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## **Assembly Bill 15 – Manufacture & Acceptance for Sale of Products Containing Microbeads** **Assembly Committee on Environment and Forestry** **February 3rd, 2015**

Thank you, Chairman Mursau and members of the Environment Committee for holding a public hearing on Assembly Bill 15 today. This legislation sets a definitive timeline for the phasing out of personal care products containing microbeads. My fellow bill authors and I have worked diligently to strike the balance of providing needed environmental protections while recognizing the good-faith efforts of leading manufacturers who have already begun voluntarily phasing out this ingredient.

Microbeads are tiny, non-biodegradable plastic particles that are used in some personal care products for a cleansing or exfoliating effect. The industry trend of using microbeads reached its peak during the 1990's and early 2000's. Microbeads are so small that most municipal water treatment systems are unable to filter out the beads, leading to a large accumulation especially in our Great Lakes. Recognizing this problem and responding to shifting consumer demands, today many manufacturers have already begun to voluntarily phase out microbeads, instead opting for natural substitutes such as apricot and other fruit particles, oatmeal, or other biodegradable ingredients.

AB 15 will bring certainty to both manufacturers and consumers. Our bill establishes a definitive timeline of December 31, 2017 to end the manufacture of personal care products with microbeads. The sale of these products would then be prohibited one year later on December 31, 2018. Over-the-counter drugs containing microbeads follow a slightly delayed timeline; the manufacture is prohibited effective December 31, 2018 and the sale prohibited on December 31, 2019. The timeline is based on similar legislation enacted last year in Illinois, which has served as a model bill for the nation and was agreed to by both business and environmental groups. Establishing this timeline sets clear guidelines for industry compliance.

Our bill will also provide assurance to Wisconsin consumers. Citizens can be confident that the products they chose to buy are not having unintended consequences on our natural resources, instead of scanning dozens of ingredients on a label searching for the words "polyethylene".

During drafting my co-authors and I worked with WMC and Clean Wisconsin to develop a piece of legislation that balances protecting our Great Lakes waterways and provides certainty to the responsible manufactures and retailers phasing out these products. The bill as drafted is also supported by both the Personal Care Products Council and Consumer Healthcare Products Association.

My co-authors Rep. Kitchens and Sen. Cowles have additional comments; then we will be happy to take your questions.

STANDING COMMITTEES:

Energy, Consumer Protection, and  
Government Reform, Chair

State and Federal Relations, Vice-Chair

Transportation, Public Safety,  
and Veterans and Military Affairs



JOINT COMMITTEES

Audit Committee, Co-Chair  
Information Policy and Technology  
Transportation Projects Commission

**Assembly Committee on Environment and Forestry**

**February 3, 2015**

**9:00 am – 328 NW State Capitol**

**Testimony on AB 15 by Senator Robert Cowles**

I want to speak briefly on Assembly Bill 15 relating to the manufacture and acceptance for sale of products containing microbeads. Wisconsin is blessed to be bordered by two of the world's five Great Lakes. The Great Lakes form the largest group of freshwater lakes on earth and are important natural resources and economic assets of the state; critical to sustaining the shipping, sport fishery and tourism economies of Wisconsin's coastal communities. In recent years, research has found tiny bits of plastic called "microbeads" in all of the Great Lakes.

In December of 2010, Dr. Rios Mendoza from the University of Wisconsin Superior published a scientific paper in the Journal of Environmental Monitoring which examined how persistent organic pollutants absorbed on plastic debris in the Pacific Ocean. This research paper was the first to demonstrate that plastic debris found in the ocean absorb pollutants in a manner similar to sediment, but they do not sink like sediment. Instead they remain on or near the surface where they are or may be ingested by fish or birds. The research continues by outlining the fact that a half to three-quarters of the samples contained measurable amounts of harmful pollutants in levels that were much higher in the plastic debris than concentrations in the water. This finding indicates that the plastic particles were indeed absorbing pollutants.

