



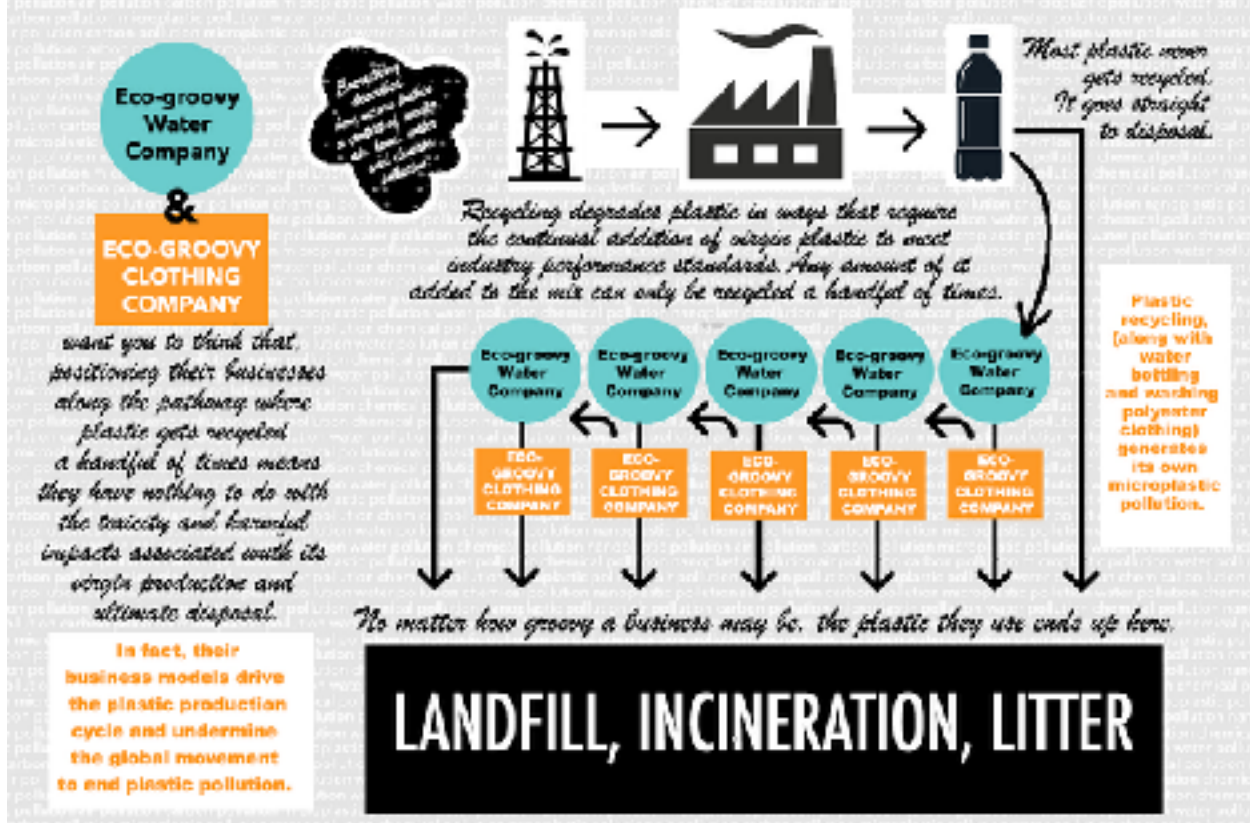
TESTIMONY OF RECYCLE HAWAII  
RE: AGENDA ITEM VII #1

As Hawaii's premier and longest standing environmental organization dedicated to minimizing waste and promoting responsible resource management, we take this opportunity to express our unequivocal opposition to Malama One's plans to build a plastic recycling facility here on Hawaii Island. We are grateful to the EMC members for creating an opportunity for our organization and others to go on the record with our concerns. We are pleased to see the EMC taking an interest in the issue and sincerely hope that this hearing is not performative but that the members will take action in their advisory role to protect the public and future generations from the harms posed by this ill-conceived scheme.

The position we take today is founded on the research we have conducted over the past four years, which itself is founded on the even deeper, highly scientific research conducted by leading experts across the world, many of whom are engaged, as are we, in the INC process sponsored by the United Nations Environmental Program. These proceedings, officially titled the "International Negotiating Committee on a global treaty to end plastic pollution including in the marine environment" serve as a nexus of information sharing and solidarity in support of a global, grassroots-driven movement to end plastic pollution.

