and oil filters, batteries and cell phones, as well as latex paint and CFLs in a limited number of jurisdictions.

While the City of Longmont is the only jurisdiction identified in the State that offers regularly scheduled curbside collection of used motor oil, the collection of used motor oil and oil filters is provided in numerous jurisdictions throughout the country. Programs collecting used motor oil have been reported in 11 states, with 70 jurisdictions offering the service in California alone. Regularly scheduled curbside collection of batteries and cell phones is also being provided in a growing number of communities.

Diversion Potential – Low to medium for targeted materials (e.g., 0.1 - 1.0 gallons of oil / account per year; 0.7 lbs cell phones/ batteries/account/year)

Cost - +/- $0.10/pound (Depending on materials collected)

Door-to-Door On-Call Pickup Programs

Door-to-Door On-Call Pickup Programs allow residents to schedule an appointment with the service provider (municipal agency or private contractor) for the collection of various HHW materials. Some programs provide residents with a “kit” to help prepare materials for collection while others simply provide residents with instructions for how they should prepare the

materials for collection. Door to door collection of materials from CESQGs is also provided in at least one jurisdiction (San Bernardino County, CA).

Appendix H provides a number of Door-to-Door Pickup Program case studies.

Diversion Potential – 50-100 pounds/participant

Cost - $100 - $125/pickup; $1.00 - $1.50/pound

In-Store-Return Programs

In-Store-Return Programs allow individuals to return specific hazardous material or items to the location where the material was either purchased or is currently sold. Retailers have established return programs for customers to return hazardous items as a way to get the customer to return to the store to purchase replacement items. In-Store-Return Programs are commonly found at auto parts stores for used motor oil and car batteries and large home improvement stores for light bulbs and/or batteries.

Diversion Potential – Medium to high for targeted materials

Cost – Generally no direct cost to user although there are exceptions (e.g., E-waste)

Return-by-Mail Programs

Return-by-Mail Programs allow individuals to package certain types of hazardous material and have the U.S. Mail, United Parcel Service (UPS), or other designated carrier, deliver the items to a company that will properly dispose or recycle the items. Residents purchase the return-by-mail containers from the company and pay for the return postage. Return-by-Mail Programs are limited to the types of material that can be safely shipped via the US Mail services.

Diversion Potential – Low

Cost – Varies by material type

Household Hazardous Waste Facilities and Programs in Colorado

A summary of Household Hazardous Waste Collection Events and Facilities in the State as reported by the Colorado Department of Public Health, and additional research conducted by R3 is as follows:

- There are approximately two dozen PHHWCFs in Colorado that provide comprehensive household hazardous waste management options for residents in the affiliated cities and counties. Of those facilities:
  - Four (4), including the County's facility, also provide services for CESQGs; and
  - The County's facility is one of only two in the State that accept sharps from households.
- Various jurisdictions in the State provide Temporary Collection Events;
- Ten (10) jurisdictions reported that they provide on-call curbside pickup of hazardous waste from residents or drop-off as funding allows. All of these programs are operated by Curbside Inc., a subsidiary of Safety-Kleen Corporation; and
- The City of Longmont is the only jurisdiction identified in the State with regularly scheduled HHW curbside collection service (used motor oil and automotive batteries).

Conditionally Exempt Small Quantity Generator Waste

Jurisdictions provide various levels of services related to the management of CESQG hazardous waste, ranging from relying entirely on private sector service providers to providing on-call municipal pickup service (for a fee).[18] The most common jurisdiction sponsored hazardous waste management option for CESQG is providing PHHWCF services for a fee, which the County provides through the its BHAPE Program at its PHHWCF. Some jurisdictions also allow CESQGs to participate in temporary collection events and CESQGs can participate in applicable In-Store-Return Programs (e.g., Thermostat Recycling Program).

Many jurisdictions also provide educational resources to CESQGs, including providing lists of private sector hazardous waste management firms and distributing business-type specific guides for reducing and managing hazardous materials. The State of Florida, as well as other public agencies, has developed guides

[18] San Bernardino County, CA operates a municipal CESQG door-to-door collection program.

for managing hazardous waste geared for specific types of businesses (e.g., auto repair shops, dry cleaners, printers etc.). King County Washington has a Local Hazardous Waste Management Program (LHWMP) that provides various services to local businesses, including Educational Visits to provide technical assistance on best management practices (BMPs) and compliance with hazardous waste regulations.

As the City considers its options related to management of CESQG hazardous waste, one option of particular value may be the State's *Generator Assistance Program* (GAP)[19]. This program, which is provided by the Colorado Department of Public Health and Environment (CDPHE) offers free assistance to small businesses for hazardous waste. The CDPHE will, upon request, provide an overall assessment of a businesses hazardous waste management practices and provide on-site technical assistance. While actual disposal services are not provided, best management practices specifically tailored to that business, compliance information and potentially money-saving practices are all provided at no cost. The visit is meant to educate and assist the business with regulatory compliance and potentially save money rather than enact enforcement measures. The GAP, which does not actively promote itself, could be promoted by the City as part of its ongoing hazardous waste management outreach and educational resources. GAP staff expressed a strong interest in providing more on-site services to businesses within the City, with a recommended focus on drycleaners, auto body shops, painters, furniture manufacturers and laboratories. Staff of the City's Waste Water Industrial Pretreatment Program also reported auto repair shops, furniture stripping, radiator shops and dry cleaners as business types of particular focus.

Suggested Next Steps

The following suggested next steps are based on consideration of the most feasible and/or effective options for the City to implement at this time with respect to the management of HHW and CESQG hazardous waste.

[19] The State also operates a Small Business Assistance Program that provides free and confidential support to help small businesses achieve and maintain compliance with environmental regulations. While the focus of this program is less targeted to hazardous waste than the GAP it does serve as another resource for small businesses.

Household Hazardous Waste

LEGISLATIVE ACTIONS

1. Pass a City EPR Resolution / Support State and Federal EPR Efforts

Central to the development of an effective long-term and sustainable HHW management system in the City is the support of mandatory EPR efforts at the State and federal level. The objective of these efforts is to develop a sustainably funded HHW management system that shifts the cost associated with the handling and disposal of HHW from municipalities and the overall rate base to product producers and consumers. A Draft EPR Resolution is provided in Appendix A that:

- Urges State and Congressional delegations to introduce and pass EPR legislation;
- Authorizes staff to send letters to State and local agencies to urge support for EPR legislation; and
- Resolves that the City develop producer responsibility purchasing and contracting policies.

2. Require Local Retailer Participation in Existing Local EPR Programs / Maximize the Number of Collection Points

While the development of new and comprehensive mandatory State and federal EPR programs deserve the City's strong support, the fruits of those efforts are not likely to be realized in the short term. However, voluntary EPR programs currently exist at the local level. In support of those options R3 suggest the City consider "take-back" legislation to require full participation of local retailers in the following two existing EPR/Product Stewardship Programs:

- The Rechargeable Battery Recycling Corporation (RBRC); and
- The Thermostat Recycling Corporation (TRC).

Many local retailers already participate in these programs, which provide for the proper and legal disposal of used rechargeable household batteries, cell phones and mercury thermostats. By passing "take-back" legislation the City would simply be requiring that all retailers of these products participate in those programs. Appendix B contains a draft Take-Back Ordinance that would require retailers of household batteries, cell phones and mercury thermostats to take these products back from the consumer without charge.

3. Consider Requiring Local Retailers to Take-Back E-Waste

With the passing of its E-waste Ordinance the City sent a clear message to local consumers that they need to take responsibility for the proper management of their E-waste. What was not included in that legislation was a requirement for local retailers to provide local consumers of their products (residents and businesses) with convenient and free[20] management options through In-Store Return (Take-Back) Programs. Such action is consistent with the City's 2008 Legislative Policy Agenda that includes support for legislation *"…to require greater producer responsibility, such as "take-back" legislation that assists consumers to appropriately recycle electronic equipment, i.e., computers and televisions."* In support of the City's E-waste Ordinance R3 suggests that the City consider passing "take-back" legislation for E-waste. Appendix B also includes a sample Take Back Ordinance for E-Waste as well as sample Take Back Ordinances for Household Batteries and Fluorescent Tubes and Sharps Waste, both of which were passed by San Luis Obispo County in California.

DEVELOPMENT OF NEW PROGRAMS / FACILITIES

4. Require All Licensed Haulers to Provide On-Call Collection of E-Waste

R3's understanding is that two of the three licensed haulers currently provide on-call E-waste collection services for a fee. Given the City's E-waste ban, providing all residents with a convenient curbside collection option for E-waste to allow them to comply with the City's ordinance would seem to be an appropriate requirement for all licensed haulers.

5. Consider Requiring Licensed Haulers to Provide Free Regularly Scheduled Curbside Collection of Used Motor Oil / Other Materials

The collection of certain HHW materials curbside is practiced in many jurisdictions throughout the Country. Those programs vary from on-call programs that collect a wide range of HHW materials for free or for a fee, to regularly scheduled collection of certain limited materials such as used motor oil, oil filters, batteries and cell phones. Paint and CFLs are also collected curbside as part of regularly scheduled trash and recycling service in a limited number of jurisdictions.

[20] The cost of the end-of-life management of the product would be incorporated into the purchase price of the product.

While the City of Longmont is the only jurisdiction identified in the State that offers regularly scheduled curbside collection of used motor oil, the collection of used motor oil and oil filters is provided in numerous jurisdictions throughout the Country. Programs collecting used motor oil have been reported in 11 states, with 70 jurisdictions offering the service in California alone. Regularly scheduled curbside collection of batteries and cell phones is also being provided in a growing number of communities.

The City may wish to consider requiring the licensed haulers to provide free regularly scheduled collection of used motor oil and/or other material types that have a proven track record of being safely and effectively collected in other jurisdictions. The licensed haulers' existing trash and recycling services present an opportunity for the collection of these materials at relatively low cost and significantly increased convenience to the City's residents.

6. Work with Local Retailers to Establish New Voluntary Take-back Programs

Work with local retailers, hospitals, etc. to establish voluntary take-back programs for:

- Compact Fluorescent Lights[21];
- Pharmaceuticals and Personal Care Products;
- Sharps; and/or
- Other targeted material types.

If these "Phase 1" efforts do not result in significant improvements in the available take-back options funded by parties other than the City and County within a set time frame (e.g., one-year period), than the City may wish to consider the implementation of a mandatory take-back ordinance for these materials.

7. Consider Funding Curbside Collection of HHW for Elderly and Disabled Residents

The City could follow the example of the City of Loveland and provide (contract for) free on-call curbside collection of HHW for elderly and disabled residents who may have difficulty driving to the County PHHWCF.

[21] ACE Hardware is collecting CFLs and mercury-containing thermostats for recycling at all their stores in the State in collaboration with the State Department of Public Health and the Environment.

8. Consider Siting an In-City Limited-Material HHW Collection Facility

The City could follow the lead of the cities of Loveland and Longmont and site a facility or facilities within the City limits for the collection of certain "lower risk" HHW materials (e.g., antifreeze, batteries, motor oil, cooking oil, paint, E-waste etc.). Such a facility could also potentially be sited at an existing City facility (e.g., equipment yard), or a recycling center.

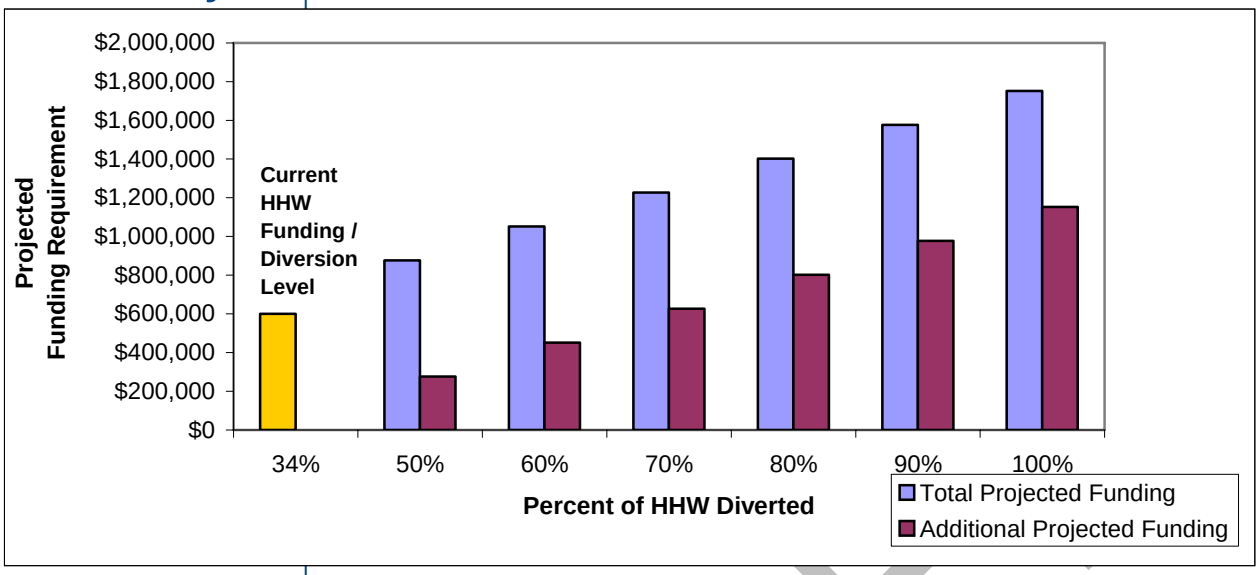
DEVELOP SUSTAINABLE FUNDING SOURCE

9. Consider Establishing HHW Trash Collection Surcharge

The City's problem statement/question for this project includes identifying the associated resources necessary to protect the health, welfare and natural environment of Fort Collins citizens from hazardous waste impacts. As stated above, the City currently has limited staff resources dedicated to hazardous waste management and no available sustainable funding source. Also as stated above, many of the options available to the City for more effectively managing HHW require varying levels of additional, and in most cases on-going funding. Without a sustainable funding source the City is limited in which options it can pursue. This is not to say that it cannot take meaningful action at this time without securing additional funding, but its options are more limited. One option for securing additional funding is to apply a surcharge to the trash collection service. Revenue from any such surcharge could be used to support efforts to more effectively manage both solid waste and hazardous waste. A $0.10 per month charge on each residential solid waste account would generate $48,000 annually (assuming 40,000 single family residential accounts), while a $0.50 surcharge would generate approximately $450,000, with additional revenue associated with any commercial/multi-family surcharge.

