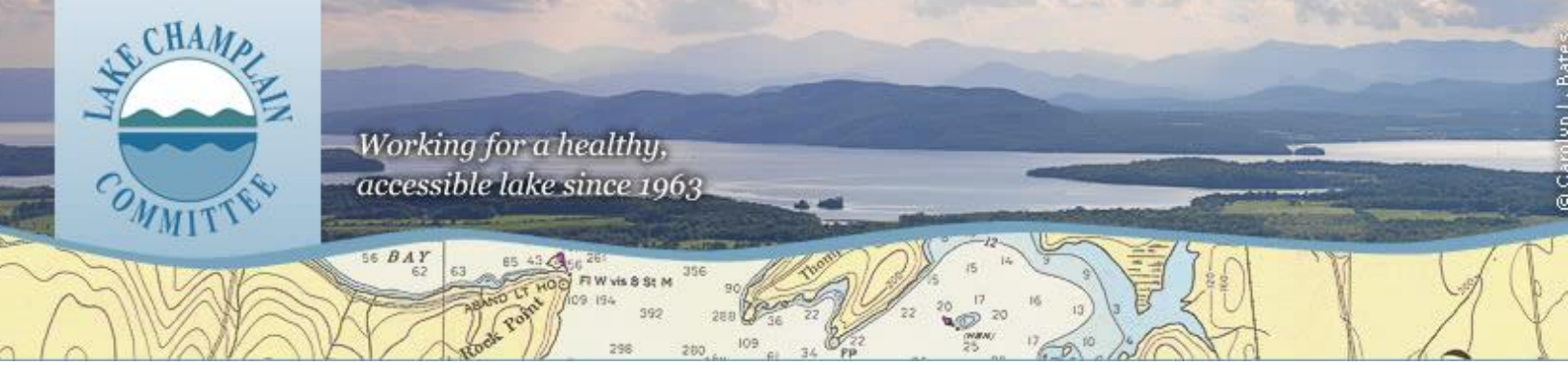


January 14, 2015

**LCC Testimony to House Fish, Wildlife and Water Resources Committee in support of H.4**

Chairman Deen, Vice Chair McCullough, members of the Committee, my name is Lori Fisher and I am Executive Director of the Lake Champlain Committee (LCC). LCC is a bi-state, non-profit watershed organization that has worked for over 50 years to protect and improve water quality. As an organization focused on water we have been concerned over the use of microbeads in hygiene and other products and strongly support the bill to prohibit the manufacture and sale of personal care products and over-the-counter drugs that contain them.

Our reasons for supporting a ban are multi-fold:

**1) Plastics have no place in our waterways. They harm fish, wildlife and ecosystem health.**

There are numerous studies documenting the physical and toxicological effects of plastic debris in the environment. Scientists project that plastic can persist for centuries. Microplastics are of particular concern because they have the potential to be ingested by a much wider range of organisms than large plastic debris making them and the chemicals they carry bioavailable throughout the food chain.

- Microbeads are most commonly composed of polyethylene or polypropylene, are often spherically shaped, and buoyant.

- Some microbeads are the size of fish eggs. Larger fish and other aquatic organisms ingest them thinking they are food. This can cause internal abrasions and blockages resulting in reduced food consumption, stunted growth and starvation. When plankton, mussels or fish fill up on plastic junk food they are likely to lose their appetite for healthier food. *A study conducted by Dutch scientists found that mussels fed tiny nanoparticles of polystyrene ate less and grew less.*

- Other research indicates that microplastics pass from a species' digestive tract to its circulatory system and are transferred from prey to predator.

- Plastics absorb toxins such as PAHs, PCBs and DDT, making them more readily available in the food chain. These chemicals are hydrophobic pollutants, when they are in water they adhere to plastics or sediment. When they attach to a buoyant microbead they have a greater ability to disperse. Hydrophobic pollutants accumulate in animals, are passed on to larger predators and can eventually contaminate fish and wildlife humans eat. These pollutants can trigger health effects including cancer, learning and growth problems in children, and birth defects.

**2) We don't need microbeads to get our faces, teeth or bodies clean.**
There are plenty of alternative products that have been used for years that do a fine job of keeping us clean and hygienic without degrading our waterways, taxing our public wastewater treatment facilities, and confusing the fish.

Seventh Generation, Aveda, St. Ives, Burt's Bees brands and many others already use natural products such as ground nut shells, jojoba, oatmeal, sea salt, or almond meal as natural exfoliates.

**3) Microbeads cannot be removed from our waters once they are released. We must keep them from getting to the water in the first place.**
Unlike most other microplastics, which result from plastic litter that has broken down over time, microbeads are actually *designed* to go down our drains and through our pipes with no possibility of recovery or recycling. Once they do, they're small enough to pass through the filters in wastewater-treatment systems—and right into our waterways. Very few sewage treatment plants have the technology to capture these tiny plastics. Some Vermont treatment plants filter water through coarse (greater than 6 mm) or fine (1.5 - 6 mm) screens but very few have cloth filtration that can trap fine particles. Microbeads range in size and shape but are usually one millimeter or smaller.


*Photos courtesy of Alliance for the Great Lakes.*

Microbeads can also enter waterways through combined sewer overflows that bypass wastewater treatment systems during periods of heavy storms.

Microbeads have been found in waters of each of the Great Lakes. The concentration increased from Lake Superior to Lake Huron to Lake Erie to Lake Ontario. The Great Lakes contained some of the highest concentrations of plastic pollution anywhere in the world.

Manufacturers that use microbeads in their personal care products are doing so with disregard for their disposal and the ability to recover, recycle or prevent them from entering the environment.

Microbeads used in personal care products and over-the-counter drugs are unnecessary and unwise and Vermont should ban them.

Thank you for the opportunity to comment on this bill. Please contact us if we can be a resource for your deliberations.

**Sources:**

1) May 2014 NY Attorney General's Report, **Unseen Threat: How Microbeads Harm New York Waters, Wildlife, Health and Environment**

2) A. Wegner, E. Besseling, E.M. Foekema, P. Kamermans, A.A. Koelmans. **Effects of nanopolystyrene on the feeding behavior of the blue mussel (Mytilus edulis L.)**. *Environmental Toxicology and Chemistry*, 2012; DOI: 10.1002/etc.1984

**Lake Champlain Committee ~ 208 Flynn Avenue, Building 3, Studio 3F ~ Burlington, VT 05401**
**802-658-1414 ~ lcc@lakechamplaincommittee.org ~ www.lakechamplaincommittee.org**