The research conducted in the world's oceans prompted researchers from the University of New York at Fredonia and the University of Wisconsin Superior to question whether the Great Lakes could also be littered with plastic debris. During the summer of 2012 and 2013 all of the Great Lakes were sailed skimming the surface with finely meshed netting to search for plastic particles. All of the Great Lakes were found to contain plastics. The research team collected 1.7 million particles in the areas sampled in Lake Erie, which acts as a sink because it receives the outflow from Lakes Superior, Michigan and Huron.

Microscopic studies of the Great Lakes samples has uncovered a likely source for the plastic: due to the perfectly round nature, scientists know that these particles are microbeads used in many personal care products.

These plastic substances pose a risk to fish communities and they absorb dangerous pollutants already in the lakes' water column. Once these absorptive particles are ingested by fish, they have the potential to bio-accumulate and pose human health risks. Of particular concern is the absorption of polychlorinated biphenyls (PCBs), chlorinated pesticides, and polycyclic aromatic hydrocarbons (PAHs), which are known carcinogens, and are considered endocrine disrupting chemicals.

At an April 2013 American Chemical Society meeting, Dr. Rios Mendoza reported that they had collected up to 1.7 million microscopic particles from Lake Erie. Rios said that lab examination has detected two potentially harmful chemicals in the Lake Erie plastic debris including PCB's and PAH's both of which are capable of causing cancer and birth defects.

Due to the potential human health impacts and environmental impacts to fish populations and Great Lakes fishing, many of the leading manufacturers in the cosmetics and personal care products industry have already begun researching how to phase out the use of microbeads in their product lines. Industry leaders like Johnson and Johnson and Proctor & Gamble have made commitments to begin to phase out the use of microbeads.

This bill strikes the balance of providing additional environmental protections for the Great Lakes while recognizing the good-faith efforts of these companies and setting a definitive timeline.

During drafting the authors worked with WMC and Clean Wisconsin to develop a piece of legislation that balances protecting our Great Lakes waterways and provides certainty to the responsible manufacturers and retailers phasing out these products. The bill as drafted is supported by the following industry groups: Personal Care Products Council (PCPC) and the Consumer Healthcare Products Association (CHPA) and is modeled after industry supported legislation that passed in Illinois and New Jersey last fall.

One-fifth of the fresh water in the world borders our state, it is my hope that we can put in place some common sense regulations that protect these resources and the people who work, recreate and live on or near these amazing Great Lakes.

Thank you for consideration and I will take any questions you may have at this time.



**MEMO**

**TO: Members of the Assembly Committee on Environment and Forestry**

**FROM: Eric Bott, Director of Environmental and Energy Policy, Wisconsin Manufacturers and Commerce**

**DATE: February 3, 2015**

**RE: Assembly Bill 15 – Prohibition on the Manufacturing and Acceptance for Sale of Synthetic Plastic Microbeads**

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Wisconsin Manufacturers and Commerce (WMC) greatly appreciate the efforts taken by the authors of Assembly Bill 15 (AB 15), Sen. Rob Cowles and Rep. Mary Czaja, to consult with businesses while drafting this legislation. By working with Wisconsin employers, they have developed a bill that will accomplish its stated goals without unduly harming Wisconsin's business community.

Assembly Bill 15 codifies into law actions manufactures and retailers are already taking as responsible stewards of Wisconsin's waterways. Keys to the success of this bill are the definitions and timelines it incorporates to allow for the development and replacement of synthetic plastic microbeads with environmentally friendly alternatives. WMC has consulted with numerous impacted Wisconsin companies regarding AB 15 and found they view the legislation favorably or neutrally, provided that the definitions and timelines contained within the bill remain intact.

WMC is Wisconsin's largest general business trade association, representing nearly 4,000 employers statewide. WMC member companies employ roughly one quarter of Wisconsin's private sector workforce.

For more information, please contact Eric Bott at [ebott@wmc.org](mailto:ebott@wmc.org) or (608) 258-3400.