The PHHWCF recovered approximately 1.9 million pounds of hazardous (and non-hazardous waste) in 2006 at operating cost of approximately $600,000, or an average of approximately $0.30 per pound. This represented approximately 34% of the total HHW recovered and disposed at the landfill in 2006. Figure 1 below provides a high level projection of the additional funding requirements necessary to achieve the HHW recovery rates shown based on a recovery cost of $0.30 per pound. As shown, a total of $875,000 per year ($225,000 in additional annual funding) would be required to divert 50% of the HHW stream. A total of $1.25 million or approximately $625,000 more than current funding would be required to achieve a diversion rate of 70% (essentially double the current rate).

Figure 1
Projected Household Hazardous Waste
Funding and Associated Recovery Rates



Conditionally Exempt Small Quantity Generator Hazardous Waste

Drawing upon research conducted related to programs and services offered by various jurisdictions throughout the County the following list of suggested next steps for managing CESQG waste was developed for the City's consideration. Before undertaking any new CESQG hazardous waste management efforts, however, we recommend that the City contact staff of the State's GAP program and seek their guidance and assistance.

***Note**: In considering additional outreach to CESQGs it is important to note that the County has stated that its BHAPE Program is at or near capacity. Any future action directed toward increasing the recovery of CESQG hazardous waste needs to be undertaken with consideration for the capacity of the available management options to absorb additional material quantities*.

PUBLIC EDUCATION

1. Develop a "Vendor List"

Develop a hazardous waste management company "Vendor List" and place it on the City's website to provide references for businesses in the City that generate hazardous materials.

(Supplemental Documents provided to the City under separate cover includes sample Vendor Lists).

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2. Provide Outreach to Business Organizations

Partner with Chamber of Commerce and/or other business specific forums to promote the proper management of hazardous materials and available local options.

3. Coordinate Outreach and Educational Efforts with Other City Departments

Piggy-back with other City Department outreach programs (e.g., Fire Department Safety Inspections; Waste Water Industrial Pre-Treatment Program; Business Permitting Department, etc.) to maximize available resources and opportunities for engaging and educating the business community with respect to proper management of hazardous waste.

TARGET SPECIFIC EXISTING CESQG BUSINESSES

4. Identity CESQGs Located in the City

Identify potential CESQGs in the City based on SIC/NAICS (North American Industrial Classification System) code data and/or by business type (yellow pages, business permits etc.).

> *(A copy of Pasco County Florida's Small Quantity Generator SIC code list is included in Supplemental Documents provided to the City under separate cover).*

5. Prioritize CESQG Business-Types

Having identified potential CESQGs in the City, prioritize CESQG business-types for outreach efforts (e.g., auto repair industry), based on appropriate factors including the number of those businesses, the potential environmental impacts of the hazardous waste they generate, the availability and interest of related business forums etc.

6. Develop Hazardous Waste Management Guides

Develop Hazardous Waste Management Guides for priority CESQG business-types to provide those businesses with specific information on the proper management of the hazardous wastes that they generate and local hazardous waste management options.

> *(Copies of business-type specific hazardous waste management guides from a variety of sources are provided in the Supplemental Documents.)*

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7. Conduct Educational Visits

Conduct "Educational Visits" of businesses within targeted CESQG business-types to provide technical assistance on BMPs for hazardous waste management.

(Information on King County Washington's educational outreach to the Auto Repair Industry in support of the proper management of hazardous waste is provided in the Supplemental Documents.)

IDENTIFY AND TARGET NEW CESQG BUSINESSES

8. Identify Potential CESQGs through Permitting Process

Identify / target CESQGs as part of business licensing process based on SIC Code or business type. Provide business-type specific Hazardous Waste Management Guides.

9. Coordinate Outreach Efforts

Coordinate outreach and other efforts with County and other regional jurisdictions (e.g., development of business-type specific guides, coordinated public education, outreach and staff training etc.).

DEVELOP SUSTAINABLE FUNDING SOURCE

10. Consider Establishing HHW Trash Collection Surcharge

Many of the options listed above for managing CESQG hazardous materials would require additional funding and/or staffing. It is certainly not inconceivable that one (1) additional staff dedicated to CESQG hazardous waste management would be required to effectively implement these options. Any such additional staff could also oversee additional HHW management efforts.

Appendix A

Draft City of Fort Collins EPR Resolution

R3

Appendix A

RESOLUTION NO. _____
RESOLUTION OF THE CITY OF FORT COLLINS SUPPORTING EXTENDED PRODUCER RESPONSIBILITY

WHEREAS, the City of Fort Collins has a long record of adopting policies that extend the lifespan of local landfills, conserve natural resources, and prevent pollution thereby avoiding related liability; and

WHEREAS, in 1999, the City adopted a goal to divert 50 percent of the City's waste by 2010 with the most cost-effective way to reduce disposed waste is through source reduction; and

WHEREAS, the City of Fort Collins passed Resolution 99-137 establishing a policy to take cost-effective actions that benefit the community to reduce local greenhouse gas emissions including reducing waste generation ; and

WHEREAS, as a pollution prevention measure, the City banned disposal of electronic waste in the trash in February 2007; and

WHEREAS, the City's municipal code prohibits the disposal of hazardous waste in the trash; and

WHEREAS, product producers are the only party with the control over product and packaging decisions and local governments have no input on the design of the products or the decisions on their packaging, make no profit from the products, and do not have the resources to adequately address the rising volume of discarded and hazardous products; and

WHEREAS, costs paid by local governments via taxes and garbage rates to manage products are in effect subsidies to the producers of hazardous products and products designed for disposal; and

WHEREAS, the products that are deemed hazardous include household batteries, fluorescent bulbs and tubes, mercury containing thermostats and other items that contain mercury, and electronic waste including computers, printers, video cassette recorders, microwave ovens, cellular phones, cordless phones, and radios; and

WHEREAS, it is anticipated that the list of waste products determined to be hazardous will grow and could be banned from disposal by Federal or State rulings; and

WHEREAS, approximately 1.9 million pounds of hazardous and otherwise regulated waste was recovered at the Larimer County Household Hazardous Waste Facility in 2007, and 21.3 million pounds have been recovered since the facility opened in 1989; and

WHEREAS, substantial quantities of hazardous waste are still being disposed at the Larimer County Landfill, accounting for 2.1 percent of the total waste disposed (6.3 million pounds), based on the County's 2007 Waste Composition Study; and

WHEREAS, the cost to properly manage hazardous and otherwise regulated waste received at the County's Hazardous Waste Facility was approximately $600,000 in 2007, which was funded through the landfill gate rate, and substantial additional cost will be required annually to properly manage the quantities of hazardous waste that are still being disposed unless policy changes are made; and

WHEREAS, there are significant environmental and human health impacts associated with improper management of hazardous waste, sharps, and other products; and

WHEREAS, the Fort Collins City Council supports statewide and national efforts to hold producers responsible for hazardous waste products and other product waste management costs; and

WHEREAS, Extended Producer Responsibility (EPR) is a policy approach in which producers assume responsibility for management of waste products and which has been shown to be effective; and

WHEREAS, when producers are responsible for ensuring their products are reused or recycled responsibly, and when health and environmental costs are included in the product price, there is an incentive to design products that are more durable, easier to repair and recycle, and less toxic; and

WHEREAS, EPR framework legislation establishes transparent and fair principles and procedures for applying EPR to categories of products for which improved design and management infrastructure is in the public interest; and

WHEREAS, the City of Fort Collins is working with the Colorado Recycling Association to organize local governments to speak with one voice in promoting transparent and fair EPR systems in Colorado; and

WHEREAS, the City of Fort Collins wishes to incorporate EPR policies into the City's and County's product procurement practices to reduce public costs, reduce liability of landfill leaching, and protect the environment; and

WHEREAS, in 2001 the Solid Waste Association of North America adopted a resolution supporting EPR policy; and

WHEREAS, in July 2008 the National Association of Counties adopted a resolution in support of a framework approach to EPR; and

NOW, THEREFORE BE IT RESOLVED, that the Council of City of Fort Collins urges the State and Congressional delegations to introduce and pass legislation which

shifts the burden of managing discarded products, especially those containing toxic materials, from local governments to the producers of those products which will give producers the incentive to redesign products to make them less toxic and easier to reuse and recycle; and

BE IT FURTHER RESOLVED, that the senior solid waste staff of the City of Fort Collins be authorized to send letters to the League of Colorado Cities, and the Colorado Department of Public Health and Environment, and the State legislature and to use other advocacy methods to urge support for EPR legislation; and

BE IT FURTHER RESOLVED, that the City of Fort Collins encourages all manufacturers to share in the responsibility for eliminating waste through minimizing excess packaging, designing products for durability, reusability and the ability to be recycled; using recycled materials in the manufacture of new products; and providing financial support for collection, processing, recycling, or disposal of used materials; and

BE IT FURTHER RESOLVED, that the City of Fort Collins and its agencies develop producer responsibility purchasing policies such as leasing products rather than purchasing them and requiring businesses contracting with the City to offer less toxic alternatives and to take responsibility for collecting and recycling their products and the end of their useful life.

PASSED AND ADOPTED by the Board of the City of Fort Collins, State of Colorado on _____ by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

Signed: _____ Date: (mo/day/year)
(Name), Chair

ATTEST: _____
(Name), Clerk
(Jurisdiction name)

Appendix B

Draft City of Fort Collins Take-Back Ordinance

Sample Take-Back Ordinance

E-waste

Household Batteries and Fluorescent Tubes

Sharps waste

R3

Appendix B

Draft City of Fort Collins Take-Back Ordinance

R3

City of Fort Collins

MODEL USED HOUSEHOLD BATTERIES, CELL PHONES AND MERCURY THERMOSTAT PRODUCT STEWARDSHIP ORDINANCE

Article 1. General Provisions

The jurisdiction finds and declares all of the following:

(a) The purpose of this ordinance is to require full participation in two existing product stewardship programs, the Rechargeable Battery Recycling Corporation (RBRC) and the Thermostat Recycling Corporation (TRC) for the proper and legal disposal of used rechargeable household batteries, cell phones and mercury thermostats.

(b) It is the further purpose of this ordinance to enact a law that establishes a program that is convenient for consumers and the public to return and ensure the safe and environmentally sound recycling of used rechargeable household batteries, cell phones and mercury thermostats, and providing a system that is funded by the product manufacturer and does not charge consumers when products are returned.

(c) It is the intent of the jurisdiction that the cost associated with the handling and disposal of used household rechargeable batteries, cell phones, and mercury thermostats be the responsibility of the producers and consumers of household rechargeable batteries, cell phones, and mercury thermostats, and not local government or their service providers, state government, taxpayers or garbage ratepayers.

(d) In order to reduce the likelihood of illegal disposal of hazardous materials, it is the intent of this ordinance to ensure that all costs associated with the proper management of used household rechargeable batteries, cell phones, and mercury thermostats are internalized by the producers and consumers of those products at or before the point of purchase, and not at the point of discard.

(e) Manufacturers and retailers of household rechargeable batteries, cell phones, and mercury thermostats in working to achieve the goals and objectives of this ordinance, should have the flexibility to partner with each other and with those private and nonprofit business enterprises that currently provide collection and processing services to develop and promote a safe and effective used household rechargeable batteries, cell phones, and mercury thermostats recycling system.

(f) The producers of household rechargeable batteries, cell phones, and mercury thermostats should reduce and, to the extent feasible, ultimately phase out the use of hazardous materials in these products and stop selling mercury thermostats as mercury-free programmable thermostats are already available.

(g) There are significant environmental and human health impacts associated with household products that contain toxic ingredients, including mercury, lead, cadmium and other toxic

chemicals that when disposed of improperly can contaminate the jurisdiction's environment.

(h) The purpose and goal of this ordinance is to provide for the safe, cost free, and convenient collection, reuse, and recycling of 100 percent of the used household rechargeable batteries, cell phones, and mercury thermostats discarded in the jurisdiction and to allow addition of new products in the future to be covered by this ordinance.

Article 2. Definitions

For the purposes of this ordinance, the following terms have the following meanings, unless the context clearly requires otherwise:

(a) "Cell Phone" means a wireless telephone device that is designed to send or receive transmissions through a cellular radiotelephone service, as defined in Section 22.99 of Title 47 of the Code of Federal Regulations. A cell phone includes the rechargeable battery that may be connected to that cell phone. A cell phone does not include a wireless telephone device that is integrated into the electrical architecture of a motor vehicle.

(b) "Consumer" means a purchaser or owner of a household rechargeable battery, cell phone, or mercury thermostat. "Consumer" also includes a business, corporation, limited partnership, nonprofit organization, Heating, Ventilation and Air Conditioning (HVAC) contractor or governmental entity, but does not include an entity involved in a wholesale transaction between a distributor and retailer.

(c) "Distributor" means a person who sells household rechargeable batteries, cell phones, and mercury thermostats to a retailer.

(d) "Jurisdiction" means the City of Fort Collins, Colorado.

(e) "Manufacturer" means a business concern that owns or owned a name brand of mercury-added thermostats sold in this jurisdiction.

(f) "Mercury Thermostat" means a "thermostat" as defined that also contains mercury.

(g) "Rechargeable Battery" means a small, non-vehicular, rechargeable nickel-cadmium, nickel metal hydride, lithium ion, or sealed lead-acid battery, or a battery pack containing these types of batteries.

(h) "Retailer" means a person who sells household rechargeable batteries, cell phones, and mercury thermostats in the jurisdiction to a consumer or wholesaler, including a manufacturer of household rechargeable batteries, cell phones, and mercury thermostats who sells household rechargeable batteries, cell phones, and mercury thermostats directly to a consumer or contractor. A sale includes, but is not limited to, transactions conducted through sales outlets, catalogs, or the Internet, or any other similar electronic means, but does not include a sale that is a wholesale transaction with a distributor or retailer.

(i) "Sell" or "sale" means a transfer for consideration of title or of the right to use, by lease or sales contract, including, but not limited to, transactions conducted through sales outlets, catalogs, or the Internet or any other, similar electronic means, but does not include a wholesale transaction with a distributor or a retailer.

(j) "Thermostat" means a product or device that uses a switch to sense and control room temperature through communication with heating, ventilating, or air-conditioning equipment. "Thermostat" includes a thermostat used to sense and control room temperature in residential, commercial, industrial, and other buildings, but does not include a thermostat used to sense and control temperature as part of a manufacturing process.