It is incumbent upon our organization, as Hawaii's leading recycling experts, to inform the public and policymakers about the dangers of plastic recycling. The expectation that we would, or should, blindly support Malama One's scheme is based on the impact decades of propaganda, through which recycling has been promoted as a fantasy solution to the problems caused by wastefulness, has had on our psyches. The ubiquity of chasing arrow symbols next to dolphins and rainbows and smiling suns in Earth Day art is tragic evidence of how deeply this propaganda has invaded the hopes and dreams of our children. The tendency for adults to automatically associate the word 'recycling' with environmental benefits is equally disturbing. As policymakers it is incumbent on us to acknowledge the reality that plastic recycling is a dirty, wasteful, energy intensive industrial process that is increasingly being touted by some of the most egregious polluters on the planet to greenwash and perpetuate their extractive and unsustainable business models.

# EXPOSING THE MYTH OF THE CIRCULAR PLASTICS ECONOMY



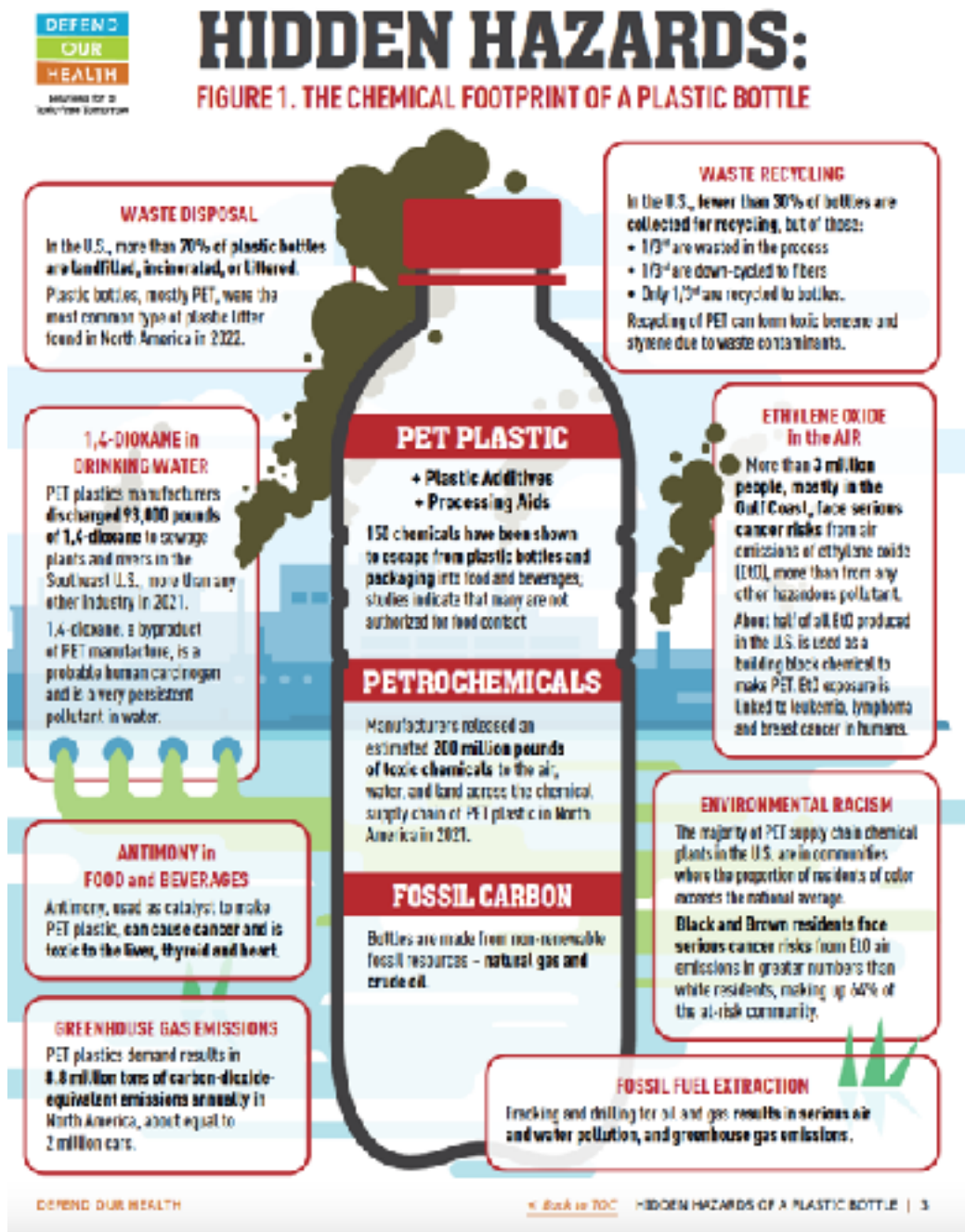
Malama One's claim that their plastic recycling scheme supports Hawaii's transition to a circular economy is patently false. As a substance made from fossil fuels that degrades during the recycling process, plastic does not conform to the most basic circularity standards. In order to meet industry needs, plastic recycling requires the ongoing addition of virgin plastic to compensate for this degradation, and while efforts to increase the durability of plastic for recycling are being made, in the end, these efforts will do more harm than good. The greatest concerns about plastic pollution stem from its persistence in the environment and in animal and plant physiologies. Making it more durable will only worsen these impacts.

