

Nebraska News Service

Emma Krab 0:13 Welcome to State of Waste. I'm Emma Krab, and this is Episode 2: Digital Debris.

Emma Krab 0:28

In a warehouse in southeast Lincoln, a small recycling center is busy at work. But at American recycling, these workers aren't processing old newspaper or sorting through aluminum cans. Instead, they strip apart computers, monitors phones and other electronic devices, packing together the most valuable pieces and holding out the rest on a forklift. Chad Gorgen is the Chief Marketing Officer at American recycling.

Chad Gorgen 0:58

We market to schools, business hospitals all throughout the country really, and we see if they have any ways to recycle ewaste, also known as electronic waste. That's the product American recycling is looking for. Whether it's industrial waste from companies or your everyday cell phone or computer, yet compared to other types of recycling ewaste is relatively unheard of, and relatively neglected. According to the United Nations in 2019, only 17.4% of the world's e waste is recycled, and the total volume of worldwide e waste has increased by 21%. In just five years. For more answers about ewaste in Nebraska, we must leave American recycling and travel to the headquarters of the Nebraska Department of Environment and Energy, also known as D E.

Eric Weiss We don't have any hard rules for electronic waste in Nebraska we just fall under our the basic solid waste rules the basic hazardous waste rules.

Emma Krab: as the department's Environmental Assistance Coordinator, Eric Weiss deals a lot with regulations. But when it comes to E waste, those regulations get a bit more complicated. Nebraska's e waste breaks down into two categories. On one hand, industrial hazardous waste, which is usually generated in bigger amounts by companies is regulated by d e, and required to find a place to recycle like American recycling. On the other hand, products like your cell phone or laptop fall into a different category known as household hazardous waste. And these are wastes that are hazardous. But everybody generates household hazardous waste like cell phones and other e waste may contain hazardous materials. But under state regulations, they can still be dumped with the daily trash. This can be a problem.

Weiss: A lot of stuff like cell phones, computers and whatnot have these lithium ion batteries. Now, if those are not properly managed and properly recycled, you know we're constantly getting landfill fires all the time.

Emma Krab 3:01 Lithium batteries are in a lot these days, from cell phones to electric cars, and we may see even more of them soon. In June, the US Department of Energy announced a new policy to scale up manufacturing for advanced batteries like those made with lithium. But these batteries come with risks, including the issue Weiss referred to: fire.

Jake Schmidt 3:23 “The main phenomena that happens with specifically lithium ion batteries and cell phones is called thermal runaway.”

Emma Krab 3:31

Jake Schmidt is an undergrad chemistry student and researcher at the University of Nebraska Lincoln.

Jake Schmidt: “This phone battery will end up just keep getting hotter and hotter.”

Emma Krab: While in use these batteries are stable, meaning your phone probably won't burst into flames in your back pocket. But stressors are everywhere in a landfill. Which begs the question, how many fires are we talking about? Turns out it's a difficult question to answer. We reached out to the Nebraska State Fire Marshal and their answer none. Not a single landfill fire has been investigated by them in the last five years. Head over to the state records at DEE and there's one report in 20 from a landfill in Colfax County, claiming two to three fires per year.

Emma Krab: (We) actually talked to the folks at the landfill and the numbers get even stranger.

Emma Krab: 30 minutes out from Lincoln trucks rumble through the GMP landfill in Milford Nebraska.

Jessica Bodfield is the office manager there.

Jessica Bodfield 4:32 A lot of times you know, if the contractor hits that spike on it, it'll pop, smolder and stuff like that.

Emma Krab 4:39 In Nebraska landfills the threat of lithium batteries looms large but across the Missouri River, recent fires in Iowa have drawn even greater attention.

TV Newscaster: 4:48 The landfill of North Iowa is reporting a handful of fires that have been sparked by lithium ion batteries.

Emma Krab 4:54 Christa Latch is the education coordinator for the landfill of North Iowa where lithium batteries caused a handful of fires this year. She tells a similar tale to Bodfield's, a lithium battery, a trash compactor, and then

Christa Latch: “The little bit of stored energy left and those lithium ion batteries has the potential to spark and basically generates fire.”

Emma Krab 5:15

Turns out these changing numbers also link back to DEE. According to Jeffery Edwards, the department's waste compliance supervisor. Landfills only have to report fires if they interfere

with daily operations like closing the landfill for the day. However, Edwards also said that e waste has risks beyond fires risks that need to be mitigated by actions like recycling.

Jeffery Edwards 5:39 “Well, ultimately, it keeps the material out of landfill, so less toxic materials that potentially could be leached into the waste mass.”

Enma Krab: leachate or the liquid produced by solid waste along with soil and air pollution, all our risks when E waste comes to the landfill.

Emma Krab Beyond the environmental concerns, even the sheer volume of ewaste has become notable in Nebraska,

Karla Weldon: “There is an increase in the waste arriving at the landfill because there's definitely a documented increase in the use of electronic devices.”

Emma Krab 6:15 Karla Weldon works for the Lincoln Department of Transportation and utilities as the superintendent for Solid Waste Operations. She advocates for more sustainable solutions for ewaste. One such option. The busy, hectic warehouse that is home to American Recycling. More than just lithium batteries. Companies like American recycling take in all the ewaste that falls through the cracks of household hazardous waste.

According to Chad Gorgon, it can be a difficult task to take on

Chad Gorgon: for Nebraska we could we could use some help yell for getting people to recycle more e waste and divert it from the landfill.

Emma Krab 6:53 In the end, recycling e waste is about protecting the environment and saving landfills from harm. It's a story of heroics, but without regulations on household e waste, the heroes aren't landfills regulators or even recycling centers. Instead, it's everyday Nebraskans who keep waste out of landfills. What about those who want to join that fight?

Chad Gorgon 7:16 That would have been call their local landfill see how what they need to do to recycle their electronics to call us to share would be

Emma Krab 7:24 Nebraskans may have the choice to send their phones down the trash chute. But should they with the last attempt to regulate e waste shut down by then-Governor Dave Heineman nearly a decade ago. Each Nebraskan is now left to walk the line between convenience and contamination.

Transcribed by <https://otter.ai>

*Transcript edited for clarity by professor Jessica Walsh