STATE REPRESENTATIVE  
**CORY MASON**

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WISCONSIN STATE ASSEMBLY  
66TH ASSEMBLY DISTRICT  
*REPRESENTING THE RACINE COMMUNITY*

**To: Members, Assembly Committee on Environment and Forestry**  
**From: Representative Cory Mason**  
**Date: February 3, 2015**  
**Re: Assembly Bill 15, the manufacture and acceptance for sale of products containing microbeads**

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Chairman Mursau and Members of the Committee, thank you for holding this public hearing today on Assembly Bill 15, which aims to phase out the use of microbeads in products made and sold in Wisconsin. I would also like to thank Representative Czaja and Senator Cowles for introducing this legislation. I am pleased to co-sponsor Assembly Bill 15. This legislation is critically important to remove a destructive pollutant from Wisconsin's waterways, particularly the Great Lakes.

Microbeads are tiny plastic balls used in dental care, hair care, and skin care products, and are small enough to slip through sewage system filters. These microbeads then end up polluting lakes and rivers, including Lake Michigan. Studies of Lake Michigan have found millions of microbeads, which can absorb toxic chemicals and damage fish and wildlife populations. The human consumption of fish damaged by microbeads is also a serious public health concern.

Legislatures in the Great Lakes and elsewhere are taking action. A bill similar to AB 15 phasing out microbeads recently passed by the Illinois Legislature on a unanimous vote in May 2014 and was signed into law by then-Governor Quinn in June 2014. Last Wednesday, January 28<sup>th</sup>, an Indiana House committee unanimously approved a bill to ban microbeads. Passage of AB 15 will not only stop the sale of microbeads in Wisconsin, it will also encourage manufacturers to eliminate microbeads from all consumer products nationwide. Manufacturers want to make products that can be sold in the Illinois and Wisconsin markets. Many manufacturers are already voluntarily phasing out microbeads after the passage of Illinois' law. Legislation to phase out microbeads has also been introduced in New York, Michigan, Minnesota, Ohio, and on the federal level in Congress.

Assembly Bill 15 has from broad support from both environmental and industry groups. This bill is a practical solution to eliminating dangerous toxins from our Great Lakes. I look forward to the opportunity to hear from experts on the Great Lakes and others interested in protecting the Great Lakes at today's hearing. Thank you again for the opportunity to testify on this legislation. It is my hope that this bipartisan legislation is adopted soon.



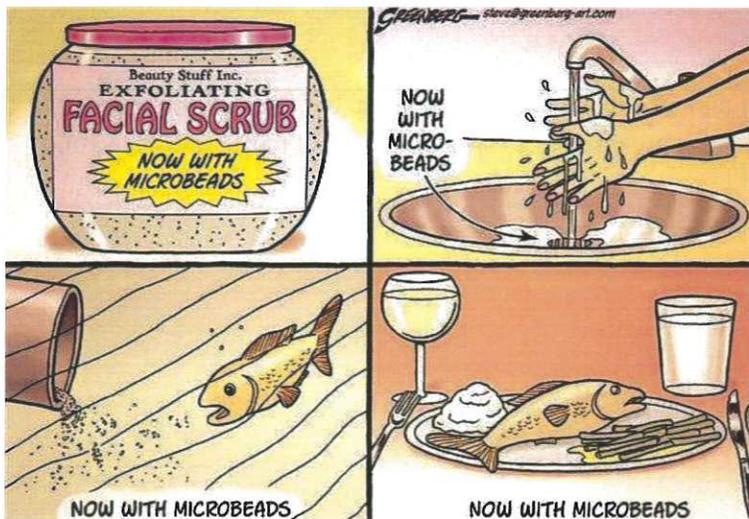
**Testimony of Tyson Cook, Director of Science and Research  
Amber Meyer Smith, Director of Programs and Government Relations  
Assembly Bill 15/Senate Bill 15  
Assembly Environment and Forestry Committee  
February 3, 2015**

Clean Wisconsin is a non-profit environmental advocacy group focused on clean water, clean air and clean energy issues. We were founded forty four years ago as Wisconsin's Environmental Decade and have 20,000 members and supporters around the state.

We appreciate the opportunity to speak in favor of Assembly Bill 15 and its companion Senate Bill 15, and to thank the authors for their attention on this emerging pollution issue.

