

# E-rase Your E-waste

Electronic Recycling Event

July 29<sup>th</sup>, 2006

## Missoula



## Final Report

Prepared by: Sandra Boggs  
Recycling and Marketing Development Specialist  
Business and Community Assistance Program  
Montana Department of Environmental Quality

P.O. Box 200901  
Helena, MT 59620-0901  
406-841-5217 phone

## **I. Background**

The Missoula E-rase Your E-waste electronics recycling event was carried out as part of the Department of Environmental Quality's (DEQ) Rural Electronic Waste Recycling Program. This program was initiated after a request by Senator Dan Weinberg of Whitefish to organize an electronic waste collection event in the Columbia Falls and Whitefish area of Flathead Valley. DEQ responded with plans to offer a series of community electronic waste collection events as pilot projects in the Flathead, Missoula, and Helena area.

Upon contact from other interested communities and organizations, the three pilot projects grew into the Montana Rural Electronic Waste Recycling Program and events in Sydney, Bozeman and Butte were added. In addition, the Department wishes to hold pilot projects in the more rural areas of Eastern Montana and has approached several communities about potential events.

Events held to date include:

Whitefish CollElectronics Event, May 26 – 27, 2006;  
Kalispell E-rase Your E-waste Event, July 15, 2006;  
Missoula E-rase Your E-waste Event, July 29, 2006

The DEQ has joined the EPA Plug-In to eCycling Program to maximize partnerships available for these pilot projects while the department works to establish a sustainable e-waste recycling program for Montana. Plug-In To eCycling is a consumer electronics campaign working to increase the number of electronic devices collected and safely recycled in the United States. Plug-In To eCycling focuses on three major areas:

- Providing the public with information about electronics recycling and increasing opportunities to safely recycle old electronics.
- Facilitating partnerships with communities, electronics manufacturers, and retailers to promote shared responsibility for safe electronics recycling.
- Establishing pilot projects to test innovative approaches to safe electronics recycling.

Partnership with the EPA Plug-In program has facilitated discussions with national retailers and electronics manufacturers regarding their involvement in Montana's pilot projects. Montana is the first Rocky Mountain State to work with them and is setting an example in doing so.

Missoula was the first Montana event to be sponsored by seven of the original equipment manufacturers: JVC, Lexmark, Panasonic, Phillips, Sharp, Sony, and Toshiba. Each company provided \$300 in cash to DEQ for use to promote the event and educate the public regarding the need for electronics recycling. In addition, the manufacturers each agreed to pay for the costs of recycling their brand name products. Due to the nature of the collection and lack of any way to predict the amount of brand name products to be returned, an inventory of the equipment collected was provided to the manufacturers after the event. Toshiba entered into an agreement directly with Inland ReTech and was billed by Inland ReTech, with the reimbursement going directly to the recycler. The other manufacturers entered into agreements with DEQ, and DEQ provided the inventory of their name brand products and requested reimbursement for the costs. Upon receipt of those funds, a check is then sent from DEQ to Inland ReTech to reimburse the recycling costs. Inland ReTech agreed to lower the recycling fees charged to the public by \$.50 to \$1.00 in return for the successful partnering with these original equipment manufacturers. Although, the public only benefited slightly from the manufacturers sponsorships, their involvement is key to DEQ's Rural Electronic Waste Recycling Program.

Best Buy sponsored the event by providing \$500 for advertising the event in local newspapers. Best Buy is also planning to be involved in a Billings event which will take place in Spring, 2007. Through partnerships and sponsorships such as these, Montana can work to establish a strong continuous program. These partnerships were made possible through the EPA Plug-In to eCycling program.

## **II. Summary**

### *Event Partners*

The following businesses and organizations partnered with DEQ to conduct this pilot project as a public-private partnership.

- Inland ReTech Recycling, Spokane, WA
- Allied Wastes Services of North America, LLC, Missoula
- Rocky Mountain Recycling, Missoula
- Women's Voices for the Earth
- Missoula Valley Recycling, Missoula
- Best Buy Company, Inc.
- Original equipment manufacturers: JVC, Lexmark, Panasonic, Phillips, Sharp, Sony, Toshiba

### *Event Supporters*

- Albertson's
- McKenzie River Pizza
- Quizno's

### *Collection Event Focus Area*

The event was advertised and available to anyone in Missoula County, or beyond. There was no limit placed on participation.

