

www.ecojustice.ca  
info@ecojustice.ca  
1.800.926.7744

March 23, 2015

VANCOUVER  
214 – 131 Water Street  
Vancouver BC V6B 4M3  
T 604.685.5618  
F 604.685.7813

TORONTO  
Centre for Green Cities  
401 – 550 Bayview Avenue  
Toronto, ON M4W 3X8  
T 416.368.7533  
F 416.363.2746

OTTAWA  
University of Ottawa  
LeBlanc Residence, 107  
35 Copernicus Street  
Ottawa, ON K1N 6N5  
T 613.562.5800 x 3382  
F 613.562.5184

CALGARY  
900 – 1000 5th Avenue SW  
Calgary, AB T2P 4V1  
T 403.705.0202  
F 403.264.8399

## BY E-MAIL

Hon. Leona Aglukkaq  
Minister of the Environment  
Environment Canada  
Les Terrasses de la Chaudière  
10 Wellington Street, 28th Floor  
Gatineau, Quebec K1A 0H3

Dear Minister Aglukkaq:

**Re: Request for Addition of Plastic Microbeads in Personal Care Products to Priority Substances List Pursuant to s. 76(3) of the *Canadian Environmental Protection Act, 1999***

I am writing on behalf of Environmental Defence, Lake Ontario Waterkeeper (“LOW”), and Ottawa Riverkeeper to request, pursuant to subsection 76(3) of the *Canadian Environmental Protection Act, 1999* (“CEPA”), that plastic microbeads used in personal care products be added to the Priority Substances List. This correspondence also serves to bring to the Minister’s attention other legislative provisions in CEPA that may have been triggered and may, therefore, require action in relation to plastic microbeads.

## I. Requestors

**Environmental Defence** has been working since 1984 to protect the environment and human health. As a registered charity, they challenge, and inspire change in government, business and people to work towards a greener, healthier and prosperous life for all.

Protecting freshwater resources is one of Environmental Defence’s four strategic priorities as an organization. The program focuses on educating people about the need for safer, cleaner water and the steps Canada can take to protect its Great Lakes and St. Lawrence River. It builds public support for lake-friendly decisions.

Environmental Defence is Canada’s official National Operator of the Blue Flag program, an international certification standard for clean beaches. Through the

program they work directly with communities across the country to ensure Canada's beaches meet strict criteria for water quality, environmental education, environmental management, and safety and services. The Blue Flag program mandates Environmental Defence to work regularly and closely with municipalities to address environmental issues at the local and regional levels.

More specifically, Environmental Defence is engaging on the microbeads issue in a number of different ways. We are raising public awareness through the use of social media, blogs, a petition, and other educational materials. This fits into the broader issue of protecting the health of the Great Lakes from a various sources of pollution, including plastic pollution.

**Lake Ontario Waterkeeper (LOW)** is a registered charity dedicated to working in the public interest by advocating for and protecting people's right to safely swim, drink, and fish in the Lake Ontario watershed. As a grassroots environmental organization, they empower people in order to stop pollution, protect human health, and restore habitat.

Since LOW was founded in 2001, they have contributed to over 100 formal decision-making processes before provincial and federal boards and tribunals as well as all levels of court including the Supreme Court of Canada. They have had extensive experience facilitating expert research, providing recommendations on terms and conditions of project approvals, and evaluating the risks of various projects to watersheds and community values.

**Ottawa Riverkeeper** was founded in 2001. It is a grassroots charity formed 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.

## **II. Legislative Framework**

The primary stated purpose of *CEPA* is to contribute to sustainable development through pollution prevention. In administering the Act, subsection 2(1) of *CEPA* imposes certain duties on the Government of Canada, including the following:

*(a) exercise its powers in a manner that protects the environment and human health, applies the precautionary principle that, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation, and promotes and reinforces enforceable*

*pollution prevention approaches*<sup>1</sup>;

*(a.1) take preventive and remedial measures to protect, enhance and restore the environment*<sup>2</sup>;

...

*(j) protect the environment, including its biological diversity, and human health, from the risk of any adverse effects of the use and release of toxic substances, pollutants and wastes*<sup>3</sup>;

...

*(k) endeavour to act expeditiously and diligently to assess whether existing substances or those new to Canada are toxic or capable of becoming toxic and assess the risk that such substances pose to the environment and human life and health*<sup>4</sup>.

Section 76 of *CEPA* provides for the establishment of a Priority Substances List with respect to the assessment of substances:

### ***Priority Substances List***

*The Ministers shall compile and may amend from time to time in accordance with subsection (5) a list, to be known as the Priority Substances List, and the List shall specify substances in respect of which the Ministers are satisfied priority should be given in assessing whether they are toxic or capable of becoming toxic.*<sup>5</sup>

Subsection 3(1) of *CEPA* defines a “substance” as “any distinguishable kind of organic or inorganic matter, whether animate or inanimate” and includes for the purposes of section 76:

*(a) any matter that is capable of being dispersed in the environment or of being transformed in the environment into matter that is capable of being so dispersed or that is capable of causing such transformations in the environment*<sup>6</sup>;

...