A truly circular economy approach emphasizes a fundamental shift that results in reduced consumption and increased investments in closed-loop systems. A closed loop system is one where waste is eliminated, and materials are continuously reused; plastic recycling is not an example of a closed loop system. In fact, PET bottle recycling is a highly wasteful process, with as much as 36% of the PET bottles sent to recycling being wasted in the process, and much of this wastage taking the form of micro and nanoplastic pollution.

<https://www.recyclingtoday.com/news/alpla-coca-cola-femsa-invest-pet-recycling-mexico-plant/>

Similarly, we cannot allow Malama One to dissociate itself from the impacts overall demand for PET has on the environment and human societies. The US EPA recently made the determination that PET poses unreasonable health risks due to the production of 1,4 dioxane during its manufacturing process. This is the first step to banning it entirely.

<https://www.packaginglaw.com/news/epa-issues-new-draft-risk-evaluation-documents-under-tsca-impact-pet-manufacturing>



Malama One's proposed scheme will do nothing to stem Hawaii's reliance on the importation of single-use plastic beverage containers. Rather, it depends on them for feedstock, which is why Malama One is actively, behind the scenes, working to undermine policies that would allow us to break free from our dependence on a highly toxic packaging material that contaminates everything it comes into contact with.



Plastic is not inert. Current research proves that it is more like skin than truly stable materials such as glass, metal and most ceramics. Plastic is constantly sloughing off billions of tiny particles that get ingested and inhaled by all manner of life forms, from microbes to large mammals, and there is a continual exchange between plastic and the substances it comes into contact with, including the food it is used to package. These exchanges involve the movement of a broad variety of chemicals with proven endocrine disrupting properties that get added to the polymers when they are first formed into beverage containers or other forms of packaging.

The Peanuts character Pigpen serves as a handy metaphor for understanding the polluting impacts Malama One's plastic recycling facility will have. This pollution will come not only from the actual recycling process but also from the daily handling of the materials, with each one of the billions of pieces of discarded plastic the plant is sized to process per year acting like a little Pigpen, constantly shedding micro and nano plastic particles as they tumble about within the plant, and with every one of those particles infused with plasticizers and other toxic chemicals.



Then comes the grinding. While Malama One boasts that their proprietary filters are designed to capture “nearly all” of the micro plastic particles that will be released into the process water, the specifications shared to date put this filtration capacity at 50 microns or greater. This means anything smaller is free to circulate in the process water and implies that no effort is being made to capture particles released into the air. When it comes to plastic pollution, it is the smallest particles that pose the greatest threat as they are the ones penetrating the physical barriers that protect biological systems and the unborn life gestating within them. It is important to note that nanoplastic particles are typically classified as those that are 1 micron or smaller.

In defense of its choice to use plastic containers, Malama One relies on life cycle analyses (LCAs) that rate plastic containers as having less impact on climate than glass or metal, but these simplistic analyses dismiss the issue of microplastic pollution upfront (since glass and metal offer no comparison in that regard) and focus almost entirely on greenhouse gas emissions. In prior discussions with Malama One, its founder Ryan Emmonds, shared a link to an LCA produced by McKinsey & Company. Although it is widely cited by the beverage industry as proof that plastic beverage containers are a better choice for the environment, the LCA’s conclusions fail to account for the total impact on climate, including the GHG emissions at the fossil fuel extraction and end-of-life phases, as well as ocean pollution, the proliferation of micro and nanoplastics, plastic’s toxicity and its impacts on human health, including those that occur during the production phase.



It is important to note that McKinsey & Company is the same firm that provided opioid manufacturers with the analyses they used to declare their products nonaddictive, a fraud for which they were ordered by the U.S. Justice Department in December 2024 to pay \$350M in fines.





