

SUBMISSION OF
LAKE ONTARIO WATERKEEPER
OTTAWA RIVERKEEPER
FRASER RIVERKEEPER
NORTH SASKATCHEWAN RIVERKEEPER

**RE: Proposed Regulations for Microbeads
in Personal Care Products Used to Exfoliate or Cleanse**

Submitted to:

Products Division
Environment and Climate Change Canada
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Via email: ec.produits-products.ec@ecanada.ca

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Overview

Lake Ontario Waterkeeper, Ottawa Riverkeeper, Fraser Riverkeeper and North Saskatchewan Riverkeeper (“the Submitters”) strongly support the decision to develop regulations to eliminate the use of microbeads in personal care products. One of Environment and Climate Change Canada’s objectives in the consultation process is to receive public input on the proposed regulations. At this point, the Submitters wish to comment on three aspects of the proposed regulations: 1) the revised definition of microbeads, 2) the proposed timeline for the introduction of the regulations, and 3) the decision to include biodegradable plastics in the prohibition.

Background

Lake Ontario Waterkeeper is a grassroots environmental organization that uses research, education, and legal tools to protect and restore the public’s right to swim, drink, and fish so that communities may prosper. In addition to their national initiatives, Waterkeeper is responsible for protecting and celebrating the Lake Ontario watershed, including the wetlands, streams, rivers, and creeks that flow into the lake. The watershed provides essential ecosystem services to millions of people, including millions of Americans and Canadians who depend on Lake Ontario for drinking water.

Ottawa Riverkeeper is a grassroots charity formed in 2001 to protect, promote and improve the health and future of the Ottawa River and its tributaries. Ottawa Riverkeeper works collaboratively to inspire others to take action, to encourage responsible decision making, to hold polluters accountable and to recommend alternative practices and policies to safeguard our local waterways. They are first responders on the river to investigate spills and harmful pollution that may impact aquatic life and public health.

Fraser Riverkeeper is dedicated to the protection and restoration of the Fraser River and its watershed. Their encompassing mission is to ensure the right of all citizens to safely swim, drink, and fish in BC waters. Fraser Riverkeeper is committed to working with the community to develop long-term strategies to protect native fish populations and the habitat they depend on. The organization’s goal is to speak for the wild species that depend on the Fraser watershed, and empower citizens to defend our natural right to swimmable, drinkable, fishable waters. Its role is to ensure that our rivers, lakes, streams and beaches exist for generations to come as thriving ecosystems for both humans and wildlife.

North Saskatchewan Riverkeeper is a local water body preservation group based in Edmonton dedicated to being a united voice of the North Saskatchewan River watershed and community. North Saskatchewan Riverkeeper works to restore, preserve and protect the water quality and biodiversity of the watershed through actions that inform, connect and protect the North Saskatchewan River watershed.

Comments on the Proposed Regulations

1) The revised size range for microbeads is too narrow and undercuts the goal of the proposed regulations

When microbeads were proposed for addition to Schedule 1 of CEPA in August 2015 they were defined as “synthetic polymer particles that, at the time of their manufacture, are greater than 0.1 µm and less than or equal to 5 mm in size”. The current proposal indicates that the definition of microbeads will be narrowed to “plastic microbeads that are < 0.5 µm but ≤ 2mm in size”. The Submitters are disappointed by the restriction in the size covered by the revised definition. The Submitters believe that a prohibition on all plastic microbeads that are less than or equal to 5mm in size is both necessary and feasible for the following reasons:

i) Nanoplastics present an environmental risk that is equal to, or possibly greater than, the risk posed by larger microbeads

Although the term microbeads has no established size cutoff, plastic particles that range from 0.01µm to 1 µm are sometimes referred to as nanoplastics, ‘nanospheres’ or ‘nanocapsules’.¹ Excluding plastics that are smaller than 0.5 µm from the definition of microbeads will leave the door open for a range of nanoplastics to be used in personal care products. This is problematic since nanoplastics possess the same qualities that make larger microbeads harmful to the environment:

- 1) they persist in aquatic environments for extremely long periods of time;²
- 2) once released, they are nearly impossible to remove from the environment;³
- 3) they can be uptaken by a variety of aquatic taxa including plankton, mussels, fish, birds and mammals;⁴

¹ United Nations Environment Programme. 2015. Plastics in Cosmetics, at 11.

