

Testimony: Oregon SB405
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January 31, 2023

Chair Sollman, Vice Chair Findley, and Members of the Committee, for the record my name is Dr. Elise Granek and I'm a professor of Environmental Science and a marine ecologist at Portland State University. I'm here today to talk to you about microfibers.

Microfibers are in our bodies. They are in our [lungs](#), our [blood](#); in [human placentas](#) and in mothers' [breast milk](#). How do they get into our bodies? We breathe them in and we ingest them from our water and our food. Around the world, microplastics have been detected in our drinking water and in our bottled water. They contaminate honey, sea salt, and craft beer, as well as our food. Here in Oregon, we have detected microfibers in [our rivers](#)-- not just in the Willamette River and the Columbia River, but also in the Deschutes River, the Rogue River, and others. At PSU, we have found microfibers in our seafood products - ranging from shellfish such as [oysters and razor clams](#), to crustaceans such as shrimp and [crabs](#), and finfish including rockfish and salmon.

Studies around the world have found that microfiber consumption can affect **growth** and **health** of [bivalves](#), [crustaceans](#), [fish](#), and mice (for effects on mice, see [1](#), [2](#), [3](#), [4](#), and [5](#)). Seafood is commercially and culturally important to Oregon and keeping these products and their populations in the ocean healthy for Oregonians and for export is critical. Additionally, Oregon's tribally important lamprey have microfibers in their tissue as well- both juvenile lamprey in our rivers and adults in our ocean.

How are they getting into our rivers and our wildlife? Take a quick look at what you are wearing today. When we wash our clothes, [small fibers shed](#) into our [laundry](#) water at a rate of about 700,000 fibers per load. Even if our wastewater treatment plants were 99.99% effective, with a state population of over 4 million, that's about 760 billion fibers per year being released into Oregon's waterways, though we do not yet know how many microfibers, [if any](#), are safe for [humans](#) to [ingest](#).

How do we decrease that number of fibers going into the environment, into our food, and into our bodies? One verified tool for preventing fibers from making their way into our treatment plants and ultimately into our waters and animals, is [washing machine filters](#). These filters are **currently** in use by U.S. homeowners on septic systems. A previous study found that installing washing machine filters in [10% of households](#) in a small town led to a 50% reduction in microfibers leaving wastewater treatment plants in the effluent – the water coming out of the treatment plant and going back into rivers and oceans. There are a number of different companies currently manufacturing such filters, so efficiency varies by product. Additionally, there are other steps that need to be taken to reduce microplastics in our food, water, wild animals, and our own bodies, but washing machine filters offer a first and important step. Though not the first in the world to mandate washing machine filters, SB 405 would make Oregon a national leader on this issue.

Thank you for your time and I'm happy to answer any questions you may have.