

# ELECTRONIC WASTE (E-WASTE)



## WHAT IS E-WASTE?

E-waste is a popular, informal name for electronic products nearing the end of their "useful life." Common electronic products include:

- ✿ Televisions and Monitors
- ✿ Computers
- ✿ Computer Peripherals
- ✿ Audio/Stereo Equipment
- ✿ VCRs
- ✿ DVD Players
- ✿ Video Cameras
- ✿ Telephones
- ✿ Fax and Copy Machines
- ✿ Cellular Phones
- ✿ Wireless Devices
- ✿ Video Game Consoles

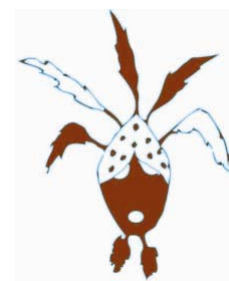
## WHY IS E-WASTE HARMFUL?

E-waste can contain hazardous materials such as lead, mercury, and hexavalent chromium, in circuit boards, batteries, and color cathode ray tubes (CRTs). Televisions and CRT monitors contain four pounds of lead on average (the exact amount depends on size and make). Electronics have been cited as a leading source of mercury in municipal waste. In addition, brominated flame retardants, now mostly banned in Europe due to their toxicity and persistence, are commonly added to plastics used in electronics. If improperly handled, these toxics can be released into the environment, **potentially placing our health and subsistence resources at risk.**

## WHAT CAN YOU DO WITH E-WASTE?

### *Reuse and Donate*

**Preventing** waste in the first place is usually preferable to any option...including recycling. **Donating** electronics for reuse extends the lives of valuable products and keeps them out of the waste stream for a longer time. **Reuse**, in addition to being an environmentally preferable alternative, also can benefit your community. By donating your used electronics, you allow schools, local non-profit organizations, and households to use equipment that they otherwise may not be able to afford. You can check out Green Star's **Alaska Materials Exchange** for donating and purchasing used electronics equipment. [www.greenstarinc.org/ame/index.php](http://www.greenstarinc.org/ame/index.php)

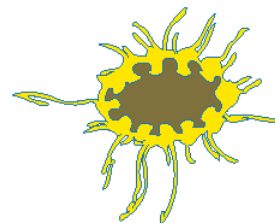


### *Recycle*

If donating for reuse or repair is not feasible, electronics can be **sent to e-waste companies for recycling**. Properly recycling electronics **avoids pollution** and the need to extract valuable and limited virgin resources. It also **reduces the energy** used in new product manufacture. **HOWEVER**, not all electronics recycling companies are environmentally friendly! To cut costs, some companies export all or parts of the e-waste to Asia where wastes are dismantled and disposed of in a way that pollutes the environment and is affecting the health of whole communities. To read more about this serious issue, check out [www.svtc.org](http://www.svtc.org). When you talk to companies, **ask them how/where they recycle their e-waste** to make sure they aren't exporting overseas, and are









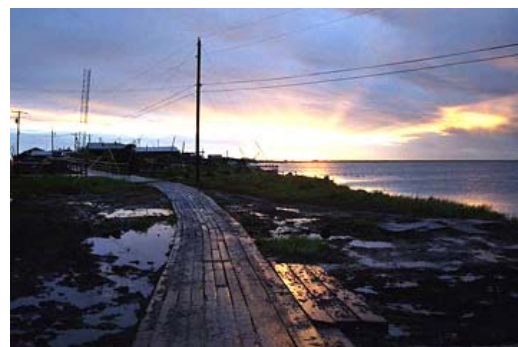
recycling all components of the e-waste responsibly. We talked to the companies listed here to ensure they are responsible in their recycling and that they do not export any components.



### Buy Our Values

Alaska Natives were environmentalists long before it was trendy. Respecting the earth and our values includes repair, reuse, and then proper recycling of electronics. It also means purchasing **new equipment that has been designed to be more environmentally-friendly**, when we are ready to buy again. When purchasing new equipment, ask the seller about its environmental features. Your Village can encourage electronics manufacturers to design electronics that respect our values through the "purchase power" of Village residents, companies, and governments. You can purchase computers and other electronics with environmentally-preferable features, and request a "take-back option" at the time of purchase. Look for electronics that:

-  Are made with fewer toxic components;
-  Use recycled content;
-  Are energy efficient (e.g., showing the "energy star" label);
-  Are designed for easy upgrading or disassembly;
-  Use minimal packaging; and
-  Offer leasing or take-back options.