(k) "Wholesaler" means a person engaged in the distribution and wholesale selling of heating, ventilation, and air-conditioning components to contractors who install heating, ventilation, and air-conditioning components, and whose total wholesale sales account for 80 percent or more of total sales. A manufacturer, as defined by this section, is not a wholesaler.

Article 3. Rechargeable household batteries/cell phones recycling

(a) Every retailer of rechargeable household batteries and cell phones sold in this jurisdiction shall have in place a system for the acceptance and collection of used household batteries for recycling or proper disposal. They can utilize the RBRC program for free www.rbrc.org or develop their own.

(b) A system for the acceptance and collection of used rechargeable household batteries and cell phones for recycling or proper disposal shall, at a minimum, include all of the following elements:

(1) The take-back from the consumer of used rechargeable household batteries and cell phones that the retailer sold or previously sold to the consumer, at no cost to that consumer. The retailer may require proof of purchase. The retailer shall only be required to accept rechargeable household batteries and cell phones in an amount not to exceed the amount previously sold to the consumer.

(2) The take-back of used rechargeable household batteries and cell phones from a consumer who is purchasing new household batteries from that retailer, at no cost to that consumer.

(3) The take-back from the consumer of used rechargeable household batteries and cell phones that the retailer did not sell or previously sell to the consumer, at no cost to that consumer. The retailer shall only be required to accept household batteries in an amount not to exceed 10 batteries per week from a consumer who resides in the jurisdiction.

(4) If the retailer delivers rechargeable household batteries or cell phones directly to a consumer in this jurisdiction, the system provides the consumer, at the time of delivery, with a mechanism for the return of used rechargeable household batteries and cell phones for recycling or proper disposal, at no cost to the consumer in an amount not to exceed the amount being purchased by the consumer.

(5) Make information available to consumers about rechargeable household battery and cell phone disposal opportunities provided by the retailer and encourage consumers to utilize those opportunities. This information may include, but is not limited to, one or more of the following:

(A) Signage that is prominently displayed and easily visible to the consumer.

(B) Written materials provided to the consumer at the time of purchase or delivery, or both.

(C) Reference to the rechargeable household batteries and cell phone stewardship opportunity in retailer advertising or other promotional materials, or both.

(D) Direct communications with the consumer at the time of purchase.

Article 4. Mercury thermostat management

(a) Every retailer of thermostats sold in this jurisdiction shall have in place a system for the acceptance and collection of used mercury thermostats for recycling or proper disposal. They can utilize the Thermostat Recycling Corporation program http://www.nema.org/gov/ehs/trc/ or develop their own.

(b) A system for the acceptance and collection of used mercury thermostats for recycling or proper disposal shall, at a minimum, include all of the following elements:

(1) The take-back from the consumer or contractor of used mercury thermostats that the retailer or wholesaler sold or previously sold to the consumer, at no cost to that consumer. The retailer may require proof of purchase. The retailer shall only be required to accept mercury thermostats in an amount not to exceed the amount previously sold to the consumer.

(2) The take-back of used mercury thermostats from a consumer who is purchasing new thermostat from that retailer, at no cost to that consumer. The retailer or wholesaler shall only be required to accept thermostats in an amount not to exceed the amount being purchased.

(3) The take-back from the consumer of used mercury thermostats that the retailer or wholesaler did not sell or previously sell to the consumer, at no cost to that consumer. The retailer or wholesaler shall only be required to accept mercury thermostats in an amount not to exceed 2 mercury thermostats per year from a consumer who resides in the jurisdiction.

(4) If the retailer or wholesaler delivers thermostats directly to a consumer in this jurisdiction, the system provides the consumer, at the time of delivery, with a mechanism for the return of used mercury thermostats for recycling or proper disposal, at no cost to the consumer in an amount not to exceed the amount being purchased by the consumer.

(5) Make information available to consumers about mercury thermostat disposal opportunities provided by the retailer and encourage consumers to utilize those opportunities. This information may include, but is not limited to, one or more of the following:

(A) Signage that is prominently displayed and easily visible to the consumer.

(B) Written materials provided to the consumer at the time of purchase or delivery, or both.

(C) Reference to the mercury thermostat disposal opportunity in retailer and wholealer advertising or other promotional materials, or both.

(D) Direct communications with the consumer at the time of purchase.

(6) Every contractor in Fort Collins that obtains a permit to demolish buildings will be required to properly recycle mercury thermostats and be provided with an information sheet about how to identify mercury thermostats, how to safely remove them, and bring locations where those thermostat recycling opportunities exist in the jurisdiction.

Article 5. Penalty

It is unlawful to sell rechargeable household batteries, cell phones or thermostats to a consumer or contractor in this jurisdiction unless the retailer or wholesaler of such products complies with this ordinance.

Article 6. Effective date

This ordinance shall become effective _____ (date TBD) as a voluntary initiative. Six months after the voluntary initiative is effective for each product type, the ordinance will become mandatory and enforceable.

Article 7. Consideration of adding new products

It is the goal of this ordinance to ensure that existing product stewardship programs for all product waste, especially hazardous waste, are fully utilized by the retailers and HVAC wholesalers that sell these products to reduce public costs and minimize pollution and public health impacts. It is also the goal to add future products to this ordinance as producers of hazardous and other products implement stewardship programs for them. If the product producers of household hazardous products implement stewardship programs for the many other hazardous products such as paint, fluorescent lamps, e-waste, sharps, and pharmaceuticals as examples, the City retains the right to reconsider taking similar actions with the retailers of those products to ensure they are properly recycled and do not unfairly burden the taxpayers and ratepayers of the City of Fort Collins.

Appendix B

Sample E-Waste Take-Back Ordinance

R3

County of Santa Cruz

BOARD OF SUPERVISORS

701 OCEAN STREET, SUITE 500, SANTA CRUZ, CA 95060-4069

(831) 454-2200 FAX: (831) 454-3262 TDD: (831) 454-2123

JANET K. BEAUTZ	ELLEN PIRIE	MARDI WORMHOUDT	TONY CAMPOS	JEFF ALMQUIST
FIRST DISTRICT	SECOND DISTRICT	THIRD DISTRICT	FOURTH DISTRICT	FIFTH DISTRICT

AGENDA: **3/11/03**

February 28, 2003

BOARD OF SUPERVISORS
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

RE: TAKE BACK ORDINANCE ON ELECTRONIC WASTE

Dear Members of the Board:

Attached is material regarding a proposed ordinance that would require manufacturers to "take back" Cathode Ray Tube (CRT) devices, at no cost to the consumer, when they have reached the end of their useful life. The statewide group Californians Against Waste is urging local governments to adopt this ordinance in response to the growing problem **of** electronic waste.

As Board members will remember, the County has a program to take back and reuse electronic waste, but the program is limited and over time will be expensive. Given the health problems associated with the devices and the high cost of recycling and reusing them, it seems reasonable that the manufacturers should share in the responsibility of dealing with them.

As the attached material indicates, this issue should really be resolved at the State level. However, thus far the industry has successfully prevented the State from taking any meaningful action. Therefore, this attempt is underway to urge local governments to adopt take back ordinances as a means of encouraging the State Legislature to take action. **A** statewide approach would be preferable but, in the interim, local ordinances seem to be the only way to compel the industry to take some responsibility for the problems their products cause.

Electronic waste is a growing problem, not only in this country but worldwide. I think it is appropriate for Santa Cruz County to participate in the effort to find a workable solution to this problem.

Therefore, I recommend that the Board of Supervisors take the following actions:

1. Direct the Environmental Health and the Public Works Departments to review the attached electronic waste "take back" ordinance and report back with their analysis and recommendations on April 8, 2003; and

2. Direct County Counsel to review the attached ordinance, place it in proper County ordinance form, and return the ordinance to the Board on April 8, 2003.

Sincerely,

Mardi Wormhoudt

MARDI WORMHOUDT, Supervisor
Third District

MW:lg
Attachment

cc: County Counsel
Department of Public Works
Environmental Health Department
Californians Against Waste

1211H3

FOR IMMEDIATE RELEASE
February 12, 2003

CONTACT:
Mark Murray (CAW) 916-443-5422
Leah Wyman (Galanter) 213-485-3357

Galanter-Garcetti Move E-waste Recycling Ordinance:

Measure would Require Los Angeles Retailers to Offer Consumer 'Take-Back' of Obsolete Electronics

LOS ANGELES – "It's clear that computer and TV manufacturers have been dragging their feet," said LA Councilmember Ruth Galanter, "and the City of Los Angeles cannot sit idly by and hope that the Legislature and the Governor will solve the electronic waste crisis. Our residents' homes are stockpiled with obsolete television sets and computers that cannot be taken to the landfill because they contain toxic materials, and over 1000 more become obsolete everyday in the City of Los Angeles.

"Consequently, Councilman Garcetti and I are today introducing a motion directing the City Attorney to draft an ordinance that will require retailers of TV sets and computers to take back those products when they become obsolete, at no cost to the consumer," Galanter said at a City Hall press conference. "This is the only fair way to protect city taxpayers who would otherwise have to pay for disposal and recycling. We must ensure that those who profit from these tools also take responsibility for them."

The Ordinance, to be prepared by the City attorney's office, will be based on a model ordinance prepared by the environmental group Californians Against Waste.

Galanter said she wanted to thank two environmental organizations, Californians Against Waste and the Sierra Club, for their work on this issue.

"CAW and the Sierra Club are to be commended for not only forcing this issue into the public eye, but for the hard work they've done to come up with both statewide and regional solutions to the crisis," Galanter said.

Last year, despite intense opposition from industry lobbyists, the State Legislature passed legislation--SB 1523 Isher]--that would have required manufacturers of all computers and TVs sold in California to pay an up-front fee. The state would have used the funds to properly recycle or otherwise dispose of the cathode ray tubes (picture tubes), which, because they contain lead and other toxic materials, are banned from California landfills. However, Governor Gray Davis vetoed the measure.

While Senator Byron Sher has introduced a new bill in Sacramento that deals with the Governor's objections, Galanter said, "Los Angeles simply cannot afford to wait one year or even two only to see Sacramento fail to create a statewide solution again. At a time where some are proposing to solve the worst budget crisis in state history on the backs of cities and counties, we simply cannot afford to pay for pick up and recycling of millions of pounds of obsolete e-trash.

Last year, more than two dozen California Cities and Counties adopted resolutions expressing their intent to introduce Local Take Back Ordinances if a statewide policy was not enacted. Los Angeles would be the first City in the State to introduce such an ordinance.

Councilman Eric Garcetti said, "I am particularly troubled about this material showing up in poor countries like China and India, where workers are paid $1.50 a day to dismantle the e-waste by hand, without protective clothing. Entire villages have been turned into e-waste dumps, water supplies have been destroyed because of the toxic materials and children are getting ill."

"It's most troubling that some e-waste exported to China was shown by its shipping tags to be from the City of LA and the LA Unified School District," Garcetti added.

The proposed ordinance would require all retailers of computers and television sets to establish a take-back program, under which consumers would be able to bring back the obsolete products to any retailer at no additional cost. Retailers would then be responsible for the safe and proper recycling of the e-waste. The ordinance would sunset if the state successfully enacted a statewide program.

"Because manufacturers have not yet fully participated in crafting a statewide solution for toxic electronic waste, the City of Los Angeles has been forced to act to protect both its budget and the health of its citizens. We applaud their action and will continue to work toward a statewide solution," said Mark Murray, Executive Director of Californians Against Waste, the state's largest waste reduction advocacy group and sponsor of the state legislation. "If passed, this would be the first such ordinance in the nation. That Councilmember Galanter and the City of Los Angeles should be taking the lead in solving such a crisis should come as a surprise to no one who knows Ms. Galanter's long record in working to solve environmental problems."

The measure is expected to be heard first in the Commerce, Energy and Natural Resources Committee which Galanter Chairs, before being considered by the full Council

# # #

Mark Murray, Executive Director
Californians Against Waste
Phone: 916-443-5422
Fax: 916-443-3912
www.cawrecycles.org

ORDINANCE ADDING CHAPTER XXXX
TO THE CITY/COUNTY MUNICIPAL CODE

RELATIVE TO HAZARDOUS CATHODE RAY TUBE DEVICES

The City Council of the City/County ordains as follows:

Chapter XX is hereby added to the City/County Municipal Code to read as follows:

Chapter XX

ELECTRONIC WASTE TAKE-BACK ORDINANCE

Sections:

Section 1 Findings and Intent.

The [City/County of] finds and declares:

a. Electronic scrap represents one of the fastest growing and most problematic components of California's waste stream.

b. According to the US Environmental Protection Agency (US EPA), more than 4.6 million tons of appliances and consumer electronics were discarded in 2000.

c. Due to the presence of toxic lead, mercury, and other hazardous and potentially hazardous materials in electronic waste, these products pose a particular threat to public health and the environment when improperly discarded.

d. About 70% of the heavy metals and 40% of the lead, found in US landfills come from electronic equipment discards, according to the US EPA.

e. Electronic products containing hazardous substances, such as the cathode ray tubes in most discarded computer monitors and television sets, must be managed and disposed of as hazardous waste, presenting a costly problem for local governments and nonprofit organizations such as Goodwill Industries and the Salvation Army.

f. A study by the National Safety Council suggests that three-quarters of all computers ever purchased in the United States remain stockpiled in storerooms, attics, garages, and basements.

g. A study conducted by the California Integrated Waste Management Board estimates that California households currently have more than 6 million obsolete computer monitors and television sets "stockpiled" in their homes.

h. It is further estimated that more than 10,000 computers become obsolete in California every day.

i. The current recycling infrastructure for electronic discards is weak, under-funded, and inconsistent.

j. The City/County recognizes that there is a cost associated with the proper and legal management of hazardous electronic scrap, and that this cost is the appropriate responsibility of the producers and consumers of hazardous electronics, and not local government, state government, or taxpayers.

k. To reduce the likelihood of illegal disposal of these hazardous materials, it is the intent of the City/County that any costs associated with the proper management of electronic scrap be internalized by the producers and consumers of hazardous electronics at or before the point of purchase, and not at the point of discard.

l. It is the intent of the City/County that the manufacturers of hazardous electronics, in working to meet the goals and objectives of this chapter, work cooperatively with each other in order to develop and promote a safe and effective electronics scrap recovery, reuse, and recycling system for California.

m. It is further the intent of the City/County that the producers of electronic CRT devices, reduce and ultimately phase out the use of hazardous materials in those products, to the extent feasible.

n. It is further the intent of the City/County that electronic CRT devices be designed for extended life, repair, and reuse, to the greatest extent feasible.

o. It is further the intent of the City/County that electronic retail establishments provide for the safe, efficient and convenient take-back of similar products for which they offer for sale, distribution, lease or conveyance.

p. It is further the intent of the City/County that systems and procedures for the recovery of hazardous electronic scrap be at least as convenient to consumers as the existing sale and distribution of hazardous electronic devices to consumers.

q. It is the intent of the City/County that retailers of hazardous electronic, in order to maintain the most convenient, cost effective, and consumer friendly recovery, reuse, and recycling system, be strongly encouraged to work in partnership with others in the hazardous electronic device retail industry to create and maintain a uniform and cooperative recovery system.