*(f) any manufactured item that is formed into a specific physical shape or design during manufacture and has, for its final use, a function or functions dependent in whole or in part on its shape or design*<sup>7</sup>; and

*(g) any animate matter that is, or any complex mixtures of different molecules*

---

<sup>1</sup> *CEPA*, s.2(1)(a).

<sup>2</sup> *CEPA*, s. 2(1)(a.1).

<sup>3</sup> *CEPA*, s. 2(1)(j).

<sup>4</sup> *CEPA*, s. 2(1)(k).

<sup>5</sup> *CEPA*, s. 76(1).

<sup>6</sup> *CEPA*, s. 3(1) “substance”, paragraph (a).

<sup>7</sup> *CEPA*, s. 3(1) “substance”, paragraph (f).

*that are, contained in effluents, emissions or wastes that result from any work, undertaking or activity*<sup>8</sup>.

Pursuant to subsection 76(3) of *CEPA*, any person may request the addition of a substance to the Priority Substances List:

***Request for addition to Priority Substances List***

*Any person may file in writing with the Minister a request that a substance be added to the Priority Substances List and the request shall state the reasons for adding the substance to the List.*<sup>9</sup>

Subsection 76(4) of *CEPA* provides that the Minister must respond to such a request with reasons within 90 days:

***Consideration of request***

*The Ministers shall consider a request filed under subsection (3) and, within 90 days after the request is filed, the Minister shall inform the person who filed the request of how the Minister intends to deal with it and the reasons for dealing with it in that manner.*<sup>10</sup>

Section 64 of *CEPA* defines a substance as toxic:

***Toxic substances***

*... if it is entering or may enter the environment in a quantity or concentration or under conditions that:*

- (a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;*
- (b) constitute or may constitute a danger to the environment on which life depends; or*
- (c) constitute or may constitute a danger in Canada to human life or health*<sup>11</sup>.

Section 75 of *CEPA* also provides for the exchange of information with other jurisdictions regarding substances that have been prohibited or substantially restricted for environmental or health reasons. Jurisdictions, for the purposes of section 75 include, “the government of a foreign state or of a subdivision of a foreign

<sup>8</sup> *CEPA*, s. 3(1) “substance”, paragraph (g).

<sup>9</sup> *CEPA*, s. 76(3).

<sup>10</sup> *CEPA*, s. 76(4).

<sup>11</sup> *CEPA*, s. 64.

state that is a member of the Organization for Economic Co-operation and Development”<sup>12</sup>. Subsection 75(3) provides the review of decisions by other jurisdictions to prohibit or substantially restrict a substance for environmental or health reasons:

***Review of decisions of other jurisdictions***

*Where the Minister is notified in accordance with procedures developed under subsection (2) of a decision to specifically prohibit or substantially restrict any substance by or under the legislation of another jurisdiction for environmental or health reasons, the Ministers shall review the decision in order to determine whether the substance is toxic or capable of becoming toxic, unless the decision relates to a substance the only use of which in Canada is regulated under another Act of Parliament that provides for environmental and health protection*<sup>13</sup>.

Further, Division 7 of Part 7 of *CEPA* requires the Minister of the Environment to take certain actions where “a substance released from a source in Canada into water creates, or may reasonably be anticipated to create, (a) water pollution in a country other than Canada”<sup>14</sup>.

**III. Description of Substance**

The substance that is the subject of this request can be described as plastic microbeads smaller than 5 mm in diameter [although generally in the 0.5 mm range] used for their abrasive properties in personal care products such as face washes, shower gels, and toothpastes (hereinafter “microbeads”)<sup>15</sup>. Microbeads are most frequently made of polyethylene, but can be also be made out of polypropylene, polyethylene terephthalate, polymethyl methacrylate or nylon. Personal care products containing microbeads are intended by design to be rinsed down drains after use by consumers.

Although microbeads may potentially be seen as a “class” of substances since they can be made of a variety of different synthetic materials, other broadly framed substances have previously been added to the Priority Substances List and assessed for toxicity, such as road salts, respirable particulate matter less than or equal to 10 microns, creosote-impregnated waste materials, waste crankcase oils, chlorinated wastewater effluents, and textile mill effluents.

Microbeads are captured by paragraphs (a), (f) and (g) of the definition of

---

<sup>12</sup> *CEPA*, s. 75(1)(b).

<sup>13</sup> *CEPA*, s. 75(3).

<sup>14</sup> *CEPA*, s. 176.

<sup>15</sup> Legislation in Illinois defines these substances as follows: “Synthetic plastic microbead” means any intentionally added non-biodegradable solid plastic particle measured less than 5 millimeters in size and is used to exfoliate or cleanse in a rinse-off product.

“substance” contained in subsection 3(1) of *CEPA*, which are reproduced in section II. Legislative Framework, above. Microbeads are capable of being dispersed in the environment, are manufactured items that are formed into a specific physical shape and design to achieve a particular function for their final use (i.e. abrasion), and are contained in effluents (wastewater effluent) as a result of their use by consumers.