## COMPANIES THAT RECYCLE E-WASTE AND THEIR 2005 PRICES

### Total Reclaim (Located in Anchorage and Seattle)

12101 Industry Way, Unit #C4 Anchorage, AK 99515 Tel: (907) 229-0183

PO Box 24996 Seattle, WA 98124-0996 Tel: (206) 343-7443 [www.totalreclaim.com](http://www.totalreclaim.com)

This is the company that Green Star in Anchorage ([www.greenstar.org](http://www.greenstar.org)) uses to ship their electronics to, for their annual e-recycling drive. The Yukon River Inter Tribal Watershed Council may be setting up an e-waste program with this company as well. For a mixed batch of electronics they charge from **\$0.25-\$0.40/lb**. Contact them for a specified price list.



### PC Salvage

3627 S 54th St Tacoma, WA 98409 Tel: 1 (866) 341-8003 [www.allaboutpcsalvage.com](http://www.allaboutpcsalvage.com)

This company charges per electronic item rather than by weight. Some of their prices for various materials are listed below:

Description	Recycling Fee	Description	Recycling Fee
Monitors	\$10.00 ea.	Removal from existing networks	Call for pricing
TVs	\$10.00 & up*	Pick up Charges	Call for pricing
Cell Phones	Free	CD ROMs ( <i>outside of case</i> )	FREE
Computers	\$5.00 ea.	Floppy Drives ( <i>outside of case</i> )	FREE
Printers	\$5.00 ea.	Media--Floppy disk, CD's, and tapes	Call for pricing
Fax/Scanners	\$5.00 ea.	Recycling of keyboards, mice, and misc. cables	\$0.25 per lb.
Copy Machines	\$5.00 & up*	Software Recycling	Call for pricing
Servers/Mainframes	\$0.25 per lb.	Home Electronics	Call for pricing

## Green Star

880 H Street, Suite 106 Anchorage, AK 99501 Tel: (907) 278-7827 <http://greenstarinc.org/>  
Green Star has held electronics recycling events in Anchorage and other areas of the state each year for the past several years. See their website or give them a call for more information <http://www.greenstarinc.org/electronicrecycling2005.php> Also check out their on-line **Alaska Materials Exchange** for donating and purchasing used electronics equipment. [www.greenstarinc.org/ame/index.php](http://www.greenstarinc.org/ame/index.php)

## GreenDisk

4404 211th CT NE Sammamish, WA 98074 Tel: 1 (800) 305-DISK <http://www.greendisk.com>  
Through GreenDisk, you can purchase "Technotrash Cans" which are boxes specially made for easy disposal of a wide variety of e-waste. The cans hold up to 70 lbs of mixed electronic waste but use just one square foot of floor space (dimensions are approximately 1'x1'x3'high), and are good for offices. *(continues next page)*

The following items can be put in the Greendisk Technotrash Cans:

- ◆ Printer cartridges (ink jets and laser)
- ◆ Cell phones, pagers and PDAs
- ◆ Diskettes, CDs, and DVDs
- ◆ Video, audio and computer tapes
- ◆ Rechargers and rechargeable batteries



With Technotrash Cans, one fee is paid that includes the collection box, shipping of the technotrash to the GreenDisk processing facility, and processing. Currently their fee is **\$29.95**.



## Computer Recycling Information on SWAN

For detailed information on where to recycle computers, go to the following page on the SWAN website [http://www.ccthita-swan.org/Tutorials/computer\\_recycle\\_intro.cfm](http://www.ccthita-swan.org/Tutorials/computer_recycle_intro.cfm) or to "computers" in the SWAN A-Z index at <http://www.ccthita-swan.org/main/a-z.cfm>

## HOW TO PAY FOR RECYCLING AND SHIPPING

Several communities we talked to that organized e-waste recycling programs used IGAP monies to pay for the e-waste recycling fees. Most communities were able to negotiate free shipping from barge/transport companies and the free use of a shipping container for collection/shipping. Special IGAP grants may also be another source for funding e-waste recycling programs. For more funding ideas, see <http://www.ccthita-swan.org/funding/funding.cfm>



## OTHER HELPFUL E-WASTE LINKS

For more information, check out these links:

Green Star <http://www.greenstarinc.org> ; Intl. Assn of E- Recyclers (IAER) <http://www.iaer.org> ;  
EPA E-cycling <http://www.epa.gov/epaoswer/hazwaste/recycle/ecycling/index.htm> ;  
NRC <http://www.nrc-recycle.org/Programs/electronics/index.htm> ; SVTC <http://www.svtc.org>  
NPSC <http://www.productstewardship.net/> ; Basel Action Network <http://www.ban.org/pledge1.html>  
E-waste Rethink initiative <http://rethink.ebay.com/> ; EIA <http://www.eia.org> ;  
IRC (cell phone and inkjet recycling) <http://www.ircfundraising.com/index.html> ;  
Ink toner recycling on SWAN <http://www.ccthita-swan.org/main/toner.cfm> ;  
Disk/CD recycling on SWAN [http://www.ccthita-swan.org/main/computer\\_disks.cfm](http://www.ccthita-swan.org/main/computer_disks.cfm) ;

## EXAMPLES OF VILLAGE E-WASTE RECYCLING

We have included the contact details of communities that have organized e-waste recycling programs. We encourage you to give them a call to ask for tips, advice, suggestions etc. for starting your own community e-waste program.