Section 2 Definitions.

Unless otherwise expressly stated, whenever used in this chapter, the following terms shall have the meanings set forth below:

a. "CRT device" means any computer monitor, television set, or any consumer product, component, or device that contains a cathode ray tube.

b. "Hazardous CRT device" means any consumer product, component, or device that contains a cathode ray tube which contains lead, mercury, or any other persistent bioaccumulative toxin, as determined by the Department of Toxic Substances Control, including, but not limited to, televisions, video monitors, computer monitors, and any other device that has one or more cathode ray tubes containing lead.

c. "Hazardous electronic scrap" means a hazardous electronic device that has been discarded.

d. "City" or "City/County" means all that territory within the incorporated area of the City/County, State of California.

e. "Electronics retailer" shall mean all sales outlets, stores, shops, vehicles or other places of business located in the City/County which operate to sell or convey hazardous CRT devices directly to the ultimate consumer. "Electronic Retail establishment" shall include, but not be limited to, any place where electronic products are sold, distributed, leased or conveyed.

Section 3 Establishment of No-Cost Retailer Take-Back of all Hazardous CRT Devices:

On and after January 1,2004, every electronics retailer in the City/County shall:

A. Establish or arrange to be established a non-cost Consumer Take-Back System for accepting hazardous CRT devices similar to those hazardous CRT devices, sold, distributed, leased or otherwise conveyed to the public by the electronic retailer. The

Consumer Take-back System must consist of, but not be limited to, at least one of the following options:

1. No-cost acceptance of hazardous CRT devices at the site of purchase from any resident of the City/County.
2. No-cost consumer mail-back of a hazardous CRT device to a registered electronic waste recycling facility for any consumer purchasing a CRT device from the electronics retailer in the previous 90 days.
3. No-cost pick-up in the City/County of a hazardous CRT device scrap from any consumer purchasing a CRT device from the electronics retailer in the previous 90 days.
4. Establishment and operation of a no-cost drop-off facility in the City/County accepting hazardous electronic scrap for reuse and/or recycling from any resident of City/County.

B. Maintain a toll-free telephone number or Internet website, or both, where consumers can obtain information on the no-cost opportunities for returning hazardous electronic scrap for reuse or recycling.

C. Create and maintain a public education program to promote the recovery and reuse and recycling of hazardous electronic scrap.

D. Ensure that each unit of hazardous electronic waste is properly collected and recycled, and forward documentation supporting that claim, as required by the California Department of Toxic Substances Control.

E. This Chapter shall become inoperative if the following occurs:

1. A State or Federal law, or combination of State or Federal laws, takes effect and does all of the following:
    a. Establishes a program for the collection, recycling, and proper disposal of CRT devices that is applicable to all CRT devices sold.
    b. Provides revenue to the state to support the collection, recycling and proper disposal of CRT devices, in amounts that are sufficient for proper collection, recycling and disposal.
    c. Requires CRT device manufacturers, retailers, handlers, processors, and recyclers to dispose of those devices in a manner that is in compliance with all applicable federal, state, and local laws regulations and ordinances, and prohibits the devices from being exported for disposal in a manner that poses a significant risk to the public health or the environment.

Section 4 Procurement Language

A. Any prospective bidder of CRT equipment, materials, or supplies to City/County shall certify that it, and its agents, subsidiaries, partners, joint venturers, and subcontractors for the procurement, take-back the products they have sold to their customers in City/County, including those items sold over the Internet, free of charge, or demonstrate that this provision is inapplicable to all lines of business engaged in by the bidder, its agents, subsidiaries, partners, joint venturers, or subcontractors. Failure to provide the certification shall render the prospective bidder and its agents, subsidiaries, partners, joint venturers, and subcontractors ineligible to bid on the procurement.

B. The bid solicitation documents shall specify that the prospective bidder is required to cooperate fully in providing reasonable access to its records and documents that evidence their compliance with this section.

C. Any person awarded a contract by the city/county agency that is found to be in violation of this section is subject to the following sanctions:

1. The contract shall be voided by the City/County agency to which the equipment, materials, or supplies were provided.

2. The contractor is ineligible to bid on any City/County contract for a minimum period of three years.

Appendix B

Sample Household Batteries and Fluorescent Tube Take-Back Ordinance

R3

San Luis Obispo County
Integrated Waste Management Authority
ORDINANCE NO. 2008-1

AN ORDINANCE ESTABLISHING A HOUSEHOLD BATTERIES AND FLUORESCENT TUBES MANAGEMENT PROGRAM

The Board of Directors of the San Luis Obispo County Integrated Waste Management Authority ordains as follows:

Section 1. General Provisions

The San Luis Obispo County Integrated Waste Management Authority (IWMA) finds and declares all of the following:

(a) The purpose of this Ordinance is to have the IWMA, a joint powers agency established pursuant to Government Code Section 6500 and empowered by its member jurisdictions to exercise the members' common powers to achieve the mandates imposed by the Integrated Waste Management Act of 1989 (AB 939) on a regional basis, enact a comprehensive and innovative system for the proper and legal management of used household batteries and fluorescent tubes in San Luis Obispo County.

(b) The purpose of this Ordinance is to enact a law that establishes a program that is convenient for consumers and the public to return and ensure the safe and environmentally sound disposal of used household batteries and fluorescent tubes, and to provide a "no-cost" system for consumers for the return of used batteries and fluorescent tubes.

(c) The purpose of this Ordinance is to assure that the costs associated with the handling and disposal of used household batteries and fluorescent tubes are the responsibility of the producers and retailers of household batteries and fluorescent tubes, and not local governments or their service providers, state government, or taxpayers.

(d) The purpose of this Ordinance is to reduce the likelihood of the illegal disposal of hazardous materials, and it is the intent of this Ordinance to ensure that all costs associated with the proper management of used household batteries and fluorescent tubes are internalized by the producers and consumers of household batteries and fluorescent tubes at or before the point of purchase, and not at the point of discard.

(e) The purpose of this Ordinance is to assure that manufacturers and retailers of household batteries and fluorescent tubes, while working to achieve the goals and objectives of this Ordinance, should have the flexibility to partner with each other and with those private and nonprofit business enterprises that currently provide collection and processing services to develop and promote a safe and effective used household batteries and fluorescent tubes recycling system.

(f) The purpose of this Ordinance is to provide for the safe and convenient collection, reuse, and recycling of 100 percent of the used household batteries and fluorescent tubes discarded in the IWMA Region at no cost to the consumer.

(g) The purpose of this Ordinance is to recognize that there are significant environmental and human health impacts associated with household products that contain toxic ingredients, including mercury, lead, cadmium and other toxic chemicals, that when disposed of improperly, can contaminate the IWMA Region's environment.

Section 2. Definitions

For the purposes of this Ordinance, the following terms have the following meanings, unless the context clearly requires otherwise:

(a) "Household Batteries" means batteries used primarily for household and personal uses, including nickel-cadmium, alkaline, carbon-zinc, Li Ion, NiMH and other batteries generated as non-RCRA waste similar in size to those typically generated as household waste. "Household Batteries" does not include lead-acid batteries such as motor vehicle batteries.

(b) "Consumer" means a purchaser or owner of household batteries and fluorescent tubes. "Consumer" also includes a business, corporation, limited partnership, nonprofit organization, or governmental entity, but does not include an entity involved in a wholesale transaction between a distributor and retailer.

(c) "IWMA Region" means the geographic area that includes the unincorporated area of San Luis Obispo County, California and the seven incorporated cities within San Luis Obispo County.

(d) "Retailer" means any entity, including but not limited to, a person or business, of whatever form of organization, which sells to the general public household batteries, fluorescent tubes, or both, in the IWMA Region to a consumer, including a manufacturer of household batteries and fluorescent tubes who sells household batteries and fluorescent tubes directly to a consumer.

(e) "Distributor" means a person who sells household batteries and fluorescent tubes to a retailer.

(f) "Fluorescent tubes" (also referred to as "universal waste lamp") means the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste lamps include, but are not limited to, fluorescent tubes, compact fluorescent lamps (cfl), high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

Section 3. Household batteries and fluorescent tubes management

(a) Every retailer of household batteries, fluorescent tubes, or both, sold in this IWMA Region shall establish within the retail outlet a system for the acceptance and collection of used household batteries, fluorescent tubes, or both, for recycling or proper disposal. A retailer who sells household batteries is required to accept, collect and dispose of household batteries. A retailer who sells fluorescent tubes is required to accept, collect and dispose of fluorescent tubes.

A retailer who sells household batteries and fluorescent tubes is required to accept, collect and dispose of household batteries and fluorescent tubes.

(b) A system established by a retailer for the acceptance and collection of used household batteries, fluorescent tubes, or both, during the retailer's normal hours of operation, for recycling or proper disposal shall, at a minimum, include all of the following elements:

(1) A convenient location within the retail establishment for the "take-back" from the consumer of used household batteries, fluorescent tubes or both at no cost to that consumer.

(2) Appropriate signage, prominently displayed within 5 feet of any entrance to the retail establishment and easily visible to the consumer, indicating that the retail establishment accepts and collects used household batteries, fluorescent tubes, or both, from consumers. In the alternative, the retail establishment may place the recycling receptacle within 5 feet of any entrance to the retail establishment with appropriate signage indicating its location for consumer disposal of batteries and/or fluorescent tubes.

(3) An appropriate receptacle or receptacles for the collection of used household batteries, fluorescent tubes, or both, within the retail establishment.

(c) A retailer who is required to accept used household batteries shall at a minimum provide the following take back services:

(1) The take-back from the consumer of used household batteries that the retailer sold or previously sold to the consumer, at no cost to that consumer. In that event, the retailer may require proof of purchase of the prior sales. The retailer shall only be required to accept household batteries in an amount not to exceed the amount previously sold to the consumer.

(2) The take-back of used household batteries from a consumer purchasing batteries from the retailer, at no cost to the consumer. In that event, the retailer shall only be required to accept household batteries in an amount not to exceed the amount being purchased.

(3) The take-back from the consumer of used household batteries that the retailer did not sell or previously sell to the consumer, at no cost to that consumer. The retailer shall only be required to accept household batteries in an amount not to exceed 15 batteries per week per consumer from any consumer who resides in the IWMA Region.

(d) A retailer who is required to accept fluorescent tubes shall, at a minimum, provide the following take-back services.

(1) The take-back from the consumer of used fluorescent tubes that the retailer sold or previously sold to the consumer, at no cost to that consumer. The retailer may require proof of purchase. The retailer shall only be required to accept fluorescent tubes in an amount not to exceed the amount previously sold to the consumer.

(2) The take-back of used fluorescent tubes from a consumer who is purchasing new fluorescent tubes from that retailer, at no cost to that consumer. The retailer shall only be required to accept fluorescent tubes in an amount not to exceed the amount being purchased.

(3) The take-back from the consumer of used fluorescent tubes that the retailer did not sell or previously sell to the consumer, at no cost to that consumer. The retailer shall only be required to accept fluorescent tubes in an amount not to exceed 8 fluorescent tubes per week per consumer from any consumer who resides in the IWMA Region.

Section 4. Enforcement

(a) The IWMA may enforce the provisions of this Ordinance through a civil action for civil penalties in the amounts established herein, and any other civil remedy, including prohibitory and

mandatory injunctive relief, filed in the Superior Court for the County of San Luis Obispo to compel and enforce the provisions herein against any retailer within San Luis Obispo County who sells batteries, fluorescent tubes, or both, in violation of this Ordinance. In addition to any relief available to IWMA to enforce this Ordinance, the IWMA shall also be entitled to recover its reasonable attorneys' fees and costs incurred in enforcing this Ordinance.

(b) For any violation of this Ordinance, the IWMA may sue to recover civil penalties in the amount of $1,000.00 per day for every day on which a violation exists. For purposes of calculating the civil penalties to be established hereunder, each day on which the retailer fails to comply with the requirements of this Ordinance, after having received a written notice of violation issued by the IWMA, shall constitute a separate offense.

(c) In addition to the civil relief available to the IWMA set forth above, any violation of this Ordinance shall also constitute a misdemeanor punishable under the laws of the State of California. The District Attorney, the County Counsel, or any City Attorney shall be authorized to enforce the provisions of this Ordinance within their respective jurisdictions. In the event of such criminal enforcement, the following criminal penalties apply to violations of this Ordinance:

(1) Violation as Misdemeanor. Violations of the provisions of this Ordinance or failure to comply with any of its requirements shall constitute a misdemeanor.

(2) The San Luis Obispo County Sheriff's Department and/or any other police department or law enforcement agencies located within the IWMA's jurisdiction may issue a Notice to Appear Citation for any misdemeanor pursuant to California Penal Code Section 853.6 for any violation of this Ordinance.

(3) Penalty for Misdemeanor. Any retailer found to be in violation of any provision of this Ordinance, or who fails to comply with any of its requirements, shall upon conviction thereof be punished by imprisonment in the county jail for not more than six months, or be fined not more than one thousand dollars ($1,000.00), or by both. Each day such violation continues shall be considered a separate offense.

(d) To the extent that the County of San Luis Obispo, the incorporated cities, and the districts within said County have adopted code enforcement ordinances applicable to their jurisdictions, this Ordinance shall be enforceable by said governmental entities under said ordinances as land-use or code-enforcement violations consistent with said ordinances.

Section 5. CEQA Findings

The Board of Directors of the IWMA finds that this Ordinance is exempt from the California Environmental Quality Act pursuant to CEQA Guidelines § 15061(b)(3) because "it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment." In addition, the Ordinance is subject to a Class 1 categorical exemption pursuant to CEQA Guidelines § 15301 in that the activities mandated by the ordinance will occur at existing retail establishments and, therefore, consist "of the operation, repair, maintenance, permitting, leasing, licensing or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.... The key consideration is whether the project involves negligible or no expansion of an existing use." The IWMA Manager is directed to prepare and file an appropriate notice of exemption.