Microbeads meet the definition of toxicity, as this submission will demonstrate.

#### **IV. Evidence of Toxicity**

Microplastics, comprised of plastic debris of less than 5 mm diameter, are considered to be an emerging global issue by numerous international institutions. Microbeads are listed among the primary sources of microplastics found in freshwater ecosystems<sup>16</sup>.

Most of the current knowledge on microplastics was generated from marine environments. Microplastics are distributed widely in the marine environment, and occur in the water column, on the seabed, and on beaches. They are ingested by many organisms, including plankton, invertebrates, fish, birds and mammals<sup>17</sup>. Microplastics accumulate throughout the aquatic food web and their bioaccumulation potential increases with decreasing size<sup>18</sup>. Wildlife ingestion of microplastics presents the potential for toxicity to both the ingesting species and other species higher in the food chain<sup>19</sup>.

Numerous studies have documented the physical and toxicological effects on aquatic organisms from ingestion of plastic debris<sup>20</sup>. Ingested plastic particles cause internal abrasions or blockages resulting in reductions in food consumption, stunted growth, and starvation<sup>21</sup>. They can induce immunotoxicological responses, alter gene expression, and cause cell death<sup>22</sup>. It has also been shown that microplastics can pass from the digestive tract to the circulatory system<sup>23</sup>.

---

<sup>16</sup> Wagner M, Scherer C, Alvarez-Muñoz D, Brennholt N, Bourrain X, Buchinger S, Fries E, Grosbois C, Klasmeier J, Marti T, Rodriguez-Mozaz S, Urbatzka R, Vethaak AD, Winther-Nielsen M, Reifferscheid G. 2014. Microplastics in freshwater ecosystems: what we know and what we need to know. *Environ Sci Eur* doi:10.1186/s12302-014-0012-7.

<sup>17</sup> Ivar do Sul, JA and Costa, MF. 2014. The present and future of microplastic pollution in the marine environment. *Environmental Pollut* 185: 352e364.

<sup>18</sup> Wright SL, Thompson RC, Galloway TS. 2013. The physical impacts of microplastics on marine organisms: a review. *Environ Pollut* 178:483–492.

<sup>19</sup> New York State Attorney General Eric T. Schneiderman. 2014. Unseen threat: How Microbeads Harm New York Waters, Wildlife, Health And Environment. Available at: [http://ag.ny.gov/pdfs/Microbeads\\_Report\\_5\\_14\\_14.pdf](http://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf).

<sup>20</sup> *Ibid.*

<sup>21</sup> Pierce et al. (2004); Ryan, P.G., & Jackson, S.J. (1987); Barnes, D. K.A. et al (2009); and Wright, S.L. et al (2013) *In* New York State Attorney General Eric T. Schneiderman. 2014. Unseen threat: How Microbeads Harm New York Waters, Wildlife, Health And Environment. Available at: [http://ag.ny.gov/pdfs/Microbeads\\_Report\\_5\\_14\\_14.pdf](http://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf).

<sup>22</sup> Seltenrich, Nate. 2015. New Link in the Food Chain? Marine Plastic Pollution and Seafood Safety. *Environmental Health Perspectives*. Vol. 123(2): A34–A41.

<sup>23</sup> Browne, M.A., Dissanayake, A., Galloway, T.S., Lowe, D.M. & Thompson, R.C. (2008). Ingested microscopic plastic translocates to the circulatory system of the mussel *Mytilus edulis* (L.). *Environmental Science & Technology*,

Microbeads also adsorb other organic contaminants from the environment<sup>24</sup>, and thus may function as a vector for transmission of organic pollutants to aquatic species<sup>25,26</sup>. Harmful chemicals transferred to wildlife from ingested plastic include hydrophobic pollutants, which collect on the surface of the plastic once in water and can be absorbed by microplastics<sup>27</sup>. These persistent organic pollutants, such as polychlorinated biphenyls (PCBs), DDT, PBDEs and polycyclic aromatic hydrocarbons (PAHs) are substances that are extremely toxic for the environment and human health. These adsorbed pollutants in microplastics can leach out and transfer into the guts and tissues of aquatic organisms<sup>28</sup>. Once microbeads are ingested by species low on the food chain, these adsorbed chemicals also accumulate, are passed on to larger predators, eventually contaminating the fish and wildlife species that humans eat. These pollutants can lead to a host of health problems including birth defects, cancer, and learning and growth deficits in children<sup>29</sup>.

Microplastics are also an emerging concern in Canada's freshwater environment, including the Great Lakes and St. Lawrence River. Surface water and freshwater streams and rivers are considered to be the primary source of microplastics in marine regions (estimated 70-80%). Microplastics have been detected in the surface waters of Lakes Superior, Huron, and Erie, in concentrations of 450 – 450,000 particles/km<sup>2</sup><sup>30</sup>. The highest concentrations occurred near metropolitan areas, and Lake Erie samples were the most polluted, containing 90% of the microplastic debris from all samples. Analyses by scanning electron microscopy and energy dispersive x-ray spectroscopy showed that 81% of plastic particles were 335 µm to <1 mm and consistent in shape, size, colour, and elemental composition with microbeads found in facial cleaners<sup>31</sup>. Reports on a follow up study of Lakes Ontario and Michigan suggest similar findings in these two Great Lakes. Microplastics have also been detected in the sediments of Lake Huron<sup>32</sup> and Lakes

---

42, 5026–5031.

