LATENT HARM FROM *IMPROPERLY* DISPOSED E-WASTE

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WHAT IS E-WASTE?

E-waste—or electronic waste—is a term used to describe electronic products (basically anything with a cable, cord, or battery) that have become unwanted, non-working or obsolete, or have reached the end of their useful life.

- computers and computer components (keyboard, mouse)
- printers
- monitors
- cell/smart phones
- tablets
- routers/modems

- *microwave ovens*
- *televisions*
- *radios*
- washers/dryers
- electronic toys

WHAT HAPPENS WHEN ELECTRONICS ARE NOT PROPERLY RECYCLED?

Improperly disposed e-waste:

- will often take thousands of years to properly decompose.
- will have a long-lasting negative effect on the environment.
- negatively impacts soil, air, groundwater, and marine ecosystems.
- leads to ongoing health risks.

IMPACT ON THE SOIL

- As electronic devices break down, they release toxic chemicals into the soil which eventually contaminate trees and plants.

- Some of these toxic chemicals include lead from circuit boards and lithium from batteries.

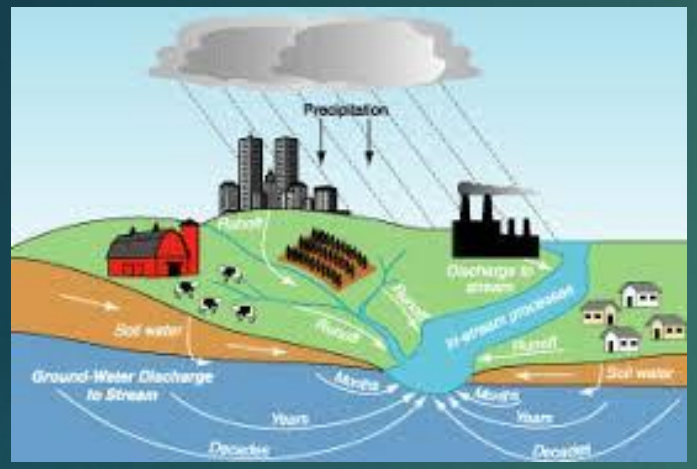
- All of these toxic chemicals have the potential to make their way into our food through the soil.

IMPACT ON AIR

- Most of the e-waste not recycled properly will get sent off to incinerators in areas that do not have sanctions regarding electronic waste disposal.

- Burning e-waste is extremely harmful to the environment; their glass, metals, and plastic produce dangerous carcinogens when they are incinerated.

- As we continue to remove e-waste in this way, we will contribute to global warming by increasing the rate of ozone depletion.



IMPACT ON GROUNDWATER

- When lead, mercury, and cadmium slowly break down, they eventually flow into the groundwater.

- Groundwater flows into streams, lakes, and ponds—and eventually makes its way into local water.

IMPACT ON MARINE ECOSYSTEMS

- Electronic waste also goes into the ocean and this nonbiodegradable marine dumping can be deadly to organisms in the area and harm ecosystems.

- E-waste and the various toxins will continue to damage ecosystems and the process of recovery will become less feasible in the future.

IMPACT ON HEALTH

- WHO warns: soaring e-waste affects the health of millions of *children*.

. smaller size, less developed organs make children more vulnerable.

. children in some countries are engaged to sort e-waste because of their small hands.

. many children live, go to school, and play near e-waste dumping grounds.

. millions of women are exposed to toxic e-waste which puts them and their unborn children at risk.

SOBERING FACTS

EPA estimates that in the US, only 15-20% of e-waste is properly recycled.

- The remaining 80% of e-waste accounts for 70% of toxic waste (DeVroom, 2020)
- In other words, e-waste is one of the highest-concentration contributors to *toxic* waste!

And we can do better:

- Currently, Europe properly recycles 42% of e-waste.

Mobile Phones

There are more mobile phones in the world than people.

- In the US, more than 151 million phones are thrown away in a single year
- For every million mobile phones that are recycled, we can recover 35,274 pounds of copper, 772 pounds of silver, 75 pounds of gold, and 33 pounds of palladium, according to EPA

Computers

It takes 500 pounds of fossil fuel, 50 pounds of chemicals, and 1.5 tons of water to manufacture one computer and monitor.
according to the American Association for the Advancement of Science.

It's estimated that recycling one million laptops—rather than manufacturing new ones—saves the energy equivalent of electricity used by more than 3,500 US homes per year (US Geological Survey, 2016)

RECYCLE E-WASTE RESPONSIBLY

- Before buying a replacement, consider repairing it. Use your electronics as long as possible in order to reduce the amount of e-waste that you create.

- When it's time to recycle: look for Electronics Recyclers with the R2 or e-*Stewards* label on their websites. They are EPA-certified to meet the cleanest and most responsible standards for e-waste.

- Remove any batteries from your electronics, they may need to be recycled separately. Lithium-ion batteries and devices containing these batteries should NOT go in household garbage or recycling bins.

WHERE TO RECYCLE COMPUTER-RELATED ELECTRONICS

- Some convenient places that accept computer-related electronics for recycling are WVC's Computer Club Technology Center—*Cathy Thorn will specify what kinds*. Best Buy, Staples, and Goodwill are also possibilities to consider.

- The EPA website also has a list of places that accept different types of e-waste for recycling.
https://www.epa.gov/recycle/electronics-donation-and-recycling

LANCASTER COUNTY'S HOUSEHOLD HAZARDOUS WASTE PROGRAM

-Lancaster County Solid Waste Management Authority; Household Hazardous Waste Facility, 1299 Harrisburg Pike, https://www.twp.lancaster.pa.us/household-hazardous-wastes (717) 397-9968 [Note: *residents* only; no business/manufacturer]

- There is no charge for recycling the following E-waste products: photo cameras, video cameras, cell phones and smart phones, cell phone peripherals (chargers, batteries, Bluetooth earpiece, air cards, clips cases), DVD and VCR players, MP3 players and iPods, PDAs, portable electronic game players, video game consoles, stereos and stereo peripherals (CD players, turntables, amplifiers, and speakers). No wooden speakers. *Limit of 10 total e-waste items per customer, per day.*

In Summary . . .

Carelessly discarded Electronic Waste

- Has long-lasting negative effects on environment
- Leads to on-going health problems
- Creates a need to mine and process raw materials to manufacture new products

Mindful choices: repair, upgrade, or recycle

Thank You for recycling responsibly.