We have known about the dangers of plastic pollution in our waters for quite some time, and there has been considerable scientific research done around the issue. This includes not only large plastics like bottles and bags, but also so-called "microplastics" – tiny particles of plastic that range in size from 5 millimeters on the large end (about the size of a pencil eraser) to micrometers (less than the width of a human hair). Until relatively recently, most of the research around these pollutants has been focused on oceanic impacts. However, scientists have lately begun to look at inland waters as well. And when they looked, they found microplastics to be widespread here as well, for example throughout the Great Lakes.

Microplastics enter the environment in a variety of ways, like through the gradual breakdown of plastic-containing litter like bottles or bags into smaller and smaller sizes. This is in fact the largest source of microplastic pollution in the oceans. However, there are also some products that are specifically designed as microplastics, like plastic "microbeads" intentionally manufactured and used in cosmetics and cleaning products despite the availability of effective and economic alternatives. When plastic microbeads are put into personal care products, they can easily make their way to inland waters because they are washed right down the drain, and are difficult to remove from the water by sanitation systems due to their size, buoyancy, and resistance to coagulation. And unlike in the oceans, over half of all microplastic particles found by researchers in the Great Lakes were in the shape of those deliberately made microbeads.



Since microplastics aren't biodegradable, once they get into the environment they stick around for a long time. This means that there are many opportunities for them to be taken in by aquatic organisms, which can, for example, mistake them for food. As a result, researchers have found them in everything from tiny invertebrates to large fish. More research is still needed on how these microplastics end up impacting the organisms that ingest them, but it is clear that they have the potential to disrupt digestive systems, and decreasing feeding by taking up space in those digestive systems.

There are also potential chemical impacts from microplastics on wildlife. For example, the plastics themselves can leach chemicals like BPA, which have been shown to cause significant impacts for individual organisms or even their offspring.

Of even greater concern for people, microplastics may act as a pathway for toxic chemicals to be gathered from the water and enter into the ecosystem, where they can reach even higher concentrations. This is because microplastics can act like sponges for persistent organic pollutants (like pesticides and PCBs) or other chemical pollutants in the water. When the microplastics are then eaten or otherwise taken in by aquatic organisms, those gathered pollutants may then be released into the organisms. Many of those types of pollutants have the ability to then accumulate in the organisms, and then “biomagnify” up to much higher concentrations as larger animals higher up the food chain eat lots of the smaller contaminated organisms.

The widespread presence of microbeads in our Great Lakes has been only recently confirmed through research by a team of scientists in 2013. Studies have shown that the Great Lakes are teeming with plastic, with higher concentrations nearer to coastal cities. An average of 17,000 tiny pieces of plastic per square kilometer has been found in Lake Michigan.

Applying previous research and estimates to our state, we calculate that Wisconsinites alone may be responsible for adding 11,000 pounds of microbeads into the waste stream each year. That is nearly 400 billion individual plastic microbeads that have the potential to get into our waters.

There are many effective economic alternatives for manufacturers to use as an exfoliant in their personal care products like rice, apricot seeds, walnut shells, powdered pecan shells, bamboo, pumice, fruit pits, and oatmeal. It is by using these safe alternatives that we can reduce unnecessary plastic contamination of our waters. Many leading manufacturers have already stopped or are removing plastic microbeads from their products. This includes the five largest cosmetic and personal care product companies: Procter & Gamble, Unilever, Colgate Palmolive, L’Oréal USA Inc., and Revlon, Inc. But even with this commitment, those companies represent only about one-third of the total marketshare, and it is necessary for lawmakers to ensure all companies are acting responsibly and getting microbeads out of their products.

Several other states are considering phasing out microbead use in personal care products. In spring of 2014, Illinois became the first state to phase out use, and SB 15 and AB 15 are substantially similar to their law. In Illinois the timelines were a carefully crafted compromise between legislators, industry and environmentalists.

Clean Wisconsin is also supportive of legislation being introduced by Senator Wirch and Representative Ohnstad which phases out the use of microbeads on a more aggressive schedule. The sooner these microbeads stop entering our waterways the better. But we also respect the compromise reached in Illinois, and feel comfortable with the phase out set forth in SB 15 and AB 15.