<sup>24</sup> Bakir A, Rowland SJ, Thompson RC. 2012. Competitive sorption of persistent organic pollutants onto microplastics in the marine environment. *Mar Pollut Bull* 64:2782–2789.

<sup>25</sup> Oehlmann J, Schulte-Oehlmann U, Kloas W, Jagnytsch O, Lutz I, Kusk KO, Wollenberger L, Santos EM, Paull GC, Van Look KJ, Tyler CR. 2009. A critical analysis of the biological impacts of plasticizers on wildlife. *Philos Trans R Soc Lond B Biol Sci* 364:2047–2062.

<sup>26</sup> Zarfl C, and Matthies M. 2010. Are marine plastic particles transport vectors for organic pollutants to the Arctic? *Mar Pollut Bull* 60:1810–1814.

<sup>27</sup> New York State Attorney General Eric T. Schneiderman. 2014. Unseen threat: How Microbeads Harm New York Waters, Wildlife, Health And Environment. Available at: [http://ag.ny.gov/pdfs/Microbeads\\_Report\\_5\\_14\\_14.pdf](http://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf).

<sup>28</sup> Engler, RE. 2012. The complex interaction between marine debris and toxic chemicals in the ocean. *Environmental Science and Technology*. 46(22):12302-15.

<sup>29</sup> New York State Attorney General Eric T. Schneiderman. 2014. Unseen threat: How Microbeads Harm New York Waters, Wildlife, Health And Environment. Available at: [http://ag.ny.gov/pdfs/Microbeads\\_Report\\_5\\_14\\_14.pdf](http://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf).

<sup>30</sup> Eriksen, M., Mason, S., Wilson, S., Box, C., Zellers, A., Edwards, W., Farley, H, Amato, S. 2013. Microplastic pollution in the surface waters of the Laurentian Great Lakes. *Mar Pollut Bull*, 77(1):177-182.

<sup>31</sup> Ibid.

<sup>32</sup> Zbyszewski M, Corcoran PL. 2011. Distribution and degradation of fresh water plastic particles along the beaches of Lake Huron, Canada. *Water Air Soil Pollut* 220:365–372.

Erie and St. Clair<sup>33</sup>, and in the St. Lawrence River<sup>34</sup>. The highest site density of microplastics in the St. Lawrence River (103 microbeads·L<sup>-1</sup>) is similar in magnitude to microplastic concentrations found in the world's most contaminated marine sediments.

Effluent from wastewater treatment plants is a probable source of microplastics in water bodies<sup>35</sup>. It is unlikely that wastewater treatment facilities capture all floating, non-biodegradable particulate matter of 0.5 mm size or smaller<sup>36</sup>. None of the major processes employed by modern wastewater treatments (screening and grit removal, primary and secondary treatment, phosphorus removal, effluent disinfection, waste activated sludge thickening, anaerobic digestion, biosolids dewatering and biosolids management) are designed to remove particles the size of microbeads. For example, metal screens used in the preliminary stage of wastewater treatment typically have a mesh size of 2 mm or greater<sup>37</sup>, which is approximately two or more times greater in size than microbeads. Moreover, the average retention time of sludge in anaerobic digesters (21.1 days<sup>38</sup>) is not long enough to allow for biodegradation of plastic particles, which can take hundreds of years. Treated effluent of wastewater treatment plants is typically discharged into freshwater rivers or lakes, providing source points for microbeads. Runoff from sewage sludge and release of sewage from combined sewer overflow events are also possible source points for microbeads.

## V. Matter of International Concern

In October 2013, the Great Lakes and St. Lawrence Cities Initiative (the “Cities Initiative”) wrote to both the U.S. Environmental Protection Agency and Environment Canada to inquire what the respective federal governments are doing to address the emerging issue of microbead pollution in the Great Lakes. The Cities Initiative is a binational coalition of mayors representing over 100 American and Canadian municipalities with the mission of advancing the protection and restoration of the Great Lakes.

While some actions have been taken in the U.S. to begin to address the environmental threat posed by microbeads (as discussed in section VII. Action in Other Jurisdictions, below), similar efforts have not yet occurred in Canada other than the

---

<sup>33</sup> Zbyszewski M, Corcoran PL, Hockin A. 2014. Comparison of the distribution and degradation of plastic debris along shorelines of the Great Lakes, North America. *J Great Lakes Res* 2014, 40:288–299.

<sup>34</sup> Castañeda R. A., Avlijas S, Simard MA, and Ricciardi A. 2014. Microplastic pollution in St. Lawrence River sediments. *Can. J. Fish. Aquat. Sci.* 71:1–5.