² Ibid, at 17.

³ Ibid, at 14.

⁴ Ibid at 19; Ivar do Sul JA, Costa MF. 2014. The present and future of microplastic pollution in the marine environment. Environmental Pollution 185: 352-364

- 4) they can adsorb toxins like PCBs, DDT, PBDEs and polycyclic aromatic hydrocarbons. When ingested by aquatic organisms nanoplastics can introduce these toxins into the organism and may promote bioaccumulation. There is some evidence indicating that nanoplastics may have a greater potential to adsorb toxins than microplastics due to their higher surface area to volume ratio.⁵

Finding reliable information on the presence of nanoplastics in personal care products is difficult. However, the personal care product industry makes use of a range of ‘nanoparticles’, and it is possible that nanoplastics are currently being used in a variety of personal care products.⁶ Even if nanoplastics are used in smaller quantities than larger microbeads, they should be subject to the prohibition since they pose the same risks and have the potential for long-term persistence and accumulation.

ii) A definition with a restricted size range will create potential loopholes and has the potential to incentivize the use of nanoplastics

The proposed definition of microbeads would allow personal care products containing plastics to be sold so long as they contain plastics that are over 2mm in diameter or under 0.5 µm in diameter. This creates an obvious and potentially significant loophole. Of particular concern to the Submitters is the fact that a prohibition that narrowly defines microbeads could incentivize the use of nanoplastics, since their use would remain permissible.

iii) The Microbead-Free Waters Act defines microbeads broadly

The Microbead Free Waters Act of 2015 defines microbeads as “any solid plastic particle that is less than five millimeters in size and is intended to be used to exfoliate or cleanse the human body or any part thereof”.⁷ This definition will apply to the US personal care industry, which is larger than Canada’s industry and includes some of the same products and corporate stakeholders. It is reasonable to assume that if the US personal care product industry will be able to accommodate this broader prohibition, Canada’s industry will be able to do the same. The Submitters take the position that regulatory alignment between Canada and the United States on this point would be both possible and desirable.

⁵ United Nations Environment Programme. 2015. *Plastics in Cosmetics*, at 24.

⁶ Environmental Working Group. 2006. *A Survey of Ingredient in 25,000 Personal Care Products Reveals Widespread Use of Nano-Scale Materials, Not Assessed for Safety, in Everyday Products*. Comments to US Food and Drug Administration.

⁷ H.R. 1321 — 114th Congress: Microbead-Free Waters Act of 2015

Summary

During the stakeholder meeting on February 22nd the revised definition of microbead was mentioned only briefly. According to Environment and Climate Change Canada the change in language was due to concerns from industry, namely that the existing “definition covered a very broad scope of plastics including the raw materials used by the plastics industry”.⁸ This explanation is confusing. The proposed prohibition is targeted at personal care products. It would not prevent the manufacture, import or use of raw materials (such as plastic nurdles) that fall within the definition of microbeads. It would only prohibit the introduction of such raw materials in personal care products, since this is the purpose of the proposed regulations.

The Submitters urge Environment and Climate Change Canada to revise the definition of microbeads to “plastic microbeads that are less than or equal to 5 mm in size”. This definition would harmonize the Canadian definition with the US definition and would ensure that nanoplastics are not used in personal care products. If Environment and Climate Change Canada decides to keep the proposed definition, the Submitters would appreciate being informed of the rationale behind the decision, since, as noted, the explanation given during the consultation process was confusing.

