

For more information on e-waste ...

- *Basel Action Network* on e-waste in China and Nigeria: www.ban.org
- E-waste in India: www.toxiclink.org
- *World Watch Institute* on e-waste problem in China: www.worldwatch.org
- *Stop The E-waste Problem (StEP)* —an initiative of various UN organizations to address the e-waste problem: www.step-initiative.org
- *Greenpeace International*: www.greenpeace.org
- *Environment Canada* information on e-waste: <http://www.ec.gc.ca>

YOU CAN HELP PREVENT E-WASTE BY...

Reducing, Reusing and Recycling your used and old electronics.

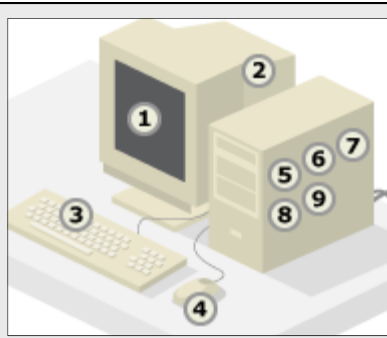
- **Reduce:** Consider repairing/upgrading your computer to suit your need instead of buying a new one.
- **Reuse:** Consider donating computers and equipments in working condition to CEA's Share IT: CFC program. Someone in need will benefit from your donation!
- **Recycle:** Drop off non-reusable equipments at our Brampton location to ensure environmentally safe and socially responsible way of e-cycling.

Community Environment Alliance (CEA) is a registered, non-profit, community-based organization dedicated to promoting community and environmental sustainability by improving the quality of life of people and protecting the environment.

OUR VISION

A safe, healthy and sustainable future for all.

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- 1: Lead** in cathode ray tube and solder
- 2: Arsenic** in older cathode ray tubes
- 3: Selenium** in circuit boards as power supply rectifier
- 4: Polybrominated flame retardants** in plastic casings, cables and circuit boards
- 5: Antimony trioxide** as flame retardant
- 6: Cadmium** in circuit boards and semiconductors
- 7: Chromium** in steel as corrosion protection
- 8: Cobalt** in steel for structure and magnetivity
- 9: Mercury** in switches and housing

IMPORTANT FACTS YOU NEED TO KNOW ABOUT

E-WASTE

THE PROBLEM, SOLUTION, AND HOW YOU CAN HELP



A typical PC weighs 27kg & contains:
**Glass - 25%, Ferrous metal - 20%,
 Aluminum - 14%, Copper - 7%, Lead - 6%,
 Zinc - 2% and Precious metals - 3%**
 (% are by weight)



This information brochure has been created by Community Environment Alliance with the purpose of raising awareness about e-waste.

What is electronic waste or e-waste?

Electronic waste or “e-waste”, includes discarded electronic appliances and products including televisions, computers, printers, scanners, cell phones and accessories that are, for a reason, deemed ‘unwanted’ or ‘obsolete’ by the owner.

What are the hazards of Computer & Cell Phone waste?

Computers and electronic gadgets are safe to use but pose a threat when thrown in trash or disposed of in a landfill. This is because **these equipments commonly contain toxic materials e.g. lead, mercury, arsenic and cadmium.** When disposed of in landfill the toxins pose the risk of leaching in the soil and contaminating the ground water and food chain; thereby posing a threat to human health and the environment. While cell phones may be deceiving because of their small size, they contain many hazardous materials particularly in their batteries (cadmium, nickel) and printed circuit boards (arsenic, cadmium, lead, brominated flame retardants).

HEALTH RISKS ASSOCIATED WITH TOXIC MATERIALS IN PCs

Material	Kg/PC ^(*)	Health Risks
Lead	0.7-2.7	damages central nervous, immune, endocrine & vascular systems, kidneys, brain development in children
Brominated Flame Retardants	6.21	cancer, damages thyroid, liver, neurological, endocrine & immune systems
Arsenic	0.04	cancer, damages liver, kidney, reproductive & vascular systems
Mercury	0.05	emotional instability, damages kidneys, nervous, respiratory & reproductive systems
Cadmium	0.25	cancer, bone disease, damages reproductive & respiratory systems

* varies based on make and model

DID YOU KNOW?

- Globally, an estimated 20-50 million tonnes of electronic waste is generated annually!
- In 2004 14.5 million computers were discarded in Ontario.
- 674 million mobile phones were sold worldwide in 2004 —30% more than in 2003.
- The majority of PCs routinely disposed of for recycling by business and consumers alike are actually far from their real end-of-life and could go on to give as much as 6,000 additional hours of use.
- 47.5 million computers and 100 million cell phones are thrown out every year in the US alone. Many are dumped in India, China and Africa.
- Nearly 70% of the heavy metals in landfills come from electrical equipment waste.

With people upgrading their mobile phones, computers, televisions, audio equipment and printers more frequently than ever before, **E-waste has been identified as the fastest growing component of the municipal solid waste stream.** Mobile phones and computers are causing the biggest problem because they are replaced most often. Individuals and businesses in Canada discarded an estimated 3.15 million units of PCs and servers, 3.2 million units of monitors and nearly 1 million units of laptop, generating 67,000 tonnes of e-waste in 2005! Developing countries are also expected to triple their e-waste production over the next 5 years.

Exporting our e-waste problem ...



Children in front of smoldering electronic waste dump in Lagos, Nigeria.

Source: *Basel Action Network*



A worker in China smashing CRT monitor to remove copper. Dumped monitor glass later leaches lead into the groundwater.

“The people actually doing the brunt of the recycling are people on less than half a dollar a day—women and children working in very shanty-like, disastrous, inhuman conditions.” - Toxics Link, India (NGO)

“Be informed. Be involved.
Make a Difference.”

LET’S ACT.

In Canada, we may take a certain amount of comfort in programs that offer to recycle used/obsolete computers and electronics. However, few of these programs recycle locally; between 50% to 80% of e-waste collected for recycling is exported to developing nations, including Nigeria, India, Pakistan and China. **Poor and marginalized workers, including women and children, work in appalling conditions in e-waste dumps in these countries to extract precious components while risking their own health in the process.**

Share-IT
Computers for Community

An award-winning sustainable solution to e-waste.

Community Environment Alliance’s **Share-IT: Computers for Community** program collects used computers to place refurbished systems in the homes of families in need. Computers deemed ‘obsolete’, at most times, have ‘useful’ life left and can be *reused*. Many underprivileged children and families in our community are in dire need of a computer to do basic computing work, but unfortunately can not afford one.