Section 6. Severance Clause

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be unconstitutional, ineffective or in any manner in conflict with the laws of the United States, or the State of California, such decision shall not affect the validity of the remaining portions of this Ordinance. The Governing Board of the IWMA hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsection, sentence, clause or phrase be declared unconstitutional, ineffective, or in any manner in conflict with the laws of the United States or the State of California.

Section 7. Effect of Headings in Ordinance.

Title, division, part, chapter, article, and section headings contained herein do not in any manner affect the scope, meaning, or intent of the provisions of this Ordinance.

This Ordinance was introduced and the title thereof read at the regular meeting of the IWMA Board of Directors on March 12, 2008 and further reading was waived by a majority vote of those Directors present.

This Ordinance shall take effect and be in full force on and after thirty (30) days from the date of its passage, and before the expiration of fifteen (15) days from the date of its passage it shall be published once with the names of the members of the Board of Directors voting for and against the same, said publication to be made in a newspaper of general circulation published in the County of San Luis Obispo.

On a motion by Director Gibson, seconded by Director Mulholland, the foregoing Ordinance was passed and adopted by the Board of Directors of the San Luis Obispo County Integrated Waste Authority, this (insert date), by the following vote:

AYES: Arnold, Ashton, Beraud, Brooks, DeMeritt, Ehring, Gibson, Hamon, Mulholland, Ovitt, Lenthall

NOES: None

ABSENT: Achadjian, Patterson

Jerry Lenthall, President of the San Luis Obispo County Integrated Waste Management Authority

ATTEST:

Carolyn Goodrich, IWMA Board Secretary

ORDINANCE CODE PROVISION APPROVED
AS TO FORM AND CODIFICATION:

RAYMOND A. BIERING
IWMA Counsel

Date: 3/12/08

Appendix B

Sample Sharps Waste Take-Back Ordinance

R3

San Luis Obispo County
Integrated Waste Management Authority
ORDINANCE NO. 2008-2

AN ORDINANCE ESTABLISHING A SHARPS (HYPODERMIC NEEDLES) WASTE MANAGEMENT PROGRAM

The Board of Directors of the San Luis Obispo County Integrated Waste Management Authority ordains as follows:

Section 1. General Provisions

The San Luis Obispo County Integrated Waste Management Authority (IWMA) finds and declares all of the following:

(a) The purpose of this Ordinance is to have the IWMA, a joint powers agency established pursuant to Government Code Section 6500 and empowered by its member jurisdictions to exercise the members' common powers to achieve the mandates imposed by the Integrated Waste Management Act of 1989 (AB 939) on a regional basis, enact a comprehensive and innovative system for the proper and legal management of home-generated sharps waste (hypodermic needles waste) in San Luis Obispo County in accordance with Section 118286 of the Health and Safety Code.

(b) The purpose of this Ordinance is to enact a law that establishes a program that is convenient for consumers and the public to return and ensure the safe and environmentally sound disposal of home-generated sharps waste, and to provide a "no-cost" system for consumers for the return of home-generated sharps waste.

(c) The purpose of this Ordinance is to assure that the costs associated with the handling and disposal of home-generated sharps waste are the responsibility of the producers and retailers of home-generated sharps waste, and not local governments or their service providers, state or local government, or taxpayers.

(d) The purpose of this Ordinance is to reduce the likelihood of the illegal disposal of home-generated sharps waste, and it is the intent of this Ordinance to ensure that all costs associated with the proper management of home-generated sharps waste are internalized by the producers and consumers of home-generated sharps waste at or before the point of purchase, and not at the point of discard.

(e) The purpose of this Ordinance is to assure that manufacturers and retailers of sharps, while working to achieve the goals and objectives of this Ordinance, should have the flexibility to partner with each other, and with those private and nonprofit business enterprises that currently

provide collection and processing services, to develop and promote a safe and effective home-generated sharps waste management system.

(f) The purpose of this Ordinance is to provide for the safe and convenient collection and disposal of 100 percent of the home-generated sharps waste discarded in the IWMA Region at no cost to the consumer and to comply with the requirements pursuant to State Health and Safety Code prohibiting the disposal of home generated sharps waste in landfills as of September 1, 2008.

Section 2. Definitions

For the purposes of this Ordinance, the following terms have the following meanings, unless the context clearly requires otherwise:

(a) "Consumer" means an individual who has purchased sharps for personal use.

(b) "Home-generated sharps waste" means hypodermic needles, pen needles, intravenous needles, lancets, and other devices that are used to penetrate the skin for the delivery of medications derived from a household, including a multifamily residence or household.

(c) "IWMA Region" means the geographic area that includes the unincorporated area of San Luis Obispo County, California and the seven incorporated cities within San Luis Obispo County.

(d) "Retailer" means any entity, including but not limited to, a person or business, of whatever form of organization, which sells to the general public sharps in the IWMA Region to a consumer, including a manufacturer of sharps who sells sharps directly to a consumer.

(e) "Distributor" means a person who sells sharps to a retailer.

(f) "Sharps" means hypodermic needles, pen needles, intravenous needles, lancets, and other devices that are used to penetrate the skin for the delivery of medications.

Section 3. Sharps management

(a) By September 1, 2008, every retailer of sharps sold in this IWMA Region shall establish within the retail outlet a system for the acceptance and collection of home-generated sharps waste for proper disposal.

(b) Each system established by a retailer for the acceptance and collection of home-generated sharps waste during the retailer's normal hours of operation, for proper disposal shall, at a minimum, include all of the following elements:

(1) A convenient location within the retail establishment for the "take-back" from the consumer of home-generated sharps waste at no cost to that consumer.

(2) Appropriate signage, prominently displayed within 5 feet of any entrance to the retail establishment and easily visible to the consumer, indicating that the retail establishment accepts

and collects home-generated sharps waste from consumers.

(3) An appropriate receptacle or receptacles for the collection of home-generated sharps waste within the retail establishment.

(c) A retailer who is required to accept home-generated sharps waste shall at a minimum provide the following take back services:

(1) The take-back from the consumer of home-generated sharps waste that the retailer sold or previously sold to the consumer, at no cost to that consumer. In that event, the retailer may require proof of purchase of the prior sales. The retailer shall only be required to accept home-generated sharps waste in an amount not to exceed the amount previously sold to the consumer.

(2) The take-back of home-generated sharps waste from a consumer purchasing sharps from the retailer, at no cost to the consumer. In that event, the retailer shall only be required to accept home-generated sharps waste in an amount not to exceed the amount being purchased.

(3) The take-back from the consumer of home-generated sharps waste that the retailer did not sell or previously sell to the consumer, at no cost to that consumer. The retailer shall only be required to accept home-generated sharps waste in an amount not to exceed a 2 quart size sharps containers per week per consumer from any consumer who resides in the IWMA Region.

Section 4. Enforcement

(a) The IWMA may enforce the provisions of this Ordinance through a civil action for civil penalties in the amounts established herein, and any other civil remedy, including prohibitory and mandatory injunctive relief, filed in the Superior Court for the County of San Luis Obispo to compel and enforce the provisions herein against any retailer within San Luis Obispo County who sells sharps in violation of this Ordinance. In addition to any relief available to IWMA to enforce this Ordinance, the IWMA shall also be entitled to recover its reasonable attorneys' fees and costs incurred in enforcing this Ordinance.

(b) For any violation of this Ordinance, the IWMA may sue to recover civil penalties in the amount of $1,000.00 per day for every day on which a violation exists. For purposes of calculating the civil penalties to be established hereunder, each day on which the retailer fails to comply with the requirements of this Ordinance, after having received a written notice of violation issued by the IWMA, shall constitute a separate offense.

(c) In addition to the civil relief available to the IWMA set forth above, any violation of this Ordinance shall also constitute a misdemeanor punishable under the laws of the State of California. The District Attorney, the County Counsel, or any City Attorney shall be authorized to enforce the provisions of this Ordinance within their respective jurisdictions. In the event of such criminal enforcement, the following criminal penalties apply to violations of this Ordinance:

(1) Violation as Misdemeanor. Violations of the provisions of this Ordinance or failure to comply with any of its requirements shall constitute a misdemeanor.

(2) The San Luis Obispo County Sheriff's Department and/or any other police department or law enforcement agencies located within the IWMA's jurisdiction may issue a Notice to

Appear Citation for any misdemeanor pursuant to California Penal Code Section 853.6 for any violation of this Ordinance.

(3) Penalty for Misdemeanor. Any retailer found to be in violation of any provision of this Ordinance, or who fails to comply with any of its requirements, shall upon conviction thereof be punished by imprisonment in the county jail for not more than six months, or be fined not more than one thousand dollars ($1,000.00), or by both. Each day such violation continues shall be considered a separate offense.

(d) To the extent that the County of San Luis Obispo, the incorporated cities, and the districts within said County have adopted code enforcement ordinances applicable to their jurisdictions, this Ordinance shall be enforceable by said governmental entities under said ordinances as land-use or code-enforcement violations consistent with said ordinances.

Section 5. CEQA Findings

The Board of Directors of the IWMA finds that this Ordinance is exempt from the California Environmental Quality Act pursuant to CEQA Guidelines § 15061(b)(3) because "it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment." In addition, the Ordinance is subject to a Class 1 categorical exemption pursuant to CEQA Guidelines § 15301 in that the activities mandated by the ordinance will occur at existing retail establishments and, therefore, consist "of the operation, repair, maintenance, permitting, leasing, licensing or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.... The key consideration is whether the project involves negligible or no expansion of an existing use." The IWMA Manager is directed to prepare and file an appropriate notice of exemption.

Section 6. Severance Clause

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be unconstitutional, ineffective or in any manner in conflict with the laws of the United States, or the State of California, such decision shall not affect the validity of the remaining portions of this Ordinance. The Governing Board of the IWMA hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsection, sentence, clause or phrase be declared unconstitutional, ineffective, or in any manner in conflict with the laws of the United States or the State of California.

Section 7. Effect of Headings in Ordinance.

Title, division, part, chapter, article, and section headings contained herein do not in any manner

affect the scope, meaning, or intent of the provisions of this Ordinance.

This Ordinance was introduced and the title thereof read at the regular meeting of the IWMA Board of Directors on March 12, 2008 and further reading was waived by a majority vote of those Directors present.

This Ordinance shall take effect and be in full force on and after thirty (30) days from the date of its passage, and before the expiration of fifteen (15) days from the date of its passage it shall be published once with the names of the members of the Board of Directors voting for and against the same, said publication to be made in a newspaper of general circulation published in the County of San Luis Obispo.

On a motion by Director Gibson, seconded by Director Achadjian, the foregoing Ordinance was passed and adopted by the Board of Directors of the San Luis Obispo County Integrated Waste Authority, this (insert date), by the following vote:

AYES: Achadjian, Ashton, Beraud, Ehring, Gibson, Hamon, Mulholland, Patterson and Lenthall

NOES: None

ABSENT: Arnold, Brooks, DeMeritt, and Ovitt

Jerry Lenthall, President of the San Luis Obispo County Integrated Waste Management Authority

ATTEST:

Carolyn Goodrich, IWMA Board Secretary

ORDINANCE CODE PROVISION APPROVED
AS TO FORM AND CODIFICATION:

RAYMOND A. BIERING
IWMA Counsel

Date: 5/1-1/08

Appendix C

Hazardous Waste Environmental Impacts

R3

Appendix C

Hazardous Waste Impacts

As discussed earlier, hazardous wastes are substances that exhibit one or more of the following characteristics and by their nature produce negative environmental impacts if not properly managed:

- Toxicity – harmful or fatal when ingested or absorbed.
- Ignitability – creates fire under certain conditions or spontaneously combusts.
- Corrosivity – contains acids or bases that can corrode metal.
- Reactivity – is unstable under "normal" conditions and can cause explosions, toxic fumes or vapors when mixed with water.

Mismanagement of hazardous wastes, particularly improper disposal and accidental releases, can cause numerous threats to public health and the environment. Improperly managed or disposed wastes can lead to ground or surface water pollution, air pollution, fire and explosions, poisoning via the food chain, and poisonings to human beings through direct contact. Some of the effects of toxic and hazardous wastes on human health include cancer, birth defects, reproductive anomalies, brain and kidney damage and skin, lung and heart disease. [1]

A more detailed discussion of the environmental impacts associated with the following hazardous waste materials is provided below:

- ABOP Wastes
  - Antifreeze
  - Batteries
  - Oil
  - Paint
- Universal Wastes
  - Batteries
  - Pesticides
  - Mercury (Mercury-containing devices and Mercury-containing lighting wastes) and
  - Electronic Waste
- Lead
- Pharmaceuticals

[1] Albuquerque's Environmental Story; Educating for a Sustainable Community; Milo Myers, 2008.

Appendix C

ABOP Wastes

Antifreeze

Antifreeze can pollute groundwater, surface water and drinking water supplies if dumped, spilled or leaked, and is harmful to marine and aquatic life. While in an engine antifreeze can become contaminated with lead, fuel or other heavy metals to the point where it must be managed as a hazardous waste. There are two types of antifreeze. Antifreeze with ethylene glycol, a greenish-yellow, flammable, odorless, yet sweet tasting chemical, poses a serious health hazard to humans and animals if ingested. Ingestion in large enough quantities may cause death by crystallization in the kidneys and acidic chemicals released into the body.[2] Antifreeze with propylene glycol is less toxic, but often marketed as nontoxic.[3] Prolonged inhalation or ingestion can cause irritation and allergic reactions in humans.

Batteries

Batteries are comprised of heavy metals and other elements. Some of these toxic heavy metals include nickel cadmium, alkaline, mercury, nickel metal hydride and lead acid. According to the EPA, despite the fact that batteries make up less than 1% of municipal solid waste (MSW), they are responsible for a large portion of toxic heavy metals in MSW.[4] Although newer alkaline batteries contain less mercury than their predecessors, they are still made of metals and other toxins which contaminate the air and soil.

Batteries may produce the following potential problems or hazards:

- Pollute the lakes or streams as the metals vaporize into the air when burned;
- Contribute to heavy metals that potentially may leach from solid waste landfills;
- Expose the environment and water to lead and acid;
- Contain strong corrosive acids;
- May cause burns or danger to eyes and skin.