2) The timelines should be harmonized with the Microbeads-Free Waters Act

The timelines set out in the proposed regulations are six months behind the timelines set out in the *Microbead-Free Waters Act of 2015* for both cosmetics and non-prescription drugs. During the stakeholder meeting on February 22nd, 2016 Environment and Climate Change Canada indicated that the regulatory process is already being expedited to keep pace with the initial timelines set by Illinois and other US states that enacted laws to ban microbeads in personal care products. The Submitters understand that passing regulations is a time-consuming process. However, in this instance the relative simplicity of the change, and the risks associated with delay, warrant synchronising Canada’s timelines with the US federal timelines.

Prohibiting microbeads in personal care products within the timelines set out in the American federal legislation will not place an undue burden on industry

Prohibiting the use of microbeads in personal care products does not require a complicated regulatory change or place an undue burden on industry. Prior to the proposed CEPA listing, some companies that operate in Canada were already pledging to eliminate the use of microbeads

⁸ Mary Ellen Perkin, on behalf of Environment Canada, during the Stakeholder meeting on February 22nd, 2016.

in personal care products.⁹ Microbeads can be replaced with natural alternatives like almond or walnut shells and jojoba beads, which have been used in personal care products for years and have well-understood properties. Against this backdrop, the Submitters would suggest that moving the timeline forward by six months will not place an undue burden on industry. Many of the products being re-formulated to meet the timelines of the American federal prohibition on microbeads will undoubtedly also be used in the Canadian market.

The proposed timelines will cause unnecessary harm to Canada's aquatic ecosystems

Microbeads persist in aquatic environments and accumulate over time. Harmonizing Canada's timelines with the *Microbead-Free Waters Act* will provide a tangible benefit: it will reduce the amount of microbead containing products that will be manufactured, sold, used and ultimately released into Canadian waters. Allowing the proposed regulations to come into effect six months after the US law will make Canada a potential dumping ground for products that can no longer be sold in the United States. As a result, the six month delay could encourage sales and promotions of microbead containing products in Canada, resulting in an increase in use just before the ban. Since the prohibition does not apply to end use, the consequences of a surge in sales could potentially persist well beyond the sixth month regulatory lag.

Summary

The Submitters urge Environment and Climate Change Canada to harmonize the regulatory timelines for the prohibition with the US federal timelines. Doing so could avoid the introduction of a significant quantity of microbeads into Canadian waters without undue inconvenience to industry.

3) The Submitters support the decision to have the prohibition cover biodegradable plastics

The Submitters commend Environment and Climate Change Canada for crafting a definition of microbeads that includes so-called biodegradable plastics and does not contain any exclusions. The Submitters believe that this an appropriate, precautionary approach.

To date, little is known about how long purportedly biodegradable plastics persist in aquatic environments. While some plastics do break down over a relatively short timeframe in composts

⁹ See, for example: CBCnews: "Plastic microbeads polluting St. Lawrence River, McGill researchers find". Published: September 26, 2014. Available at: <http://www.cbc.ca/news/canada/montreal/plastic-microbeads-polluting-st-lawrence-river-mcgill-researchers-find-1.2779096>

bins or landfills the rate of degradation can be far slower in aquatic environments.¹⁰ Additionally, there is evidence to suggest that biodegradable plastics pose the same risks to aquatic life as conventional microbeads.¹¹ For these reasons the Submitters believe that it is essential for Environment and Climate Change Canada to ensure that the prohibition unambiguously applies to biodegradable and traditional plastics alike.

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¹⁰ Green DS, Boots B, Sigwart J, Jiang S, Rocha C. 2016. Effects of conventional and biodegradable microplastics on a marine ecosystem engineer (*Arenicola marina*) and sediment nutrient cycling. *Environmental Pollution*, 208:(B), 426-434.

¹¹ NOAA Marine Debris Program, What we know about: plastic marine debris. Available at: <http://marinedebris.noaa.gov/info/plastic.html>