

E-waste Dangers

In many instances, the only visible part of an electronic product is its outer shell. Unless that casing is broken, we rarely see the myriad circuit boards, wiring and electrical connections that make the device actually function.

But it's those inner mechanical organs that are so valuable and so toxic. A whole bouquet of heavy metals, semimetals and other chemical compounds lurk inside your seemingly innocent laptop or TV. E-waste dangers stem from ingredients such as lead, mercury, arsenic, cadmium, copper, beryllium, barium, chromium, nickel, zinc, silver and gold. Many of these elements are used in circuit boards and comprise electrical parts such as computer chips, monitors and wiring. Also, many electrical products include various flame-retardant chemicals that might pose potential health risks.

When these elements are safely encased in our refrigerators and laptops, e-waste dangers aren't much of an issue. Problems can occur when devices break -- intentionally or accidentally. Then they can leak and contaminate their immediate environment, whether in a landfill or on the streets. Over time, the toxic chemicals of a landfill's e-waste can seep into the ground (possibly entering the water supply) or escape into the atmosphere, affecting the health of nearby communities.

People are beginning to discuss the serious aspects of this pollution in terms of **bioaccumulation** and **biomagnification**. Bioaccumulation occurs when people, plants and animals build up levels of toxic substances in their bodies faster than they can get rid of them. Biomagnification occurs when toxin levels accumulate within the food chain. For example, plankton might absorb low levels of mercury. Then fish that eat large amounts of plankton ingest an even larger, unhealthier dose. The problem continues as birds or humans eat the mercury-tainted fish.

Researchers in the Dartmouth Toxic Metals Research Program have compiled a list of the effects that some of these toxins take on the human body. Keep in mind this is not an exhaustive list of all the suspected health effects of these metals. Also, this list mentions only some of the chemicals and compounds used in household products.

- Arsenic may disrupt cell communication and interfere with the triggers that cause cells to grow, possibly contributing to cardiovascular disease cancer and diabetes if someone is exposed in chronic, low doses.
- Cadmium affects your body's ability to metabolize calcium, leading to bone pain and severely weakened, fragile bones.
- Chromium can cause skin irritation and rashes and is potentially carcinogenic.
- Copper can irritate the throat and lungs and affect the liver, kidneys and other body systems.
- Lead poisoning can cause a whole slew of health problems including the impairment of cognitive and verbal activity. Eventually, lead exposure can cause paralysis, coma and death.
- Nickel is carcinogenic in large doses.
- Silver probably won't hurt you, but handle it too frequently and you might come down with a case of **argyria** -- a condition that permanently stains your skin a blue-gray shade.

{Source: [Dartmouth Toxic Metals Research Program], [howstuffworks.com]}

Now that we know about the dangerous parts lurking behind our computer screens and favorite electronics, Elk Township has implemented an Electronics Recycling Program "E-Waste".

Contact the Public Works Department for drop off time and location.

Steven G. Alexander, Superintendent

Phone: 856-881-6525 ext. 21 (please leave a message with a call back number)



ACCEPTING THE FOLLOWING E-WASTE ITEMS

- 15,17,19,21 INCH MONITORS, FLAT SCREENS AND ALL-IN-ONES
- TOWERS, DESKTOPS AND LAPTOPS
- UNINTERRUPTED POWER SUPPLY
- KEYBOARDS, MOUSE AND SPEAKERS
- ALL TYPE OF WIRE
- GOLD CLIP ENDS
- PRINTERS, FAX MACHINES, SCANNERS, MODEMS, COPY MACHINES
- ALL TYPE OF MEMORY
- ANY HARD DRIVES
- FANS AND POWER SUPPLIES
- MOTHER, B, C, TWEENER AND FINGER BOARDS
- AC ADAPTORS, YOKES, AND MOTORS
- PLASTIC, BALED OR LOOSE
- ALUMINUM, BRASS, LIGHT IRON AND COPPER
- METALS, BALED OR LOOSE
- ANY AND ALL RELATED COMPUTER PARTS
- PHONES, CELL PHONES, CELL PHONE AND LAPTOP BATTERIES
- PC SCRAP AND STEREOS (**NO WOOD**)
- VCR's, DVD's, CD PLAYERS, BOOMBOXES
- ANY AUDIO AND VISUAL EQUIPMENT
- SCANNERS AND PAGERS
- CASH REGISTERS AND SCALES (ELECTRONIC OR MECHANICAL)
- RECHARGEABLE BATTERIES
- MICROWAVE OVENS
- TELEVISIONS, FLAT AND TUBE TYPE
- **MOST ANY HOUSEHOLD ELECTRICAL ITEM THAT DOES NOT HAVE A COMPRESSOR**

Please recycle these items

Do Not place electronics out to the curb with your trash

Call the Elk Township Public Works Department
for drop off time and location.

(856) 881-6525 ext. 21

Visit www.thanksforbeinggreen.com for more information on e-waste recycling

Thank you for being environmentally responsible!

*Elk Township is not responsible for information on computer hard drives.
Please have all potentially damaging information erased before dropping off.*