

Memorandum

To: Dr. Patterson, Professor of Engl 301

From: Adrianna Mroz, student of Engl 301

Date: Oct 15th, 2021

Subject: Proposal for Determining Safe Disposal and Decreasing Barriers to the Recycling of E-waste in the City of Yellowknife

The proposal is intended to be read by the Government of the Northwest Territories Department of Infrastructure and Yellowknife city council and mayor who have the authority to make local changes. The changes to local infrastructure also need to appeal to residents so this proposal while geared towards department and city council members will also attempt to be accessible to residents.

Introduction

The increased expansion in consumer technology in a society that is driven by consumption has resulted in the creation of a large amount of electronic waste (e-waste). E-waste is created when an electronic product is discarded at the end of its working life, when electronics are improperly stored or dumped into landfills there is an increased likelihood that toxic chemicals will leach into soil, water and air systems with potentially disastrous consequences to human, animal and plant life. In 2014 a study conducted by the Norman B. Keevil Institute of Mining Engineering at UBC found that of the 750 kiloton of e-waste produced in Canada only 20% was collected and recycled, e-waste disposals becoming an increasingly larger issue and those cities without major disposal systems are at a higher risk of inadvertently poisoning local systems.

Statement of Problem

Over the past decade the city has implemented a recycling program aimed at processing materials such as compost, glass and cardboard but does not have a suitable system of recycling electronics. The current measures attempt to follow government regulations with the Government of the Northwest Territories (GNWT) *Waste Reduction and Recovery Act*, however, barriers exist to recycling such as lofty

fees for larger electronics, ambiguous drop-off sites and lack of transparency around the recycling process. On top of consumer barriers Recycling North, the company that has been tasked with recycling measures within the city, does not seem equipped to handle the toxic chemicals found within technology such as cellphones instead specializing in household appliances such as refrigerators and air conditioners. Technology such as cellphones and laptops contain highly toxic chemicals such as lead, cadmium and beryllium that require a different handling to the fluorinated hydrocarbons found in the cooling systems of refrigerators and air conditioners.

Proposed Solution

Possible solution to reducing the harmful effects of toxic chemicals leaching into the surrounding area from improper disposal of e-waste is to offer better incentives to locals to bring in their electronics instead of bringing them to the landfill, providing residents with a specific location isolated from the landfill in order to protect local fauna and flora as well as giving local communities a better degree of transparency surrounding facility operations.

Scope

Data will be collected mainly through the use of unsolicited inquiries and informal interviews, in order to do this I will be :

- Conducting comparative research into other municipalities in how they structure their programs
- Propose amendments to the *Waste Reduction and Recovery Act*
- Alternative locations to store e-waste other than current landfill site
- Collecting data on percentage of recycled material through contact with facilities
- Funding suggestions through a change in recycling charges

Methods

My primary data sources will include contacting Dawn Tremblay head at Ecology North, a not-for-profit organization dedicated to tackling environmental issues in NWT, a review of geological survey maps from Northwest Territories Geological Survey Open Data resource in order to determine possible relocation of disposal sites that are sufficiently isolated from the water table as well as providing accessibility to residents. As well, I will be reviewing the GNWT policy in both departments of Environment and Natural resources as well as Infrastructure in order to gain a working insight into operations to further highlight areas that could be improved.

Qualifications

Through my studies in history my work has allowed a sharpened focus towards processing large volumes of information including geographical maps for my previous work in identifying museum objects for the Museum of Anthropology at UBC. Much like a historical research paper this proposal will be constructed through comprehensive analysis of available data from local organizations as well as conducting independent research through analysis of relevant documents.

Conclusion

The report will use a formal tone in order to both inform and suggest changes that could be made to increase the health of communities and biosphere. Through the collection of information that is situated in a norther context that is often overlooked the report also hopes to generate interest in specific environmental issues in vulnerable communities.

Sources:

Kumar, Amit, and Maria Holuszko. "Electronic Waste and Existing Processing Routes: A Canadian Perspective." *Resources* 5.4 (2016). <http://dx.doi.org/10.3390/resources5040035>.

"Inventory and Feasibility Assessment of Electronic Waste Recovery in the Northwest Territories".

Dessau,(2012).https://www.enr.gov.nt.ca/sites/enr/files/web_pdf_ed_wrr_inventory_feasibility_assessment_final_report_10_december_2012.pdf