<sup>35</sup> GESAMP (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). 2010. Proceedings of the GESAMP international workshop on microplastic particles as a vector in transporting persistent, bio-accumulating and toxic substances in the oceans. *In* Bowmer T and P. Kershaw (Eds.) Paris GESAMP Reports & Studies. UNESCO-IOC. 68 pp.

<sup>36</sup> *Supra* note 21

<sup>37</sup> Wastewater Treatment Plant screen mesh diameter: Ashbridges Bay, Humber, and High Creek, Toronto: 12.5 mm; North Toronto: 12.5 mm; Brockville: 2-6 mm; Greenway, Pottersburg, Vauxhall, Adelaide, Oxford and Lambeth, London: 2-19 mm; G.E. Booth, Peel: 6.35 mm.

<sup>38</sup> City of Toronto. 2013. Ashbridges Bay wastewater treatment plant 2012 Annual Report. 112 pp.



recent introduction of a private member's bill<sup>39</sup> to ban the manufacture and addition of microbeads<sup>40</sup> to cosmetics, soaps or similar products in Ontario. If this bill is passed, Ontario would be the first jurisdiction in Canada to ban microbeads.

The Great Lakes are an important resource and Canada shares responsibility for protecting their health. Microbeads released from wastewater treatment plants in the Great Lakes Basin may be reasonably anticipated to cause water pollution in U.S. waters. As such, the Minister should, in addition to considering the subsection 76(3) request, consider whether actions should be taken pursuant to *CEPA*'s international water pollution provisions as set out in Part 7, Division 7.

## **VI. Voluntary Commitments by Manufacturers**

Microbeads are an example of poor design that does not take into account the full life cycle of the product. When used as directed by consumers these products are rinsed down drains with no recovery plan for the plastic particles they contain, which are non-biodegradable. A position paper by the non-profit organization 5 Gyres estimated that there were approximately 330,000 microbeads in a single tube of one personal care product they examined<sup>41</sup>. Fortunately, readily available biodegradable alternatives to microbeads, such as ground apricots and jojoba beads, already exist and are used in widely distributed personal care products.

A number of large manufacturers of personal care products have publically communicated intentions to phase out the use of microbeads and replace them with biodegradable alternatives. While the requestors appreciate voluntary efforts by manufacturers to reduce the environmental impacts of their products, they still believe that it is appropriate for these substances to be added to the Priority Substances List and assessed for their toxicity. Given the wide variety of products containing microbeads currently available on the market, the requestors are not confident that voluntary actions by some manufacturers will be adequate to prevent pollution of water bodies by these substances. In the event that microbeads are found to be "toxic or capable of becoming toxic", pollution prevention measures could then be developed that would apply consistently and universally to all manufacturers and retailers of personal care products.

Further, replacing non-biodegradable plastic with biodegradable alternatives remains a concern regarding toxicity. Manufacturers claim that recent innovations have created materials that biodegrade 80 per cent within 14 to 18 days<sup>42</sup>. Further research is required to ensure biodegradability in the natural environment (as opposed to labs) and to determine if the remaining 20 per cent of material negatively impacts

---

<sup>39</sup> Legislative Assembly of Ontario. *Bill 75, Microbead Elimination and Monitoring Act, 2015*. Introduced March 9, 2015 by MPP Marie-France Lalonde.

<sup>40</sup> Defined in Bill 75 as: "non-biodegradable solid plastic particles measuring less than one millimetre in diameter".

<sup>41</sup> 5 Gyres Institute et al, "Microplastics in consumer products and in the marine environment", online: [http://5gyres.org/media/5\\_Gyres\\_Position\\_Paper\\_on\\_Microplastics.pdf](http://5gyres.org/media/5_Gyres_Position_Paper_on_Microplastics.pdf)

<sup>42</sup> <http://www.triplepundit.com/2015/03/biodegradable-microbeads/>

ecosystem integrity. The onus should be on companies to demonstrate any alternative biodegradable plastic contained in their products that end up in their environment will not cause undue harm to the ecosystem.

## **VII. Action in Other Jurisdictions**

On June 8, 2014, the State of Illinois enacted legislative provisions that will prohibit the manufacture and sale of personal care products containing microbeads<sup>43</sup>. In March 2015, the New Jersey legislature enacted a law banning the production and sale of personal care products containing plastic microbeads, making it the second after Illinois to pass similar legislation. The states of Ohio, Indiana, Maine, Vermont, Minnesota, Washington, Wisconsin, New York, and Colorado are currently considering similar legislative measures. Further, on June 18, 2014, Bill HR 4895 (the *Microbead-Free Waters Act of 2014*) was introduced into the U.S. House of Representatives that would, if passed, ban the sale or distribution of personal care products containing microbeads effective January 2018.

To the extent that Minister of the Environment (the “Minister”) has been notified in accordance with procedures developed under subsection 75(2) of *CEPA* of legislative action of a government of a foreign state or a subdivision of a foreign state that is a member of the Organization for Economic Co-operation and Development to prohibit or substantially restrict microbeads for environmental reasons, pursuant to subsection 75(3) of *CEPA*, the Minister shall review that decision to determine the substance’s toxicity pursuant. We submit that, even in the event that the Minister has not been notified in accordance with any procedures that may have been developed under subsection 75(2), the action taken by Illinois provides support for the addition of microbeads to the Priority Substances List.