### *Hauler/Recycler*

Inland ReTech is an electronics recycling firm located in Spokane, Washington. Inland ReTech is planning to open a warehouse in Missoula this year, and/or partnering with a local nonprofit or business that will serve as a collection point for them. This was the third e-waste event for Inland ReTech in Montana.

Inland ReTech agreed to a public-private partnership that enabled the costs for recycling electronics to be paid directly to Inland ReTech by participants. Having a public-private partnership negated any need by the state to take possession of the computers at any point. It also avoided the need for a Request for Bids on supplying services, as the state did not receive any services.

DEQ staff visited the Inland ReTech facility July 5, 2005, and a completed Federal Electronics Challenge (FEC) audit confirms that Inland is a reputable electronics recycler that recycles 95% of the materials received.

### *Advertising and Outreach*

The following venues for advertising and outreach were used:

- a. Advertisements purchased in The Missoulian and The Missoula Independent newspapers.
- b. Press releases sent to all area local newspapers.
- c. Short "news brief" on the event in the Thursday July 27 edition of the Missoulian.
- d. Public Service Announcements (PSAs) sent to all television and radio stations.
- e. Posters distributed by Women's Voices for the Earth, and Mark Nelson, Lake County. WVE placed posters in downtown businesses (storefront windows) and electronics stores.

- f. WVE sent event information to the following listserves: Women's Voices for the Earth; Missoula Community News; and Sustainable Business Council of Missoula Univ. Of MT Environmental Studies Department Newslite.
- g. Websites: Women's Voices for the Earth website and NewWest.net Missoula events calendar.
- h. DEQ website included a poster, prices and details. Copies are included as part of the Appendix.

#### *Volunteer Recruitment and In-kind Donations/Contributions*

Kaitlyn Selser, DEQ intern, assisted with organizing the volunteers. Erin Thompson of Women's Voices for the Earth (WVE) arranged for WVE member volunteers and community service volunteers. Allied Waste, Missoula Valley Recycling, and DEQ staff all worked throughout the event.

The partnership with Allied Wastes proved to be important for a well-run event. Allied provided the location, as well as the pallets, forklift and forklift operator. Allied also provided coolers and ice for the drinks, in addition to purchasing a sun screen to shade the volunteers. Rocky Mountain Recycling provided gaylord boxes for the collection. Erin Thompson of Women's Voices for the Earth (WVE) arranged for community service volunteers, distributed posters advertising the event and provided labor. Partnering with WVE provided valuable outreach opportunities and their assistance was greatly appreciated. Missoula Valley Recycling provided volunteers, advertised the event on their website, and announced the event in their client newsletter. Partnering with local groups has always proven to be important for the success of these pilot projects.

The Department of Environmental Quality paid for newspaper advertisements in The Missoulian and The Missoula Independent newspapers. DEQ also provided press releases and public service announcements to media outlets. There was a short "news brief" regarding the event in the July 27th edition of the Missoulian. Lisa Peterson, DEQ Public Affairs Coordinator, sent out media alerts and contact information the day before the event to encourage media coverage of the event. Unfortunately, no media came to the event.

#### Saturday Event (9 am to 4 pm)

Over the nine-hour period on Saturday, a total of 12 volunteers put in 49 hours of work beside staff from Inland ReTech (1), Allied Wastes (3), and DEQ (3). Some volunteers were there for the whole day, and some were able to assist for several hours at a time. Three paid Allied Wastes staff provided 25.5 hours of work. Three paid DEQ staff provided 27 hours of work. A total of 18 people worked 101.5 hours to make the event a success.

DEQ provided signs to direct traffic flow on the day of the event. Future events at Allied should provide signs in the front of the building after regular business hours (closes at Noon on Saturday) to direct people around back to the electronics recycling event. Many Missoula citizens use the drop off recycling containers near the front of the Allied warehouse, and are used to finding recycling there. Participants complained of confusion and not knowing how to find the event. One of the traffic signs was moved to the front on the building to alleviate the confusion, but citizens continued to be confused and upset, and some likely left without ever finding their way to the event through the back. Either future events should be moved to the front of the warehouse (could cause traffic management issues), or clearly marked signs should provide information on the need to go around the back of the building.

Terrie Kenney, Administrative Professional, DEQ, solicited donations of food or beverages from Safeway, Super 1 Foods, Pizza Hut and Quizno's to keep the volunteers well fed and hydrated. A poster at the event thanked all partners and sponsors for their part in making the event possible.