These bills are a common sense approach where safer and affordable alternatives exist, but legislation is needed to make sure all companies are complying. We appreciate the opportunity to speak on this bill today, and urge your support.



# PLASTIC MICROBEADS POLLUTING OUR WATERS



*Photo courtesy of The Alliance for the Great Lakes*

**Plastic microbeads** are tiny particles of plastic that are sometimes put in products like face and body scrubs, hand soaps, or toothpastes.

They can range in size from less than 10 micrometers (about the diameter of a red blood cell) up to a few millimeters (a millimeter is about the width of a credit card).

## The problem with plastic microbeads

Plastic microbeads aren't easily captured by water treatment systems, so after being rinsed down drains, they can get in our waters where they can damage the aquatic ecosystem.

And because the plastic particles are not biodegradable, they remain in the environment for long periods of time.

## Plastic microbeads in the Great Lakes

Recent research has shown that the Great Lakes are teeming with plastic, with higher concentrations nearer to coastal cities.

*An average of 17,000 tiny pieces of plastic per square kilometer has been found in Lake Michigan.*

## What are manufacturers doing?

Fortunately, many leading manufacturers have already stopped or are removing plastic microbeads from their products. This includes the five largest cosmetic and personal care product companies: Procter & Gamble, Unilever, Colgate Palmolive, L'Oréal USA Inc., and Revlon, Inc.

These leaders have less than one-third of that total marketshare however, leaving many potential microbead-containing products on shelves.

**A single bottle of  
microbead face  
scrub can contain  
over 300,000  
plastic particles**

**AVOID PRODUCTS  
CONTAINING:  
POLYETHYLENE,  
POLYPROPYLENE, OR  
ACRYLATE (CO)POLYMER**

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Photo courtesy of 5 Gyres

**Wisconsinites may be adding nearly 400 billion microbeads to the waste stream a year**

## What are the impacts of plastic microbeads?

Plastic microbeads in the water can be easily confused for food by aquatic organisms. As a result, researchers have found them in everything from tiny invertebrates to large fish. And since they cannot be digested, they can cause problems like decreased feeding and disrupted digestive systems.

Plastic microbeads can also contain various chemicals. Some of those chemicals are purposeful additives like BPA put in the microbeads themselves. Other times, the microbeads act like sponges, soaking up chemicals they come into contact with. Plastic debris in the oceans, for example, has been found to accumulate pollutants such as PCBs up to 100,000 to 1 million times the levels in the water.

When chemicals are absorbed by the organisms that eat plastic microbeads, they have the potential to kickstart the process of biomagnification, where chemical concentrations increase to much higher levels up the food chain, like in larger fish.

## Does my product contain plastic microbeads, and are there alternatives?

You can check your personal care or beauty products for plastic microbeads by checking the ingredients list for *polyethylene*, *polypropylene*, or *acrylate (co)polymer*.

While a large number of products, especially those marketed as “scrubs” do contain these plastic microbeads, there are also many that don’t. They use natural ingredients like fruit pits, oatmeal, or pumice instead.

## Why are we just hearing about plastic microbeads?

Until recently, research on plastic pollution in our waters has been focused in the oceans. But new research has shown that microplastics like plastic microbeads are also found throughout inland waters.

In the oceans, the vast majority of microplastic pollution is made up fragments broken down from larger pieces of plastic like plastic bags or bottles. In the Great Lakes, however, over half of all microplastic particles found by researchers were in the shape of microbeads.

**IN THE GREAT LAKES,  
OVER HALF OF ALL  
MICROPLASTIC PARTICLES  
WERE FOUND BY RESEARCHERS  
TO BE IN THE SHAPE OF  
MICROBEADS**

## What can be done to fix the problem?

Unfortunately, there are no known methods to effectively remove plastic microbeads from the environment. As a result, we need to keep them from getting out into our waters in the first place.

***Recently proposed bills in Wisconsin follow the lead of other states to do just that, by banning the manufacturing of microbead-containing products, and phasing them off store shelves.***