



Testimony on HB 216
Personal Care Products Containing Synthetic Plastic Microbeads – Prohibition on Manufacturing or Sale
Position: Favorable with Amendments

February 18, 2014
Environment & Transportation Committee
Maryland House of Delegates

Good afternoon, Chairman Barve and members of the committee. My name is Julie Lawson. I am Director of Trash Free Maryland, a network of organizations and businesses that work to reduce and prevent trash pollution in our state's neighborhoods and waterways. Our members are becoming increasingly concerned about microplastics that are persisting in local waters. Plastic pellets are known to absorb toxic chemicals from the water in a matter of days¹, so whether our issue is urban litter or plastic in wastewater, the public health impacts of plastic pollution are coming into focus.

Last fall we worked with the 5 Gyres Institute to conduct a short survey of the Chesapeake Bay to begin to learn more about the scope of microplastics pollution in the Bay. We sailed from Deale for four days in November. Using a manta trawl, we collected seven samples. The trawl has a 20x60 centimeter opening, trailed by a 330 micron net—it effectively collects everything but water in a narrow strip across the surface of the water. We dragged the trawl for an hour at 2 knots, and then packed the solids we collected in jars, preserving them with rubbing alcohol. All seven samples included microbeads, identifiable by their consistent size and spherical shape. The sample from the first day, when we had calm seas and the most placid weather, very clearly shows that the Bay has a bead problem. Stiv Wilson, who has sailed more than 20,000 nautical miles with 5 Gyres, said the amount of plastic we collected in the Bay was significantly higher than anything he has seen in the ocean garbage patches.²

While our initial survey did not yield enough samples to scientifically answer our questions about the amount of plastic polluting the Bay, it definitely indicated a problem. We also can hypothesize that plastic exists in various parts of the water column, given the varying salinity around the Bay and the lateral and vertical currents. We are making plans for a longer excursion this summer to learn more.

Given our initial findings in the trash trawl, we are very happy that Delegate Morhaim has raised the issue of microbeads for a broad public discussion. Public education is going to be key—we can push manufacturers to reformulate their products if consumers shift their behavior toward products with alternative ingredients. But even our best citizen activists and professional advocates were not aware of the impact their own product use is having on local waters, so education alone is a very long-term strategy. We are glad that many manufacturers have voluntarily agreed to reformulate their products, but each day that passes is another day that hundreds of thousands of these beads enter the water and then enter our food chain. Meaningful bans on such products passed in enough states will push for that product change sooner.

1. <http://cen.acs.org/articles/90/web/2012/08/Ocean-Plastics-Soak-Pollutants.html>

2. http://www.bayjournal.com/article/every_little_bit_counts_microplastics_plague_chesapeake_waters

I want to highlight two aspects of the bill language that prevent the ban from having the environmental impact that it implies. I have also suggested amendments to address these concerns:

- **Definition of allowed and disallowed particles.** The optimal reformulation of these products will use truly natural ingredients to achieve the exfoliating effect. Materials like oatmeal, nut shells, fruit pits, sugar, salt, and sand are already in use in a number of products. We would prefer if the bill language made this intention clear. As written, it allows for the use of bioplastics like polylactic acid. You may think of “corn cups” or other plastic-like cups that are labeled as compostable, which are made of the same material. Unfortunately PLA and polyhydroxyalkanoates (PHA) do not actually biodegrade except in industrial composting facilities where they are processed under high heat. Microbeads that wash down the bathroom sink into wastewater treatment and eventually to local waters never get close to the temperatures required to biodegrade. In the water, they behave the same way as other plastics, absorbing chemicals from the surrounding water and then eaten by marine life. No standard currently exists for marine biodegradation of plastics.³

The phrase “retain a defined shape during their life cycle and after disposal” doesn’t apply to petroleum-based plastics either, as they photodegrade into smaller pieces and fragments break off, or they are nibbled at by marine life.

Because the intent of this effort is to stop the flow of persistent pollution from exfoliants, we urge the committee to specify what the allowed replacement materials are and ensure that they are not at risk of harming water quality or the marine life exposed to them.

- **Extended timeline for over-the-counter drugs.** The bill as written bans the sale of personal care products containing disallowed microbeads after December 31, 2018, unless that product is classified as an over-the-counter drug. OTC drugs are given an additional year. Unfortunately the vast majority of products that contain these beads are OTC drugs, and most consumers don’t recognize a difference. A face wash with salicylic acid is an OTC drug. Dandruff shampoo that contains pyrithione zinc is an OTC drug. Toothpaste that contains fluoride is an OTC drug. But most consumers do not realize this distinction. If the Maryland Department of Environment is expecting to enforce this ban on a complaint basis, I foresee a lot of false complaints if the two classes of products have different timelines.

We urge the committee to set 2018 as the deadline for all products that contain microbeads.

Again, we are very glad to see the Assembly taking up this issue and recognizing the risks microplastics pose for the Chesapeake Bay and our fisheries and strongly support the effort to stop microbead pollution. I hope the committee will consider our amendments in order to have the impact our waters need. Thank you for your time, and I look forward to any questions.

3. <http://www.calrecycle.ca.gov/publications/Documents/1435%5C20121435.pdf>

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