DEQ printed thank you cards which were handed to each participant as they left the event. The cards thanked participants for keeping hazardous waste out of the landfill and for making the effort to recycle. It also directs

participants to DEQ recycling websites and encourages them to see the film, *An Inconvenient Truth*, to learn more about individual efforts to affect global change. A copy is included as part of the Appendix.

### **III. Event Evaluation and Results**

The event was well attended and participants were enthusiastic about the opportunity to recycle electronics. At times, traffic was backed up four deep as people waited in line to drop off equipment. Four people were assigned to assist unload and stack the computers. Five people were assigned to meet and greet cars coming in with the paperwork to be filled out prior to unloading the vehicles. One person directed traffic. Inland ReTech handled all the fees, and a community service volunteer handed the thank you notes, magnets and WVE mercury information to all participants before they left.

Through pre-arrangement, one participant arrived at 8:30 a.m. as set-up was continuing. Others arrived right at 9 a.m. and volunteers were immediately involved in unloading and filling out paperwork. Unfortunately there was not enough preparation time to handle the immediate interest and participation. DEQ had to stop activity for a few moments to get everyone assignments and provide direction. In future events, where high participation is expected it will be important to divide up responsibilities and assignments prior to the advertised opening time.

Though the event was well attended, it was not overwhelming and might have been much more successful had the event not been held on a Saturday during the summer. DEQ is having the events during the summer in order to gather data for use during the upcoming legislative session. The need for the data has required DEQ to hold these events while school is not in session; several people have advised and/or requested that future events be held during the school year.

About 100 participants recycled 711 pieces of electronic equipment.

#### *Evaluation*

In addition to believing a non-summer event would be more successful, DEQ still believes that per unit recycling fees may affect participation. Some residents did arrive at the event unaware of the fees; two drove away without participating. DEQ did negotiate with Inland ReTech to lower fees by \$.50 to \$1.00, due to the manufacturers' sponsorships, but it is unlikely that the slightly lower prices greatly encouraged participation by the public.

This event charged participants a per unit recycling fee that ranged from \$.15 to \$15.00. The range of fees were posted to the Internet and provided to the event sponsors. In addition, all advertisements and publicity directed the public to call for prices or visit the website. A more effective way of communicating fees still needs to be found.

Participants were asked to complete a survey and those results are tabulated in Appendix A. The survey revealed that a majority of participants learned of the event through newspaper advertisements and word-of-mouth. Most participants lived less than five miles away from the event, and the vast majority recycling were residences. The majority of participants felt that consumers/users of electronic merchandise and the manufacturers should pay between \$5 and \$10 to recycle electronics equipment. Most would like to see municipal recycling centers accept electronics for recycling.

All participants were happy to recycle old electronics, and encouraged sponsors to hold additional events. A total of 18 businesses and 84 individuals participated in the survey. The total units dropped off for recycling was 711. A break down of units received by equipment type and also by manufacturer follow in the tables below.

**Table 1. Volume of Equipment Received**

Product	Units	Product	Units
Monitors	114	Modems	15
CPUs	112	Tape Decks/Recorders	12
Keyboards	75	CRT	10
Miscellaneous Equip./ Peripherals	58	Combos	9
Printers	53	Fax Machines	9
Telephones	47	CD ROM Readers/CD Writers/CD Drives	9
Speakers	34	Laptops	8
Computer Mice	26	Copiers	5
Televisions	24	CD Players	5
VCRs	21	Satellite Receivers	4
Scanners	19	Stereo Receivers	3
Cell Phones	19	Fax/Printers	2
Hard Drives/Zip Drives	17	Satellite Modem	1

**Total: 711**

**Table 3. Equipment Received by Manufacturer.**

% Rec'd	Units	Manufacturer*
20%	41	Hewlett-Packard
15%	31	Rohm
15%	30	Dell
12%	25	Apple
11%	23	Gateway
8%	16	Macintosh
7%	14	IBM
6%	12	NEC
5%	10	Panasonic
4%	9	Epson, Sony
4%	8	E Machine, Magnavox
3%	6	GE, Nokia, Zenith
2%	5	AT&T, Tandy, Toshiba, Viewsonic, Emerson, Micro Mania, Princeton
2%	4	Kaypro, Mitsubishi, Motorola, Sharp, Yamaha, Micron, , TMS
1%	1 - 3	JVC, Lexmark, Packard Bell, Phillips, Radio Shack

\*This is not a complete list of the manufacturers represented. That list is available by calling DEQ at 800-433-8773.

