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## Opponent Testimony to SB 222

The Ohio Senate Local Government  
Public Safety and Veterans Affairs Committee

This testimony is in opposition to SB 222 which will “preempt local regulation of auxiliary containers and carryout bags” by taking away the constitutionally-granted authority of local governments to establish local fees or taxes on “auxiliary containers including carryout bags, bottles, cans, cups, takeout containers, straws and other items used to transport food.

Once again, Ohio’s politicians are ignoring science-based studies and the growing evidence of the dangers of single-use plastics. The Great Lakes, especially Lake Erie, have become a victim of our overzealous and negligent use of plastics.

During their 2017 litter pick-up called “Adopt-a-Beach”, volunteers for Alliance for the Great Lakes recovered whole in-tact items such as bags, caps, straws, and bottles. Over 85 percent of the litter picked up was composed “partially or fully of plastic.” A study in the Journal of Great Lakes Research believes “it will cost in an excess of \$400 million annually to combat and curtail plastic pollution in the Great Lakes.”

A 2017 article published in the Marine Pollution Bulletin states that the Great Lakes receive about 11,000 tons of plastics a year. Plastic waste is washed into sewer pipes from our homes and businesses. Trash from streets is carried into storm drains. Run-off from landfills carries wastes into sewers. Beachgoers and local neighborhoods are responsible for windblown trash like plastic bags and single use food containers making their way into the lake.

The majority of plastic pollution in the Great Lakes does not reach the oceans. The plastic can simply stay suspended in the water column, sink to the sediment below or it can be broken down via mechanical weathering and UV light. It then becomes a microplastic; a much more dangerous type of plastic.

These are particles that are smaller than 5 millimeters in size, about the size of the top of a pushpin. In a study of marine organisms performed by researchers at the University of Toronto, microplastics were found in all fish tested. Another study, published in the Public Library of Science, tested twelve breweries that use municipal water from the Great Lakes, and found that all had plastic particles in their beers.

Complete “mineralization”, where a product is broken down into carbon dioxide, water and other inorganic molecules, happens only after hundreds or thousands of years of exposure to sun and weathering. Therefore, plastics never truly “go away”.

A 2015 article in the Journal of Great Lakes Research said, “Among Lakes Superior, Huron and Erie, the highest concentration of microplastics was found in Lake Erie.” Available data on freshwater lakes around the world shows that Lake Erie “exhibits the highest average concentration of microplastics.” This is especially disturbing because these plastics are carbon based and can carry toxic substances such as polycyclic aromatic hydrocarbons and polychlorinated biphenyls into the food chain. Both compounds are capable of causing cancer and birth defects. Studies are now underway to determine the potential for these compounds to be transferred to humans via consumption of fish and other organisms.

The complete life cycle of plastics is full of externalities., This includes fracking to obtain the ethane gas used to make these single-use plastic items. Additionally, studies show the plasticizers found in plastics can cause endocrine disruption and are implicated in the over fifty percent drop in sperm counts and the de-masculinization of human males.

Plastic bags and Styrofoam containers take up to 1000 years to decompose, if ever. We cannot keep ignoring this problem which other countries and other states in the USA are working towards bans and phasing out of single use plastics. Ohio has a limited amount of landfill capacity (less than 40 years).

Recycling will not solve this problem, as USA’s citizens recycle about nine percent of their wastes. Additionally, markets for these items have “dried up” as China and Malaysia will no longer accept our plastic wastes.

As a scientist, a mother, a grandmother, and a life-long citizen of Ohio, I am appalled at the lack of science literacy demonstrated when addressing issues that threaten our lives and the environment. Once again, this bill proves that Ohio wants to remain in the past and ignore the problems created by single-use plastics.

I strongly oppose SB 222.

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