In response to Malama One's claims about the high quality employment they will provide, we point to the reality of what standing at a conveyor belt for eight hours a day, five days a week will feel like for the people compelled to take these jobs. We point to the lack of concern about the chemically-contaminated micro and nano plastic pollution that will be generated and inhaled by workers when the constantly-shedding waste plastic is shuffled about in the plant. We point to the lack of concern about the micro and nano plastic pollution that will NOT be captured by filters

designed to trap particles 50 microns or greater in the process water. We point also to the fact that the same, or possibly more, jobs could be created through investments in reuse infrastructure and the assurance that, regardless of the number created, the quality of those jobs would be far higher.

Malama One and its partner Waiakea Water are in a unique position to support Hawaii's transition to a circular economy by abandoning their proposed plastic recycling scheme and investing instead in reuse infrastructure. We call on everyone who shares Recycle Hawaii's commitment to reducing waste and protecting the environment to join us in supporting this outcome.



We conclude our testimony with a list of just some of the conditions associated with micro and nano plastic pollution that could potentially impact workers at the facility and members of the surrounding community if this project is allowed to proceed.

**Here are some of the conditions that are related to micro- and nanoplastics:**

- *Respiratory disorders:* Inhaling plastic particles can cause **inflammation and damage** in the lungs and airways, leading to coughing, sneezing, shortness of breath, fatigue, and dizziness.
- *Cancer:* Plastic particles can trigger **uncontrolled cell proliferation and tissue growth**, leading to many cancers, including those affecting the lungs, blood, breasts, prostate, and ovaries.
- *Heart disease:* Plastic particles can be found in artery plaques, which can increase the risk of heart attack and stroke.
- *Immune system dysfunction:* Plastic particles can make us more **susceptible to infections**, including the flu, and increase the risk of autoimmune diseases.
- *Obesity:* Plastics makes us fatter by increasing **fat absorption by an astonishing 145%**.
- *Inflammation:* Plastics can cause **chronic inflammation**, which is linked to cancer, heart disease, inflammatory bowel disease, and rheumatoid arthritis.
- *Hormonal and reproductive system issues:* Plastics can leach out chemical additives that can harm the hormone and reproductive systems, resulting in **infertility in women and poor sperm quality in men**.
- *Gut microbiome dysfunction:* Plastics shift the gut microbiome into an unhealthy state by mimicking or attaching to its microbes. The risks come not just from the micro- and nanoplastics themselves, but also from the **synthetic chemicals and heavy metals** they contain.

Given Malama One's decision to withhold information and refrain from conducting public outreach, we are calling on the EMC to take the lead on informing policymakers and relevant stakeholders regarding the concerns we have raised. Recycle Hawaii calls upon the EMC to raise the following questions with Malama One as a follow up to this initial proceeding. We also ask that the EMC share these questions with the Hawaii State Department of Health, which is currently in the process of determining what permits Malama One will need to operate their proposed plastic recycling plant.

- 1) What size microplastic particles will the proposed system capture? How will they be handled? What provisions will be made to capture smaller sized particles from the process water? What provisions will be made to capture airborne microplastic particles?
- 2) How will Malama One remove PVC labels from the discarded plastic feedstock it collects to ensure that the toxic byproducts formed when processing PVC are not introduced into the process water or added to the recycle?
- 3) What protective equipment will Malama One employees be required to wear in order to prevent exposure to micro and nanoplastic pollution? What disclosures regarding risks associated with exposure to micro and nanoplastic pollution will be made to employees?
- 4) What testing of the environment surrounding the facility will be done to establish a baseline that makes monitoring for increased microplastic pollution possible?
- 5) What monitoring for microplastic pollution will be conducted and by whom?
- 6) Where will the facility be located?
- 7) What plans does Malama One have to conduct public outreach and inform the surrounding community about the proposed construction, including potential risks?
- 8) Does Malama One support policies designed to phase out Hawaii's use of single use plastic packaging?
- 9) Is Malama One willing to make a legally binding commitment to prevent the leakage of micro and nanoplastic particles into the environment?

Given the concerns expressed above, it is our position that the state department of health and relevant county agencies should not allow the construction of the Malama One facility to proceed until rules governing the regulation of micro and nanoplastic pollution are promulgated. Until then, every measure Malama One proposes to take to mitigate such impacts is completely voluntarily which means that they could, at any time and for any reason, decide to stop taking them with no legal consequences.

Respectfully submitted,

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