### **Curyung Tribal Council    Contact: Billy Maines 842-1751**

In 2004 and 2005, the Curyung Tribal Council held an electronics collection day along with a spring trash cleanup. A 20 foot Connex container (loaned for free by Northland Barge) was set up by the school, and on a designated day, and everyone in the community was able bring their electronics waste to the Connex for recycling. The electronics collection event was announced over the community PA system and was advertised in the local paper and through flyers around the community. During the 2004 collection event, half of the Connex was filled with various types of electronics, and the event in 2005 filled the remainder of the container. More electronics come in during the second collection event, which they thought was due to better advertising within the community. The total amount of e-waste collected was 15,000 lbs and included approximately:

- |                      |   |
|----------------------|---|
| ☼ 137 monitors       | ☼ 7 scanners                              |
| ☼ 84 printers/faxes  | ☼ 4 large copiers                         |
| ☼ 59 CPUs            | ☼ 6 typewriters                           |
| ☼ 29 laptops         | ☼ 125 keyboards                           |
| ☼ 14 battery backups | ☼ 6 TV's                                  |
| ☼ 10 marine radios   | ☼ Boxes of components, parts, cords, etc. |

The Curyung Tribal Council talked to **Northland Barge** about their event and was able to negotiate free shipping of the electronics to Washington. The electronics were shipped to **Total Reclaim** (<http://www.totalreclaim.com>). By talking to **Greenstar** (<http://www.greenstar.org>) ahead of time, they were able to negotiate the same recycling rate that Greenstar gets when they ship electronics for their annual e-recycling drive. End-of-year IGAP funds were used to pay for the recycling.



The Curyung Tribal Council wants to make the electronics collection an annual event and they are **working on incorporating e-waste recycling into their environmental workplans and codes**. Since the schools and health corporation contributed the largest amount of electronics during both events, they are also trying to start an "end-of-use" fee system. The idea is that the schools and health corporation would pay a small fee when new computers and large electronics are purchased to help pay for their recycling when they can no longer be used.



**Native Village of Chenega Contact: Kate McLaughlin 573-5476**

In conjunction with their annual Village Spring Clean-up (in May 2004), the Native Village of Chenega held an electronics and household hazardous materials collection day at their hazardous waste shed located at their landfill. The event was advertised to the community ahead of time. To make the collection/cleanup fun, everyone who participated enjoyed a picnic of hamburgers, hotdogs, chips, apples, oranges, juice and ice-cream. Each child also received a glass mug filled with candy and small gifts. Prizes and gift certificates were raffled, every child earning a ticket for each bag of trash they brought in.



Electronics collected at Chenega



**Elders** and those with health related problems were able to call the Environmental Office to **get their electronics items picked up** at their homes. The types of electronic equipment people dropped-off included PC hard-drives, monitors, keyboards, mouse pads, copiers, TV's and VCR's. Household hazardous wastes collected included old paints, solvents, and batteries. With the assistance of a certified HazMat technician from **PSC Environmental**, all the materials collected were separated by type, counted, properly packaged for shipping, and stored in their shed until the summer. All materials were then shipped out on the summer barge. A **Special IGAP/Unmet Needs grant** was used to fund this project.

The Chenega Environmental Office was successful in obtaining donations from community businesses to assist the collection event: The clinic donated rubber gloves; The corporations donated gifts and prizes; The Chenega Tribal Council donated the use of an ATV and trailer; A resident donated the use and operation of his barbecue grill; And a couple residents volunteered their time to help with the collection and packaging of e-waste.

**Sitka Tribe of Alaska Contact: John Morris 747-6506**

The Sitka Tribe has held spring electronics collection events in 2004 and 2005. The e-waste collected in both events mostly consisted of computers (towers and monitors) and fax/copy machines. E-waste was shipped to **Total Reclaim** in Seattle both years and they were charged a rate of around **\$0.25/lb**. The e-waste was shipped the first year on **AML** and the second year on **Northland** and they were able to negotiate a discounted shipping rate each year with the barge companies. **IGAP funds** were used to fund this project.



In 2004 they collected over 9,500 lbs of e-waste and the event was held in May. In 2005 the event was held in the summer (in July) and they collected only 6,000 lbs. Since a large portion of their electronics comes from their schools and the university, they will try to hold future events **right at the end of the school year** (in May) so they are able to get the maximum amount of e-waste generated by the schools. Each year they advertised the collection events on the radio and in the local newspaper, and they also hung up flyers around the community for maximum participation.