

Gavin Ockert

Ocean Bay Middle School

Mrs. Livingston – Reading Teacher

Mr. Mortlock – Science Teacher

6th Grade

April 2017

Landfill? More Like Landkill

There are more mobile phones in existence than living people on Earth, but only about 15 percent of those phones are currently being used. As for the other 85 percent, most are thrown away to be buried in a landfill. If a coastal community had several hundred acres of land to use for development, there are a variety of proposals the residents could consider. A proposal to use the land to build a specialized landfill for the disposal of used electronic devices would be among the worst options to consider. A landfill would disrupt and contaminate local wildlife, destroy the rainfall and environment, and harm the local economy while simultaneously attracting fewer people to live and work in the region. Building a landfill of used electronics, or e-waste, would ruin the local community in every way possible.

The proposal to build a monstrous display of dead electronic devices would damage the environment and expose filthy chemicals to the water and air. The proposed area of land to be built on has trees covering about 30 percent of the area. Trees “are the main things that give off oxygen” (“How Does Cutting Down Trees Affect Us?” 1). With fewer trees in the area, the breathing quality of the entire community will diminish. This landfill not only would harm the trees; it would also pollute the atmosphere. Some chemicals like chlorofluorocarbons (CFCs), which are usually found in cooling devices, are dangerous and “have been phased out because when released into the atmosphere, they accumulate in the stratosphere and have a deleterious effect on the ozone layer” (“Hazardous Substances in e-Waste”). This could harm the planet as it would promote global warming in the community and around the globe. Finally, the mercury found in e-waste is known to disrupt local wildlife populations. Mercury can spread from one organism to another and “has a devastating effect on marine life as it can reduce reproductive

abilities of fish, impair their growth and development, cause behavioral abnormalities, alter their blood and oxygen exchange, damage sensory processes and can also be fatal” (Zeller). The quality of the environment would diminish with the construction of the landfill.

A landfill of rotting technology would pollute the rainfall and rivers while also harming the ocean. E-waste is known to have “up to 60 elements from the periodic table as well as flame retardants and other toxic chemicals” (Gilpin). When toxic chemicals such as mercury, lead, and CFCs get into the rainwater, they hurt many aquatic animals and their reproductive systems (Zeller). Not only would this damage any animals that ate those polluted fish, but it would also hurt the people who live in the community. If a pregnant woman ate organisms contaminated by pollution, the baby would “have about four times higher risk of stillbirth” (Xu et al.) Building this landfill would also require the removal of many trees, whose roots hold soil in place and prevent sediment pollution of water. When sediment enters stormwater it “degrades the quality of water for drinking, wildlife and the land surrounding streams” (“Sediment Pollution”). Sediment would hurt a lot of the wildlife when it got into the rainwater and streams because it can block out the sunlight in the water, thus killing aquatic grasses and plants (reedycreekcoalition, 2011).

Building an electronic graveyard would also hurt the economy and drive away tourists. Landfills can “decrease adjacent residential property values by 12.9%, on average” (Ready). This would mean that houses would be worth up to 12 percent less in the community than they normally would without the landfill, which causes a huge decline in the economy. The landfill’s effect on the environment could also drive away potential fishermen. Just like in the Columbia River, fish could become polluted and fishermen would be advised not to fish in the community. Finally, building a landfill would repel people from the community, thus impacting the economy.

The proposed land for the landfill is located only a few miles away from the coastline, so people who want to buy a house or vacation near the beach run the risk of being near toxic chemicals.

While building a landfill might draw in money from neighboring towns who want to dump their e-waste, this wouldn't make up for the money that would be lost. The landfill would be full within 35 years, and after that the land would take hundreds of years to be usable again. As workers for the community are essential for keeping the economy up, a landfill would attract fewer people because workers would rather work at a golf course or mall than work in a landfill.

There are a few alternatives to building a landfill that would help protect the ecosystem while also improving the economy. For example, instead of building a landfill of e-waste, building an e-waste recycling center would extract dangerous materials that normally pollute the environment and reuse them in other devices. The flame retardants found in the plastics of computers is "reused to produce more technology materials" (Osolla). Other chemicals, like lead and mercury, could be recycled, and a recycling center would also make more money than a landfill as "fewer landfills means better property values, as well as the knowledge that your community is actually working to mitigate global warming" (Smith 1). Recycling centers are much smaller than landfills as most of the chemicals are shipped away to be reused, so trees wouldn't necessarily have to be cut down. A recycling center is a more logical solution than a landfill.

Overall, building a landfill for disposal of used electronic devices would harm the community in every way possible. It would ruin the ecosystem, pollute the rainwater, destroy the local economy, and threaten human health. The 85% of dead cell phones could be reused and transformed into newer, better phones with the help of an e-waste recycling center, but a landfill would tunnel the phones into the ground, leaving them to rot for decades.

Works Cited

- Gilpin, Lyndsey. "The Depressing Truth about E-waste: 10 Things to Know." *TechRepublic*.
Web. 11 Jan. 2017.
- "Hazardous Substances in E-Waste." *Ewasteguide*. Web. 6 Jan. 2017.
- "How Does Cutting down Trees Affect Us and Our Environment?" *123coimbatore*. Web. 12 Jan.
2017.
- Ossola, Alexandra. "Where Do Recycled Electronics Go?" *Popular Science*. Web. 22 Jan. 2017.
- "Putting the Proposed Reedy Creek Stream Restoration in Context." *Reedy Creek Coalition*.
Web. 12 Jan. 2017.
- "Sediment Pollution." *SpringerReference Cfpub*. Web. 15 Dec. 2017.
- Smith, Meghan E. "How Can Recycling Impact a Community?" *HowStuffWorks Science*.
HowStuffWorks, n.d. Web. 22 Jan. 2017.
- Xu, Yang, Chen, Zhou, Wu, Liu, Zhang, and Huo. "Birth Outcomes Related to Informal E-waste
Recycling in Guiyu, China." *Reproductive Toxicology (Elmsford, N.Y.)*. U.S. National
Library of Medicine, Web. 12 Jan. 2017.
- Zeller, Kirsten. "E-Waste: A Burden on Human Health and Our Ecosystem Alike | Biodiversity."
Web. 12 Jan. 2017.
- Zimmermann "Do Landfills Always Depress Nearby Property Values?" *Do Landfills Always
Depress Nearby Property Values?* Web. 12 Jan. 2017.