## **VIII. Conclusion**

Given emerging evidence regarding the prevalence and toxicity of microbeads in bodies of water such as the Great Lakes, and the actions that are being taken in the U.S. and now Ontario, the Minister should, in keeping with the precautionary principle take urgent action to assess and address this environmental threat. In particular, the Minister should:

1. Add plastic microbeads to the Priority Substances List for assessment pursuant to the subsection 76(3) request contained herein;
2. Assess whether obligations in relation to international water pollution under Part 7, Division 7 of *CEPA* have been triggered, and if so, take the required actions; and

---

<sup>43</sup> An excerpt of Illinois’ *Environmental Protection Act* containing the new “Microbead-Free Waters” provisions is attached to this request.

3. If notification procedures have been developed under subsection 75(2) of *CEPA*, assess whether the notification the Minister has received of the recently enacted legislation in Illinois qualifies as requisite notice to trigger the requirement to act under subsection 75(3) of *CEPA*

Thank you for your consideration of this request and I look forward to receiving a response within the legislated timeframe.

Sincerely,

A handwritten signature in black ink, appearing to read "Tanya Nayler". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Tanya Nayler  
Barrister & Solicitor

AN ACT concerning safety.

**Be it enacted by the People of the State of Illinois,  
represented in the General Assembly:**

Section 5. The Environmental Protection Act is amended by changing Section 42 and by adding Section 52.5 as follows:

(415 ILCS 5/42) (from Ch. 111 1/2, par. 1042)

Sec. 42. Civil penalties.

(a) Except as provided in this Section, any person that violates any provision of this Act or any regulation adopted by the Board, or any permit or term or condition thereof, or that violates any order of the Board pursuant to this Act, shall be liable for a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues; such penalties may, upon order of the Board or a court of competent jurisdiction, be made payable to the Environmental Protection Trust Fund, to be used in accordance with the provisions of the Environmental Protection Trust Fund Act.

(b) Notwithstanding the provisions of subsection (a) of this Section:

(1) Any person that violates Section 12(f) of this Act or any NPDES permit or term or condition thereof, or any filing requirement, regulation or order relating to the

NPDES permit program, shall be liable to a civil penalty of not to exceed \$10,000 per day of violation.

(2) Any person that violates Section 12(g) of this Act or any UIC permit or term or condition thereof, or any filing requirement, regulation or order relating to the State UIC program for all wells, except Class II wells as defined by the Board under this Act, shall be liable to a civil penalty not to exceed \$2,500 per day of violation; provided, however, that any person who commits such violations relating to the State UIC program for Class II wells, as defined by the Board under this Act, shall be liable to a civil penalty of not to exceed \$10,000 for the violation and an additional civil penalty of not to exceed \$1,000 for each day during which the violation continues.

(3) Any person that violates Sections 21(f), 21(g), 21(h) or 21(i) of this Act, or any RCRA permit or term or condition thereof, or any filing requirement, regulation or order relating to the State RCRA program, shall be liable to a civil penalty of not to exceed \$25,000 per day of violation.

(4) In an administrative citation action under Section 31.1 of this Act, any person found to have violated any provision of subsection (o) of Section 21 of this Act shall pay a civil penalty of \$500 for each violation of each such provision, plus any hearing costs incurred by the Board and the Agency. Such penalties shall be made payable to the

Environmental Protection Trust Fund, to be used in accordance with the provisions of the Environmental Protection Trust Fund Act; except that if a unit of local government issued the administrative citation, 50% of the civil penalty shall be payable to the unit of local government.

(4-5) In an administrative citation action under Section 31.1 of this Act, any person found to have violated any provision of subsection (p) of Section 21, Section 22.51, Section 22.51a, or subsection (k) of Section 55 of this Act shall pay a civil penalty of \$1,500 for each violation of each such provision, plus any hearing costs incurred by the Board and the Agency, except that the civil penalty amount shall be \$3,000 for each violation of any provision of subsection (p) of Section 21, Section 22.51, Section 22.51a, or subsection (k) of Section 55 that is the person's second or subsequent adjudication violation of that provision. The penalties shall be deposited into the Environmental Protection Trust Fund, to be used in accordance with the provisions of the Environmental Protection Trust Fund Act; except that if a unit of local government issued the administrative citation, 50% of the civil penalty shall be payable to the unit of local government.

(5) Any person who violates subsection 6 of Section 39.5 of this Act or any CAAPP permit, or term or condition

thereof, or any fee or filing requirement, or any duty to allow or carry out inspection, entry or monitoring activities, or any regulation or order relating to the CAAPP shall be liable for a civil penalty not to exceed \$10,000 per day of violation.

(6) Any owner or operator of a community water system that violates subsection (b) of Section 18.1 or subsection (a) of Section 25d-3 of this Act shall, for each day of violation, be liable for a civil penalty not to exceed \$5 for each of the premises connected to the affected community water system.