Batteries that end up in landfills and incinerators eventually leak into the environment and end up in the food chain, causing serious health risks to humans and animals.[5]

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[2] Department of Health and Human Services; ToxFAQs

[3] New York Sea Grant's Marine Pollution Prevention Web Site <http: //www.seagrant.sunysb.edu/marineabmp/section1/antifreeze.htm>

[4] Earth 911; Where to Recycle your Batteries.

[5] Earth 911; Why is battery recycling important.

Appendix C

There are many types of consumer batteries, from the lead-acid batteries we use in our cars to the little button batteries in our watches. There are household batteries like AA, AAA, C, D and 9-volt, some of them rechargeable, some not. But whatever type of battery, they all have chemicals inside them. Of course, chemicals are not all equally toxic. The three worst components of batteries are:

- Lead;
- Cadmium; and
- Mercury.

Other battery components like silver, zinc and nickel can also be problems, but less so. Sending any type of battery to the landfill or incinerator means the contents of the battery will ultimately end up getting into the soil, air, groundwater and/or service water, and thus eventually into the food chain and drinking-water supply.[6]

Oil [7]

Motor oil picks up a variety of contaminants during its use that pose significant risks to human health and the environment. Used oil can contain heavy metals such as cadmium, chromium and lead and may also contain arsenic and dioxins. Humans can be exposed to some or all of these chemicals by drinking water and eating food contaminated with used oil, by coming into contact with contaminated soil and by breathing in contaminated dust. The health effects from exposure to some of these chemicals are very serious, as they can be quickly absorbed through the skin, lungs and intestines and can accumulate to high levels in people's bodies. Short-term exposure to used oil can lead to irritation of the skin, eyes and respiratory system and potentially gastro-intestinal upsets. Long-term exposure can cause damage to the liver, brain, immune system, reproductive system and can cause cancer. Children may be especially sensitive to used oil and the contaminants it may contain.

Oil is also a pollutant: it takes only one liter of oil to contaminate one million liters of water (about half the size of an Olympic swimming pool), and a single automotive oil change produces four to five liters of used oil. Once released to the environment, the contaminants in used oil tend to build up in soils. They can then be absorbed by plants, animals, fish and shellfish, harming the health of these organisms. People can also be affected by eating these plants or animals. In water oil is a visible pollutant, floating as a scum on the surface. This oil scum can stop sunlight and oxygen from getting into the water, affecting fish and water plants.

[6] www.grinningplanet.com/2004/12-21/battery-recycling-article.htm

[7] Australian Government; Department of Environmental, Water, Heritage and the Arts; Fact Sheet: Used Oil – Health & Environmental Impacts.

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It can kill fish, frogs and other animals that breathe from the waters surface.

Paint

Paint can be divided into two groups: oil-based and water based (latex). Oil paints include enamels, varnishes, shellacs, lacquers, petroleum distillates and pigments. They contain solvents and may contain heavy metals that can damage the environment and endanger human health if not disposed of properly. Exposure to humans may contribute to respiratory problems, liver damage and kidney damage. Latex paints may be toxic if ingested[8] resulting in respiratory problems, muscle weakness, liver damage and kidney damage. Within poorly ventilated areas both paints can lead to irritation of the eyes, skin and lungs as well as headaches and nausea. Improper disposal of the paints causes damage to sewage treatment effectiveness and may contaminate otherwise recyclable materials in the waste stream.[9]

Universal Wastes

Batteries

See discussion under "ABOP Wastes" above

Pesticides[10]

Pesticides are poisons meant to kill unwanted living organisms. They include herbicides (an herbicide is used to kill unwanted plants), insecticides (an insecticide is a pesticide used against insects in all developmental forms), fungicides (fungicides are chemical compounds used to prevent the spread of fungi or plants in gardens and crops) and more. It has been estimated that 70-5 million pounds of over 300 different active pesticide ingredients are applied to our nation's lawns and gardens each year.

Pesticides can contaminate soil, water, turf and other vegetation. In addition to killing insects, rodents or weeds, pesticides can be toxic to a host of other organisms including humans, pets, livestock, wildlife including birds and fish, beneficial insects, and non-target plants. Insecticides are generally the most acutely toxic class of pesticides, but herbicides can also pose risks to non-target organisms. The Northwest Coalition for Alternatives to Pesticides (NCAP) estimates that the major use of pesticides (by

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[8] Colorado Department of Public Health and the Environment; Hazardous Materials and Waste Management Division; Disposal of Household Paint.

[9] CA Integrated Waste Management Board; *www.ciwmb.ca.gov/Publications*

[10] *Environmental Impact of Pesticides Commonly used on Urban Landscapes*; Northwest Coalition for Alternatives to Pesticides / NCAP.

volume) on school grounds, public parks and urban lawns is application of herbicides to kill weeds.

It is estimated that often less than 0.1 percent of an applied pesticide reaches the target pest, leaving 99.9% as an unintended pollutant in the environment, including soil, air and water or nearby vegetation. Pesticides can also move from the site of application via drifting, volatilization, leaching and runoff. Some commonly used pesticides may persist in soil from three to five years.

Pesticides can reach surface water through runoff from treated plants and soil. Contamination of water by pesticides is widespread. U.S. Geological Survey studies found pesticides in all samples from major rivers with mixed agricultural and urban land influences and 99% of samples from urban streams. Pesticides, including herbicides, can and do leach to contaminate ground water. According to the USGS at least 143 different pesticides and 21 transformation products have been found in the ground water with detections found in the ground water of more than 43 states.

Pesticides can also drift or volatilize from the treated area and contaminate air, soil and non-target plants. As much as 80-90% of an applied pesticide can volatilize within a few days of application, and studies consistently find pesticide residue in air.

Mercury

Waste mercury-containing devices are commonly generated by a wide variety of generator types including households, medical clinics, hospitals, the electronics industry, dairies, small businesses, pipeline monitoring companies, and other industrial operations. Such devices include mercury thermostats, thermometers, manometers, barometers, blood pressure cuffs, electrical switches and relays, gauges and flow regulators, pyrometers, thermocouples and vacuum pumps. Fluorescent lamps also contain mercury.

Improper disposal of mercury can impact water supplies or be released into the air as gas emissions. Mercury is among a group of pollutants that do not break down or go away. When deposited to the environment, mercury can be converted into methylmercury, which builds up in the tissues of fish, wildlife and humans. Mercury is a potential neurotoxin that interferes with the way nerve cells function and can cause damage to the brain, kidneys and lungs.[11] At high levels of exposure, methylmercury's harmful effects on

[11] Colorado Department of Public Health and the Environment; Compliance Bulletin Hazardous Waste; Management of Mercury-containing devices.

[11] Col

animals include reduced reproduction, slower growth and development, abnormal behavior, and death.[12]

The mercury contained in standard fluorescent lamp will contaminate 6,000 gallons of water beyond safe drinking levels. Even low-mercury lamps (there is no such thing as mercury free fluorescent lamp) will contaminate more than 1,000 gallons of water beyond safe drinking levels.[13]

Electronic Waste[14]

Due to the higher sales and shorter life spans of information technology (IT) equipment, electronic waste has become one of the world's fastest growing waste streams. In the United States, it is predicted that between 315 million and 680 million computers will become obsolete within the next few years. Moreover, the average electronic product contains a variety of hazardous materials, such as:

- Chlorinated plastics in cable wiring;
- Brominated flame retardants in circuit boards;
- Heavy metals like lead and cadmium in Cathode Ray Tube (CRT) monitors; and
- Mercury in Liquid Crystal Display (LCD) of flat panel monitors.

IT equipment contains chemicals that are known or probable teratogens[15], persistent bioaccumulative substances, carcinogens, reproductive toxins, endocrine disruptors, and mutagens. When electronic products are improperly disposed of in landfills and incinerators, they can release heavy metals and other hazardous substances that contaminate groundwater and pollute the air. It is estimated that 70% of the heavy metals (including mercury and cadmium) and 40% of the lead found in landfills comes from discarded electronic products.

Lead[16]

Lead is widely used for its malleability, density, low melting point, corrosion resistance, and opacity to x-rays and atomic radiation. It

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[12] Mercury in King County; Environmental Impacts.

[13] Earth 911; Balancing Environmental Impact – Household Lighting.

[14] Environmentally Preferable Procurement Guidelines for Information Technology (IT) Equipment in Health Care; Health Care Without Harm 2004.

[15] An agent, such as a virus, a drug, or radiation, that causes malformation of an embryo or fetus.

[16] Colorado Department of Public Health and the Environment; Compliance Bulletin Hazardous Waste; Lead-based Paint Abatement and Waste Management.

is widely used in storage batteries and has also been used to make solder, foils, coverings for cables and ammunition. Lead is also used as an ingredient in pigments for paints, enamels, ceramic glazes, glass, plastics and rubber. Despite its usefulness, lead is toxic to humans. The primary way lead enters the body are through inhalation of lead dust and ingestion of lead paint chips, dust or debris. Adults who are exposed to lead can suffer digestive problems, nerve disorders, memory or concentration problems, high blood pressure, hearing problems, muscle and joint pain and reproductive problems. Lead is even more dangerous to children than adults because children's growing bodies absorb lead more readily and their brains and nervous systems are more sensitive to the damaging effects of lead. If not detected early, children with high levels of lead in their bodies can suffer from learning disabilities, behavioral problems, slowed growth, hearing problems, headaches and brain damage. In young children, hand-to-mouth activities account for most lead exposure. The primary source of lead poisoning is the ingestion of paint in old deteriorating housing. However, lead also may be found in paints on toys and furniture, glazing on pottery and ceramics, lead pipes, lead solder in older plumbing fixtures, vinyl mini blinds, some clay pots and dishes, ammunition, stained glass products, dust on topsoil, factory and automotive fumes, as well as traditional medicines and cosmetics. It is also an integral component of certain industries such as battery recycling or manufacturing.

Pharmaceuticals[17]

Pharmaceuticals and Personal Care Products (PPCPs) are an emerging waste management issue. PPCPs can be introduced into the environment through many routes and are found where people or animals are treated with drugs and people use personal care products. PPCPs are found in any water body influenced by raw or treated sewage, including rivers, streams, ground water, costal marine environments and many drinking water sources. PPCPs have been identified in most places sampled.

Further research suggests that certain drugs may cause ecological harm. More research is needed, however, to determine the extent of ecological harm of pharmaceuticals and any role they may have in potential human health effects. To date, scientists have found no evidence of adverse human health effects from PPCPs in the environment.

Reasons for concern related to the improper disposal of PPCPs include:

- Large quantities of PPCPs can enter the environment after use by individuals or domestic animals;

[17] www.epa.gov/ppcp/faq.html

Appendix C

- Sewage systems are not equipped for PPCP removal. Currently, there are no municipal sewage treatment plants that are engineered specifically for PPCP removal or for other unregulated contaminants. Effective removal of PPCPs from treatment plants varies based on the type of chemical and on the individual sewage treatment facilities;
- The risks are uncertain. The risks posed to aquatic organisms, and to humans are unknown, largely because the concentrations are so low. While the major concerns have been the resistance to antibiotics and disruption of aquatic endocrine systems (the system of glands that produce hormones that help control the body's metabolic activity) by natural and synthetic sex steroids, many other PPCPs have unknown consequences. There are no known human health effects from such low-level exposures in drinking water, but special scenarios (one example being fetal exposure to low levels of medications that a mother would ordinarily be avoiding) require more investigation; and
- The number of PPCPs are growing. In addition to antibiotics and steroids, over 100 individual PPCPs have been identified (as of 2007) in environmental samples and drinking water.

Appendix D

Larimer County Household Hazardous Waste Facility and BHAPE Program Data

R3

Larimer County Solid Waste Department

2007

ANNUAL REPORT

Hazardous Waste Program Serves More Customers Than Ever

The Household Hazardous Waste program, begun in 1989, has over the years kept more than 21.3 million pounds of hazardous material out of the landfill. This is especially important since our landfill has no liner underneath like modern landfills do.

The total waste received through the program in 2007, however, decreased; compared with the previous year's 1,925,334 pounds of waste collected, only 1,875,077 pounds was brought in this year. Happily, though, customer participation skyrocketed, with about 400 more customers served this year in the residential program. This trend is an indication that residents of Larimer County are keeping hazardous waste from accumulating in their homes. The number of residents dropping off waste increased by nearly 600, while those picking up others' usable waste from our Drop 'n' Swap store decreased by 200. Still, the Drop 'n' Swap continues to save the program money on disposal costs by eliminating the need for disposal of about 9 percent (based on weight) of the total amount of waste received through the residential program.

A welcome addition to the Drop 'n' Swap is an educational poster created by hazardous waste technician Jeff Leleszi. The poster depicts what happens to the waste processed at our site for treatment or disposal, and it was made in response to the many questions we receive from users of the facility.