#### IV. Budget and Expenses

Due to the public-private partnership strategy used in this event, a budget for this event was never developed. Sponsors were asked to track expenses so that a total cost could be calculated for the event. Sponsors provided in-

kind donations of equipment and labor. The Department of Environmental Quality provided cash to cover some of the advertising and necessary signs. DEQ signs were made to be large enough to be seen by traffic, and were created with adjustable arrows that could be set to direct traffic. The signs were created with the intent to be re-used at future events. Total cost for the event, not including recycling fees paid by participants, was \$3,255, not including transportation costs of the recycler.

Participants bore all costs for recycling the equipment. Inland ReTech arranged for a truck to be at Allied Wastes and transport the equipment to Spokane for processing. The partnership among the sponsors is one of the goals of this pilot project as DEQ works to show communities that electronic recycling events can be offered without requiring a special line-item budget in already stretched municipal budgets.

Inland ReTech was approached by Opportunity Resources regarding a potential partnership to recycle electronics in Missoula. Opportunity Resources provides jobs for developmentally disabled citizens and already works with Allied Wastes to do paper recycling. Opportunity Resources is interested in expanding their recycling operations and creating more jobs for their clients. Electronics recycling might fit very well with their mission and provide Missoula residents with electronics recycling throughout the year. DEQ encourages the development of continuous programs throughout this series of electronic recycling events. Inland ReTech reported transportation costs of \$269.

## **V. Conclusion**

The event was well attended and participants are excited about the potential for more events or an ongoing collection program. DEQ will continue to encourage and facilitate a partnership between Inland ReTech and Opportunity Resources. Participants and interested callers were also told of Palmer Electric's electronics recycling program available throughout the year. Palmer Electric's program should be promoted more. The partnerships with Allied Wastes, Rocky Mountain Recycling, Women's Voices for the Earth, and Missoula Valley Recycling were quite successful. Local leadership was invaluable in pulling off the event.

The per unit costs for recycling electronic equipment was borne completely by participants (consumers) during the event. According to the survey, many of those that participated felt this was appropriate, although almost as many felt some responsibility should be borne by the manufacturers. Additional surveys will be done throughout this series of events, including one that will occur at the Bozeman 'free' event. More study needs to be done regarding the costs consumers are willing to bear and whether a share of the costs should be covered by retailers, manufacturers, and state or municipal governments. Work needs to continue to reduce consumer costs and increase participation. Sandra Boggs, Recycling and Marketing Development Specialist, DEQ, continues to develop partnerships with national retailers and manufacturers to lower consumer costs and create sustainable electronics waste recycling programs in Montana.

## **VI. Appendix**

# **Appendix A**

## **Montana E-rase Your E-waste Project Participant Survey Summary**

**Location: Missoula, MT**

**Date: July 29, 2006**

**Total number of surveys taken: 94**

1. How did you hear about this event?

Web page	1
TV ad	4
Newspaper ad	59
Flyer	3
Radio	---
Word of mouth	16
Other responses:	
Email	6
Missoula Comm. News	1
Newspaper story	6
Computer ER	1
Allied Waste	2

2. How far did you travel today to recycle your electronics?

< 5 miles	42
5 – 10 miles	34
11 – 20 miles	7
> 20 miles	11

3. Are your electronics from a:

Residence	84
Business	18
Other	---

4. Who do you think should pay for the safe recycling of electronic products?

Consumer/user	46
Retail store	4
Electronics manufacturer	33
Government	9
Other responses:	
Share costs between all	2
User & manufacturer share	2

5. What is the most you would be willing to pay per item to recycle your electronics?

\$2	9
\$5	45
\$10	33

Other responses:	
\$0	1

6. What is the most convenient way for you to recycle your electronics?

Take them to a municipal recycling center	80
Take them to a retail store	11
Mail them back to a manufacturer	2
Take them to a local charity	12
Other responses:	
Pick up	1
All the above if they will take them	1

7. How many computer monitors and TVs do you have at home right now?

0 – 2	43
3 – 4	35
5 or more	16

8. How many households does your vehicle represent?

1	73
2	11
3	4
More than three	2