(7) Any person who violates Section 52.5 of this Act shall be liable for a civil penalty of up to \$1,000 for the first violation of that Section and a civil penalty of up to \$2,500 for a second or subsequent violation of that Section.

(b.5) In lieu of the penalties set forth in subsections (a) and (b) of this Section, any person who fails to file, in a timely manner, toxic chemical release forms with the Agency pursuant to Section 25b-2 of this Act shall be liable for a civil penalty of \$100 per day for each day the forms are late, not to exceed a maximum total penalty of \$6,000. This daily penalty shall begin accruing on the thirty-first day after the date that the person receives the warning notice issued by the Agency pursuant to Section 25b-6 of this Act; and the penalty shall be paid to the Agency. The daily accrual of penalties

shall cease as of January 1 of the following year. All penalties collected by the Agency pursuant to this subsection shall be deposited into the Environmental Protection Permit and Inspection Fund.

(c) Any person that violates this Act, any rule or regulation adopted under this Act, any permit or term or condition of a permit, or any Board order and causes the death of fish or aquatic life shall, in addition to the other penalties provided by this Act, be liable to pay to the State an additional sum for the reasonable value of the fish or aquatic life destroyed. Any money so recovered shall be placed in the Wildlife and Fish Fund in the State Treasury.

(d) The penalties provided for in this Section may be recovered in a civil action.

(e) The State's Attorney of the county in which the violation occurred, or the Attorney General, may, at the request of the Agency or on his own motion, institute a civil action for an injunction, prohibitory or mandatory, to restrain violations of this Act, any rule or regulation adopted under this Act, any permit or term or condition of a permit, or any Board order, or to require such other actions as may be necessary to address violations of this Act, any rule or regulation adopted under this Act, any permit or term or condition of a permit, or any Board order.

(f) The State's Attorney of the county in which the violation occurred, or the Attorney General, shall bring such



actions in the name of the people of the State of Illinois. Without limiting any other authority which may exist for the awarding of attorney's fees and costs, the Board or a court of competent jurisdiction may award costs and reasonable attorney's fees, including the reasonable costs of expert witnesses and consultants, to the State's Attorney or the Attorney General in a case where he has prevailed against a person who has committed a wilful, knowing or repeated violation of this Act, any rule or regulation adopted under this Act, any permit or term or condition of a permit, or any Board order.

Any funds collected under this subsection (f) in which the Attorney General has prevailed shall be deposited in the Hazardous Waste Fund created in Section 22.2 of this Act. Any funds collected under this subsection (f) in which a State's Attorney has prevailed shall be retained by the county in which he serves.

(g) All final orders imposing civil penalties pursuant to this Section shall prescribe the time for payment of such penalties. If any such penalty is not paid within the time prescribed, interest on such penalty at the rate set forth in subsection (a) of Section 1003 of the Illinois Income Tax Act, shall be paid for the period from the date payment is due until the date payment is received. However, if the time for payment is stayed during the pendency of an appeal, interest shall not accrue during such stay.

(h) In determining the appropriate civil penalty to be imposed under subdivisions (a), (b) (1), (b) (2), (b) (3), or (b) (5) of this Section, the Board is authorized to consider any matters of record in mitigation or aggravation of penalty, including but not limited to the following factors:

(1) the duration and gravity of the violation;

(2) the presence or absence of due diligence on the part of the respondent in attempting to comply with requirements of this Act and regulations thereunder or to secure relief therefrom as provided by this Act;

(3) any economic benefits accrued by the respondent because of delay in compliance with requirements, in which case the economic benefits shall be determined by the lowest cost alternative for achieving compliance;

(4) the amount of monetary penalty which will serve to deter further violations by the respondent and to otherwise aid in enhancing voluntary compliance with this Act by the respondent and other persons similarly subject to the Act;

(5) the number, proximity in time, and gravity of previously adjudicated violations of this Act by the respondent;

(6) whether the respondent voluntarily self-disclosed, in accordance with subsection (i) of this Section, the non-compliance to the Agency;

(7) whether the respondent has agreed to undertake a "supplemental environmental project," which means an

environmentally beneficial project that a respondent agrees to undertake in settlement of an enforcement action brought under this Act, but which the respondent is not otherwise legally required to perform; and

(8) whether the respondent has successfully completed a Compliance Commitment Agreement under subsection (a) of Section 31 of this Act to remedy the violations that are the subject of the complaint.

In determining the appropriate civil penalty to be imposed under subsection (a) or paragraph (1), (2), (3), or (5) of subsection (b) of this Section, the Board shall ensure, in all cases, that the penalty is at least as great as the economic benefits, if any, accrued by the respondent as a result of the violation, unless the Board finds that imposition of such penalty would result in an arbitrary or unreasonable financial hardship. However, such civil penalty may be off-set in whole or in part pursuant to a supplemental environmental project agreed to by the complainant and the respondent.