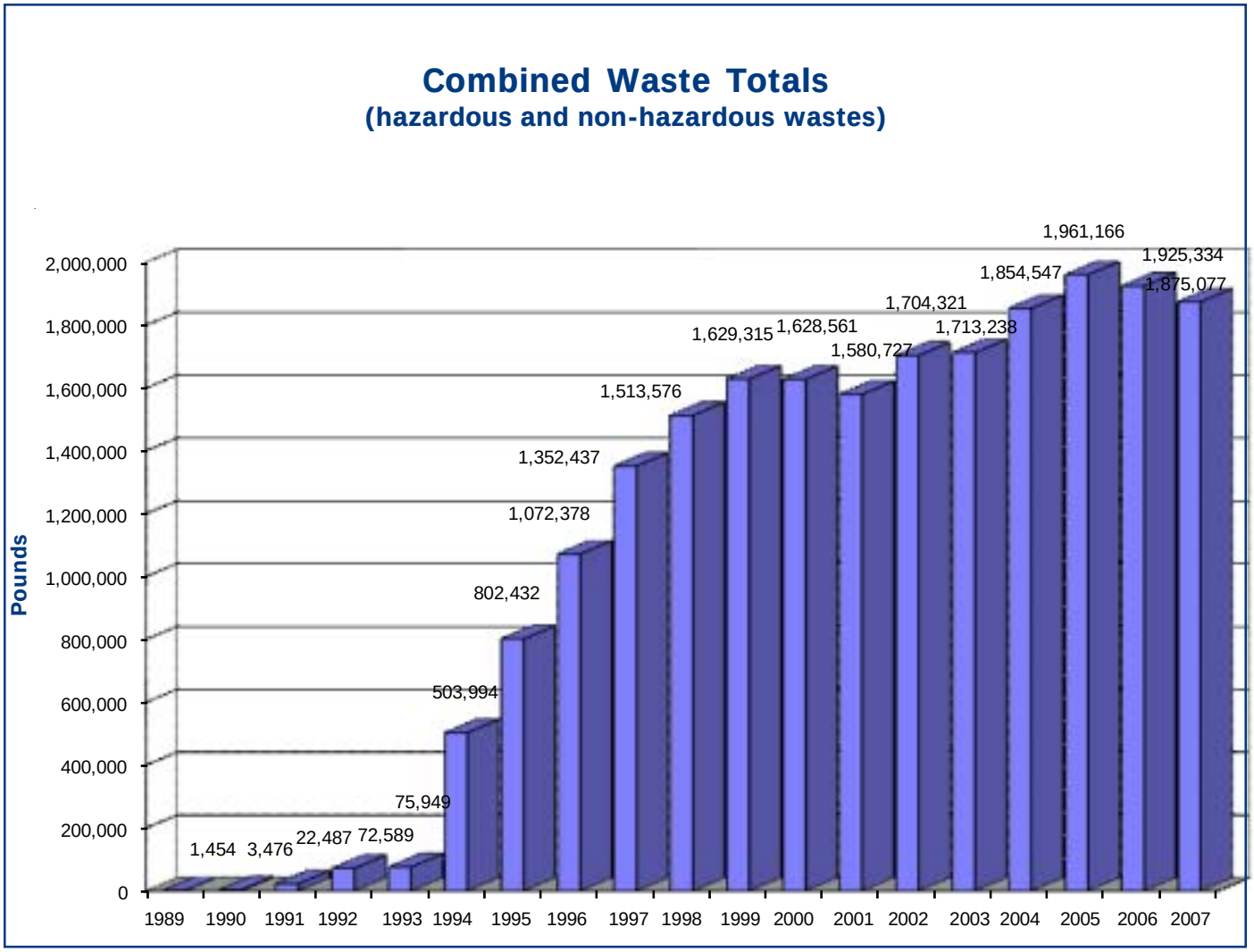
Aside from our permanent collection facility, the hazardous waste program provides a limited number of one-day rural on-site collection events each year. This year, we held events in Estes Park and Berthoud.

The June collection held in Estes Park was phenomenal, serving 350 residents, breaking the record for participation at any one-day event we've held. The incredible help provided by the Town of Estes Park employees made it so successful, and we applaud and appreciate the efforts of the Estes Park Utilities Department in making this day happen.

The Berthoud collection event, held in conjunction with a town clean-up day in May, was also very successful with 167 participants. A big thank you goes to the town administrator for working so hard to keep this event going from year to year for Berthoud area residents.

2008 Survey

The hazardous waste program will be conducting a customer survey to find ways to better serve county residents' and businesses' needs. If you'd like to participate in the survey, contact Linda Hayden, hazardous waste manager, at (970) 498-5771. Or simply give us your comments and suggestions anytime throughout the year. Customer input helps make this a better program for everyone.



Since opening in 1989, the hazardous waste program has kept 21.3 million pounds of hazardous and otherwise regulated waste out of the landfill. The program is subsidized by landfill revenues.

County Businesses Continue to BHAPE

The **B**usiness **H**azardous waste **A**ssistance **P**rogram and **E**ducation (BHAPE) was designed to provide an appropriate and feasible disposal option to qualified local businesses and organizations that operate in Larimer County. Many businesses in the county take advantage of the program, and we appreciate those who use this opportunity to properly dispose of their waste.

In 2007, the BHAPE program experienced 226 visits from 154 customers, 74 of which were first-time users of the program. Total hazardous waste collected through the business program for the year was 11,892 pounds (up from 9,663 pounds in 2006), with the non-hazardous waste total at 43,722 pounds (down from 46,609 pounds in 2006). Some liquid wastes, such as latex paint, are non-hazardous but still not accepted for disposal at the landfill.

The BHAPE program serves a variety of business types. Government agencies, including city, county and federal entities, are the largest group of customers. Construction companies, property management firms and laboratories also rank among the top groups dropping off waste through the program.

Appendix E

Local Options for Managing Household Hazardous Waste

R3

Appendix E
CITY OF FORT COLLINS
LOCAL OPTIONS FOR MANAGING
HOUSEHOLD HAZARDOUS WASTE

Management Options		Days / Hours	Household Hazardous Waste (Multiple Material Types)	ABOP Materials			
				Antifreeze	Car Batteries	Oil	Paint
FACILITIES							
Larimer County HHW Facility		**9:00 am - 4:00 pm Tue, Thu, Fri, Sat**	**Adhesives; Fertilizers; Fire Extinguisher; Fungicides, Gas, Herbicides; Household Cleaners; Insecticides; Paint; Paint Thinners; Photographic Chemicals; Pool Chemicals, Solvents, Propane Tanks; Brake Fluid; Transmission Fluid**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**
Larimer County Landfill - Recycling Programs		**8:00 am - 4:30 pm Mon - Sat 9:00 am - 4:00 pm Sun**			**Car Batteries - Anytime Landfill is Open**	**Oil - Anytime Landfill is Open**	**Paint - Anytime Landfill is Open**
COLLECTION EVENTS							
Temporary Collection Events							
Temporary Comprehensive HHW Collection Events		**Option not Currently Available**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
Temporary Targeted Material HHW Collection Events		**Option not Currently Available**					
Scheduled Collection Programs							
Curbside Collection	As part of Regularly Scheduled Curbside Recycling Programs	**Option not Currently Available**				**Potential Targeted Material**	**Potential Targeted Material**
	On-Call Collection (Private Contractor)	**Option not Currently Available**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
	On-Call Collection (Municipal Program)	**Option not Currently Available**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
BUSINESSES AND IN-STORE RETURN PROGRAMS							
Ace Hardware Compact Fluorescent Lights / Mercury Thermostat Collection		**Regular Business Hours**					
Various Recycling Businesses (Refer to: www.fcgov.com/recycling/centers.php?ID=54)		**Regular Business Hours**		**Houska Automotive (no others)**	**Sams Club; Checker Auto Parts; Advance Auto Parts; Napa Auto Parts**	**Checker Auto Parts; Advance Auto Parts; Autozone**	**Habitat for Humanity Home Supply Store 4001 Taft Hill Road**
RETURN-BY-MAIL PROGRAMS							
Various Programs		**NA**					
EPR PROGRAMS							
Rechargeable Battery Recycling Corp. (RBRC)		**Regular Business Hours**					
Thermostat Recycling Program (TRP)		**Regular Business Hours**					

Appendix E
CITY OF FORT COLLINS
LOCAL OPTIONS FOR MANAGING
HOUSEHOLD HAZARDOUS WASTE

Management Options		Universal Waste						
		Pesticides	Fluorescent Bulbs	Alkaline Batteries	Rechargeable Batteries	Cell Phones	Mercury Thermostats	Mercury Thermometers
FACILITIES								
Larimer County HHW Facility		**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**	**Larimer County Landfill HHW Collection Facility**
Larimer County Landfill - Recycling Programs								
COLLECTION EVENTS								
Temporary Collection Events								
Temporary Comprehensive HHW Collection Events		**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
Temporary Targeted Material HHW Collection Events								**Target Material**
Scheduled Collection Programs								
Curbside Collection	As part of Regularly Scheduled Curbside Recycling Programs			**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**		
	On-Call Collection (Private Contractor)	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
	On-Call Collection (Municipal Program)	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
BUSINESSES AND IN-STORE RETURN PROGRAMS								
Ace Hardware Compact Fluorescent Lights / Mercury Thermostat Collection			**Ace Hardware (Compact Fluorescents)**				**Ace Hardware**	
Various Recycling Businesses (Refer to: www.fcgov.com/recycling/centers.php?ID=54)			**Drake Hardware and Lumber; The Light Center (Compact Fluorescents)**	**Best Buy; Office Depot; RadioShack**	**Best Buy; Office Depot; RadioShack;**	**The Body Shop; Sprint PCS; Best Buy; Office Depot**		
RETURN-BY-MAIL PROGRAMS								
Various Programs			**Waste Management Inc.; Veolia Envir. Services (Compact Fluorescent Bulbs)**	**Green Box (Alkaline Batteries); Waste Management Inc.**	**Waste Management Inc.**			
EPR PROGRAMS								
Rechargeable Battery Recycling Corp. (RBRC)					**AT&T; Batteries Plus; Circuit City; Home Depot, Lowes; Office Depot, Office Max; Radio Shack; Sears; Staples; Target**			
Thermostat Recycling Program (TRP)							**Charles D. Jones; Gustave A. Larson Co.; Poudre Valley Air**	

Appendix E
CITY OF FORT COLLINS
LOCAL OPTIONS FOR MANAGING HOUSEHOLD HAZARDOUS WASTE

Management Options		Electronic Waste	Sharps	Pharmaceutical Waste		Smoke Alarms
				Pharmaceuticals	Personal Care Products	
FACILITIES						
Larimer County HHW Facility			**Larimer County Landfill HHW Collection Facility**	**Pharmaceuticals (Non-Narcotics Only)**	**Larimer County Landfill HHW Collection Facility**	
Larimer County Landfill - Recycling Programs						
COLLECTION EVENTS						
Temporary Collection Events						
Temporary Comprehensive HHW Collection Events		**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
Temporary Targeted Material HHW Collection Events		**City Formerly Held Temporary E-Waste Collection Events**		**Boulder County 200 people; 270 lbs of medication (Sept 8, 2007)**		
Scheduled Collection Programs						
Curbside Collection	As part of Regularly Scheduled Curbside Recycling Programs					
	On-Call Collection (Private Contractor)	**Gallegos Sanitation; RAM Disposal (Fee Based Service)**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
	On-Call Collection (Municipal Program)	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**	**Potential Targeted Material**
BUSINESSES AND IN-STORE RETURN PROGRAMS						
Ace Hardware Compact Fluorescent Lights / Mercury Thermostat Collection						
Various Recycling Businesses (Refer to: www.fcgov.com/recycling/centers.php?ID=54)		**Batteries Plus / G&S Mt. Recyclers; Best Buy; Office Depot; ARC Thrift Store; Staples; Recycle America; Others (Free & Fee Based Services)**		**Good Day Pharmacy (Non-Narcotics Only)**		
RETURN-BY-MAIL PROGRAMS						
Various Programs		**Printer Cartridges (Hewlett Packard)** **Computers (Dell; Samsung; Sony; LG Electronics); Apple Computers**	**Biomedical Waste Solutions; Stericycle; Waste Management Inc.; Veolia Environmental Services**			
EPR PROGRAMS						
Rechargeable Battery Recycling Corp. (RBRC)						
Thermostat Recycling Program (TRP)						

Appendix F

Information on Extended Producer Responsibility and Take-Back Ordinances

R3

Appendix F

Extended Producer Responsibility and Take-Back Ordinances

National EPR Efforts

While there is no EPR mandated policy at the national level in the United States there has been considerable discussion at the EPA about designing such policies for electronics and agricultural pesticide containers. In fact, Congressman Mike Thompson (California) is distributing a draft EPR bill for E-waste for comment from those in the EPR community and may submit a bill in the 2009 session.

EPA submitted a draft rule for "Pesticide Container Recycling" to the Office of Management and Budget (OMB) On April 1, 2008. OBM returned the draft proposed rule to EPA on July 3, 2008 for further consideration and analysis. The EPA is currently considering information provided by the OBM based on its review and will determine next steps related to this particular rulemaking effort.

This effort is a result of the agricultural pesticide producers voluntarily joining together in 1992 to start a Third Party Organization (TPO) called the **Ag Container Recycling Council (ACRC)** with the goal of collecting and recycling pesticide containers. The ACRC asked the EPA to adopt regulations and make participation mandatory for all producers of agricultural pesticides. ACRC was voluntarily formed by 40 of 80 producers which resulted in half of the manufacturers paying to recycle the containers produced from all the manufacturers. This is called the "free-rider" problem and is a risk to all voluntary participation programs because of the inequity in having a few manufacturers pay to recycle all manufacturers' products. What makes the ACRC situation interesting is that it is the only case where the manufacturers of a product are requesting EPA to make their recycling program mandatory.

In general, manufacturers favor national policies and not state-by-state regulatory approaches. In the summer of 2006 there was draft Federal legislative language circulating for mercury controls that contained language preempting any state or local agency from requiring product manufacturers to finance retail take-back and recycling programs. The language was dropped and HR 6261 was introduced in the fall of 2006, without the pre-emption, although that legislation was not enacted. Nevertheless, the original pre-emption language came to the attention of elected officials of the **National Association of Counties (NACo) Environment and Land Use Steering Committee,** which adopted resolutions in support of:

R3

- Expended Producer Responsibility Framework Approach;
- Mercury Fluorescent Lamp Recycling;
- Electronic Waste Recycling; and
- Paint Reuse and Recycling.

Another national voluntary EPR program was started by the battery manufacturers in 1996 and was titled the **Rechargeable Battery Recycling Corporation (RBRC).** RBRC operates in the US and Canada and started collecting only rechargeable batteries and over time has expanded the program to also collect cell phones. Currently, RBRC has 90% of the manufacturers participating in both countries and have battery collection centers at 30,000 retailers and businesses. So far, RBRC seems to be maintaining manufacturer participation and has seen significant increases in the pounds of batteries collected (5.6 million pounds in 2006). However, there are far fewer battery collection points than sales points for batteries, so convenience to the consumer is still limited.

Another voluntary EPR program was announced in June of 2006 by **Dell Computer** that promotes a voluntary take-back and recycling program for all Dell branded products if the consumer purchases a replacement product. Approximately 55 million pounds of computer material has been collected in North and South America to date. Other manufacturers, including Samsung, Sony and LG Electronics have all started taking back their E-waste. A list of computer take-back programs can be found at the Computer Take-Back Campaign's website at: *http://www.computertakeback.com/corporate_accountability/company_takeback.cfm*

The most recent voluntary EPR effort is the **National Vehicle Mercury Switch Recovery Program**, the objective of which is to remove mercury-containing switches from scrap vehicles. The program became effective in August of 2006 and is promoted by EPA. The vehicle manufacturers are paying into a $4 million dollar implementation fund that will encourage the return of the switches by vehicle dismantlers. This program is in its infancy so no conclusions can be drawn on its effectiveness.

Another voluntary national EPR organization is the **Thermostat Recycling Corporation (TRC)**, which started in 1998 and actively promotes the collection and recycling of mercury thermostats from older Heating Ventilation and Air Conditioning (HVAC) systems. Collections occur at the HVAC wholesalers where HVAC contractors return older units for recycling. For a one-time $25 charge wholesalers receive a pre-paid shipping box to return the mercury thermostats collected from the contractors. When a box is returned to TRC, another one is automatically sent to the wholesaler. In addition, the TRC board recently voted to add HHW

collection centers to its program in 2007. Several states including Vermont and California have bills awaiting signature to make all producers of mercury thermostats participate in a program like TRC. Honeywell Inc. supported the California bill (AB 2347) in the 2008 legislative session to "level the playing field" and make companies that sold thermostats participate in the take-back program.

Statewide EPR Policies

Several states have chosen to mandate EPR programs for various products:

- CA Auto Lead-Acid Batteries Take-Back (1989)
- CA Cell Phone Take-Back (2004)
- CA Rechargeable Battery Take-Back (2005)
- MA Mercury Containing Products - Producer Pays (2006)
- MD Computer Recycling Producer Take-Back (2005)
- ME E-waste Recycling Act -Producer Pays (2005)
- ME Mercury Products Law – Producer Take-Back (2006)
- WA E-waste Recycling Bill – Producer Take-Back (2006)

In addition, there are three pieces of take-back legislation in California this session awaiting signature by the Governor: AB 2347 mercury Thermostat recycling Act, AB 1860 for recalled products take-back, and AB 1879 which would allow DTSC to pass regulations that would make producers take-back their products.

Local EPR / Take-Back Policies

Local governments have also passed EPR and take-back policies relating to E-Waste and Universal Waste, including those listed below.

It is important to note that ***EPR is NOT mandatory retailer take-back programs***, which do not engage the producer. Take-back programs are a local response to lack of engagement by producers to help collect products. Through mandatory take-back programs jurisdictions can place pressure on the retailers to pressure the producers to change product deign and packaging and to start EPR collection programs.

- Dane County, Wisconsin: Ordinance passed in January 1990 prohibiting any retailer from selling tires, lead acid batteries, mercury thermostats or fluorescent lamps without also informing the public that they are banned from landfill disposal and offering to accept these products back for reuse and recycling.

Appendix F

- Central Contra Costa County Solid Waste Authority, California: Resolution adopted in March 2002 urging the state to require E-waste take-back legislation that encourages green design.
- City of Madison, Wisconsin: Ordinance passed December 2003 requiring any retailer that sells fluorescent bulbs or other lamps containing mercury to notify the public that they cannot be disposed of in landfills and requiring retailers to offer to accept those items for a reasonable fee.
- San Francisco, California: Resolution passed February 2006 urging statewide EPR legislation targeted at U-waste and other hazardous products and packaging and directing City staff to develop producer responsibility policies for City procurement.
- Suffolk County, New York: Resolution 1545 passed unanimously September 5, 2006 creating a purchasing policy that will require County agencies to seek out and do business only with vendors that take-back used electronics and recycle them in an environmentally sound manner.
- City of Morgan Hill, California: Resolution passed September 20, 2006 supporting statewide EPR policies and stating that if the state does not pass effective legislation within the next 18 months, or if the industry does not implement take-back, the City will consider requiring local retailers to take-back universal wastes.
- San Luis Obispo County, California: Ordinance passed March 12, 2008 requiring every retailer of household batteries or fluorescent tubes to accept, collect and dispose of those materials at no cost to the consumer.
- San Luis Obispo County, California: Ordinance passed May 14, 2008 requiring every retailer of sharps take-back from the consumer of home-generated sharps waste that the retailer previously sold to the consumer at no cost to the consumer.

R3

Appendix G

Comparative Matrix of Household Hazardous Waste Facility and Program Management Options

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Appendix G
HOUSEHOLD HAZARDOUS WASTE
FACILITY AND PROGRAM MANAGEMENT OPTIONS
COMPARATIVE MATRIX

(Ratings are as Compared to Other Options)

Management Options	Convenience	Overall Cost to City	Diversion Potential	Cost / lb / Diverted [1]	Overall Assessment	Reference Jurisdictions
FACILITIES						
Permanent In-City HHW Facility (PHHWCF)	**MEDIUM**	**HIGH**	**HIGH** (Targets most HW material types)	**$0.30** (not including capital cost)	**Duplicates County PHHWCF Services & Existing Voluntary Take-Back Programs but increases convenience. May be most effective if CESQG capacity provided. May result in shift of materials from County to City facility + additional diversion.**	**Larimer County (CESQG); Boulder County**
Limited Material In-City HHW Facility	**MEDIUM**	**LOW- MEDIUM** (Depending on new or existing site and facility design)	**HIGH** (For Specific Materials Targeted)	**< $0.30** (not including capital cost)	**Duplicates County PHHWCF Services & Existing Voluntary Take-Back Programs but increases convenience. May result in shift of materials from County to City facility + additional diversion**	**Loveland** (Motor oil, Batteries, E-waste)**; Broomfield** (Oil only)**; Clear Creek** (Oil & Car Batteries)
COLLECTION PROGRAMS						
Temporary HHW Collection Events	**LOW**	**MEDIUM** ($10,000+ / event) (+/- $50 / Participant)	**MEDIUM** (High per participant: 50 - 100 lbs/participant)	**$0.70**	**May be most effective targeting specific materials (e.g. mercury thermometers, E-waste events, chemical events, etc.)**	**Douglas County; Durango; Englewood; La Plata; Littleton; Adams County**
Curbside Collection — **As part of Regularly Scheduled Curbside Recycling Programs**	**HIGH**	**LOW**	**LOW - MED** (for targeted materials)	**$0.10**	**Very convenient, but very limited local experience. Anticipate hauler concern and potential resistance.**	**100+ Used Motor Oil Programs Nationally**
Curbside Collection — **On-Call Collection (Municipal or Private Contractor)**	**HIGH**	**HIGH** ($100 - $125 / Pickup)	**MEDIUM** (High per participant: 50 - 100 lbs/participant)	**$1.00 - $1.50**	**High costs but high convenience. This service may be most effective as an option for elderly and disabled customers.**	**Aurora, Cherry Hills, Denver, Greenwood Village, Longmont[2] and Westminster**
IN-STORE RETURN PROGRAMS						
EPR / Take-Back Programs	**MEDIUM**	**NONE - LOW** (Depending on Level of Support)	**MED - HIGH** (for targeted materials)	**NONE - LOW** (Depending on Level of Support)	**Provides opportunity for long-term solution through EPR legislative action.**	**Not jurisdiction specific**
MAIL-IN PROGRAMS						
Mail-In Programs	**MEDIUM**	**NONE - LOW** (Depending on Level of Support)	**LOW** (varies by material type)	**NONE - LOW** (Depending on Level of Support)	**Likely to Have Limited Role**	**Not jurisdiction specific**

(1) Costs are estimates based on available quantitative and qualitative data for purposes of providing relative cost comparison of options.

(2) The City of Longmont collects used motor oil and car batteries through an on-call collection program that is integrated into their Cart Repair operation (i.e., cart repair staff collect the materials as part of their job).

Appendix H

Temporary Collection Event Case Studies

Door-to-Door HHW Pickup Program Case Studies

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Appendix H

TEMPORARY EVENT CASE STUDIES

City of Longmont, CO

The City of Longmont puts on five (5) E-waste events per year in addition to offering residents the option of using the Boulder drop-off facility. They usually spend $20,000 per year on the events. Waste collected from the events is then transported to the Boulder drop-off facility. The events serve as a more conveniently located option for residents.

Boulder County, CO

Boulder County has its own drop-off facility for hazardous waste materials. Boulder staff also help host temporary events in various cities that piggy-back in use of the Boulder drop-off facility. The County is partnered with the private company Clean Harbors that safely ships the materials collected from the various events to their facility. Clean Harbor is a private company that specializes in handling of hazardous waste materials. Cities are back-charged depending on volume and disposal costs.

City of Broomfield, CO

The City of Broomfield cooperates with the Boulder Hauler and staff to coordinate two collection events per year. They use an appointment system with 250 slots for chemical hazardous waste and 250 slots for E-waste. The events cost between $10,000 and $14,000 each to put on. Charge is determined by volume of waste. The cost per participant is approximately $35. Participation excludes CESQGs and proof of residency within the jurisdiction is required for households.

City of Durango, CO

The City of Durango coordinates with La Plata County and splits costs 50/50 on an annual chemical waste event. CESQGs have been allowed to participate the past 2 years. Each participant is requested to donate $10 which usually results in costs of chemical events being offset slightly with total cost dropping from $78,600 to about $70,000. The hauler Envirosolve participates in the chemical event and about 600 users usually participate. Between 14,000 and 18,000 gallons of chemical hazardous waste are collected each event.

Durango also joins the San Juan Basin Area Recycling Association to put on bi-annual E-waste events. The events average 400 users and 67,000 lbs are collected.

City of Glenwood Springs

Glenwood Springs puts on one collection event in conjunction with Clean Harbors Company. Hazardous waste collected at the event is disposed of by Clean Harbors. The cost of each event has usually been $20,000 with 100 participants. In 2007 the City decided to spend $45,000 to get the event more publicity which resulted in surge to 300 household participants.

Appendix H

DOOR-TO-DOOR CASE STUDIES

Curbside Inc. - *Various HHW Materials*

Various cities offer door-to-door collection of HHW items through a contract with a private company. In Colorado, Curbside Inc. provides door-to-door HHW collection to several cities, towns, and counties including Aurora, Cherry Hills, Denver, Greenwood Village, and Westminster. Curbside Inc. is a hazardous waste company that specializes in providing HHW collection programs to cities throughout the United States, including door-to-door programs, temporary events, and operating permanent HHW facilities. The funding for the programs operated by Curbside Inc. are determined by the contracting agency. The costs to residents may be no cost or the resident may be required to pay a "co-pay." Curbside Inc. provide door-to-door at no cost to residents in Denver, residents of Gilpin County pay a $5.00 co-pay, and residents of Greenwood Village pay a $20 co-pay. The fees to residents will depend on the arrangement between the company and the municipality.

City of Longmont, Colorado – *Used Motor Oil and Automotive Batteries*

In addition to a free-of-charge drop-off site at the Public Works Operations yard, the City of Longmont offers free collection of used motor oil and automotive batteries in conjunction with regularly scheduled trash days. Residents must call in at least a day before their scheduled trash day to alert Team Longmont of their intention to set used motor oil or automotive batteries out curbside.

City of Roseville, California - *Various HHW Materials*

The City of Roseville operates a door-to-door HHW collection program at no out-of-pocket cost to the residents. The program collects batteries, light bulbs, electronics, mercury thermometers, electronic items, used motor oil, oil filters, and cooking oils and grease. Residents call the City to set up an appointment. City crews collect the material in a small truck and deliver the items to the Regional Authority's Permanent Household Hazardous Waste Collection Facility (PHHWCF). Residents with other HHW items including chemicals, pesticides, acids, flammables, or needles must take those items to the PHHWF located at the transfer station.

City of Folsom, California - *Various HHW Materials*

The City of Folsom provides two types of door-to-door HHW collection programs:

- Weekly collection of HHW items that are recyclable including anti-freeze, batteries, oils, paints, fluorescent lights, propane tanks, and electronics, and
- Monthly collection of other non-recyclable HHW items including chemicals, poisons, acids, flammable materials, and pool chemicals.

Both programs require residents to call the City to schedule an appointment. The services are provided at no out-of-pocket cost to the residents. City crews collect material in a small truck and deliver the items to a local PHHWCF. In 2007, the City of Folsom was awarded the North American Hazardous Materials Management Associations, Program Excellence Award.

City of San Francisco, California – *Various HHW Materials*

The City of San Francisco's hauler provides a door-to-door household hazardous waste pick-up service to its residents. It is separate from regular trash collection. The service is free and requires an appointment to be scheduled ahead of time for a Thursday, Friday or Saturday morning with SF Recycling & Disposal. Priority is given to elderly and disabled residents. The program is operated by the hauler who owns the destination facility of the hazardous materials. Materials accepted include all paint related materials, small propane containers, CFLs, chemical cleaners, motor oil, antifreeze, automotive/household batteries, aerosol cans and pesticides.

City of San Jose, California – *Motor Oil*

The City of San Jose offers a free curbside collection of used motor oil as part of normal trash collection. Free oil jugs are provided to customers and upon collection of filled oil jugs, drivers leave up to four replacement jugs next to the cart for future used motor oil collection.

Marion County, Oregon – *Used Motor Oil, Batteries and Latex Paint*

The County of Marion's eight franchised haulers all collect used motor oil, batteries, glass and latex paint. The materials are all recycled, except for the latex paint which is reused by the Marion County Public Works department. Residents are allowed to leave up to two gallons of paint at the curb, which is collected and then stored at each haulers' main office. Every two months, the Marion County Juvenile Department's Alternative Program picks up the paint from the haulers' main offices and paint stores and mixes all the reusable paint into giant vats where they are mixed into grayish paint, thus giving the program the name "Paint the Town Gray". The police and sheriffs department then distribute the paint free-of-charge to property owners who have been victimized by graffiti. Paint at the incorporated Portland Metro is even sorted by color and sold at discounted prices to willing buyers.

City of Irvine, California – *Batteries and CFLs*

The City of Irvine permits residents to dispose of batteries and compact fluorescent tubes (CFLs) as part of the bulky item collection program. Pickups are not part of regularly scheduled trash or recycling collections, and must be scheduled ahead of time with the franchised hauler Waste Management. CFLs must be packaged in the original box or another protective sealed container to prevent breakage.

City of Daly City, California – *Used Motor Oil, Batteries and CFLs*

Allied Waste Daly City collects used motor oil, batteries, and CFLs as part of normal curbside collection at no additional charge. Motor oil must be place next to the recycling cart in a labeled container. Batteries and CFLs must be sealed in a clear plastic bag and placed on top of the recycling cart.

County of San Bernardino, California – *CESQG Waste Collection*

The County of San Bernardino's entire HHW program is under the auspices of the Fire Department. They handle temporary events and other HHW duties, but they also provide a CESQG service as a sub-program. Among other things, the program is essentially a mobile hazardous waste pick-up disposal service offered at cheap rates to CESQGs. It is a fee based program based on staff time and disposal. A total of 279 businesses

participated during fiscal year 2007/2008 the service diverting over 94,000 pounds of hazardous waste. The fire department handles most hazardous waste including E-waste, anti-freeze, latex paint, CFLs and propane cylinders. Marketing of the program is also partnered with other County departments involving hazardous waste inspectors, code enforcement officers, and restaurant inspectors.