(i) A person who voluntarily self-discloses non-compliance to the Agency, of which the Agency had been unaware, is entitled to a 100% reduction in the portion of the penalty that is not based on the economic benefit of non-compliance if the person can establish the following:

(1) that the non-compliance was discovered through an environmental audit or a compliance management system documented by the regulated entity as reflecting the

regulated entity's due diligence in preventing, detecting, and correcting violations;

(2) that the non-compliance was disclosed in writing within 30 days of the date on which the person discovered it;

(3) that the non-compliance was discovered and disclosed prior to:

(i) the commencement of an Agency inspection, investigation, or request for information;

(ii) notice of a citizen suit;

(iii) the filing of a complaint by a citizen, the Illinois Attorney General, or the State's Attorney of the county in which the violation occurred;

(iv) the reporting of the non-compliance by an employee of the person without that person's knowledge; or

(v) imminent discovery of the non-compliance by the Agency;

(4) that the non-compliance is being corrected and any environmental harm is being remediated in a timely fashion;

(5) that the person agrees to prevent a recurrence of the non-compliance;

(6) that no related non-compliance events have occurred in the past 3 years at the same facility or in the past 5 years as part of a pattern at multiple facilities owned or operated by the person;

(7) that the non-compliance did not result in serious actual harm or present an imminent and substantial endangerment to human health or the environment or violate the specific terms of any judicial or administrative order or consent agreement;

(8) that the person cooperates as reasonably requested by the Agency after the disclosure; and

(9) that the non-compliance was identified voluntarily and not through a monitoring, sampling, or auditing procedure that is required by statute, rule, permit, judicial or administrative order, or consent agreement.

If a person can establish all of the elements under this subsection except the element set forth in paragraph (1) of this subsection, the person is entitled to a 75% reduction in the portion of the penalty that is not based upon the economic benefit of non-compliance.

(j) In addition to any other remedy or penalty that may apply, whether civil or criminal, any person who violates Section 22.52 of this Act shall be liable for an additional civil penalty of up to 3 times the gross amount of any pecuniary gain resulting from the violation.

(k) In addition to any other remedy or penalty that may apply, whether civil or criminal, any person who violates subdivision (a)(7.6) of Section 31 of this Act shall be liable for an additional civil penalty of \$2,000.

(Source: P.A. 96-603, eff. 8-24-09; 96-737, eff. 8-25-09;

96-1000, eff. 7-2-10; 96-1416, eff. 7-30-10; 97-519, eff. 8-23-11.)

(415 ILCS 5/52.5 new)

Sec. 52.5. Microbead-free waters.

(a) As used in this Section:

"Over the counter drug" means a drug that is a personal care product that contains a label that identifies the product as a drug as required by 21 CFR 201.66. An "over the counter drug" label includes:

(1) A drug facts panel; or

(2) A statement of the active ingredients with a list of those ingredients contained in the compound, substance, or preparation.

"Personal care product" means any article intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and any article intended for use as a component of any such article. "Personal care product" does not include any prescription drugs.

"Plastic" means a synthetic material made from linking monomers through a chemical reaction to create an organic polymer chain that can be molded or extruded at high heat into various solid forms retaining their defined shapes during life cycle and after disposal.

"Synthetic plastic microbead" means any intentionally added non-biodegradable solid plastic particle measured less than 5 millimeters in size and is used to exfoliate or cleanse in a rinse-off product.

(b) The General Assembly hereby finds that microbeads, a synthetic alternative ingredient to such natural materials as ground almonds, oatmeal, and pumice, found in over 100 personal care products, including facial cleansers, shampoos, and toothpastes, pose a serious threat to the State's environment.

Microbeads have been documented to collect harmful pollutants already present in the environment and harm fish and other aquatic organisms that form the base of the aquatic food chain. Recently, microbeads have been recorded in Illinois water bodies, and in particular, the waters of Lake Michigan.

Although synthetic plastic microbeads are a safe and effective mild abrasive ingredient effectively used for gently removing dead skin, there are recent concerns about the potential environmental impact of these materials. More research is needed on any adverse consequences, but a number of cosmetic manufacturers have already begun a voluntary process for identifying alternatives that allay those concerns. Those alternatives will be carefully evaluated to assure safety and implemented in a timely manner.

Without significant and costly improvements to the majority of the State's sewage treatment facilities, microbeads contained in products will continue to pollute

Illinois' waters and hinder the recent substantial economic investments in redeveloping Illinois waterfronts and the ongoing efforts to restore the State's lakes and rivers and recreational and commercial fisheries.

(c) Effective December 31, 2017, no person shall manufacture for sale a personal care product, except for an over the counter drug, that contains synthetic plastic microbeads as defined in this Section.

(d) Effective December 31, 2018, no person shall accept for sale a personal care product, except for an over the counter drug, that contains synthetic plastic microbeads as defined in this Section.

(e) Effective December 31, 2018, no person shall manufacture for sale an over the counter drug that contains synthetic plastic microbeads as defined in this Section.

(f) Effective December 31, 2019, no person shall accept for sale an over the counter drug that contains synthetic plastic microbeads as defined in this Section.