Federal Report on Microfiber Pollution

The **National Oceanic and Atmospheric Administration Marine Debris Program** and **Environmental Protection Agency's Trash Free Waters Program**, on behalf of the **Interagency Marine Debris Coordinating Committee**, developed the Report on Microfiber Pollution. Support was also provided by the consulting firm **Materevolve** and the **National Marine Sanctuary Foundation**.

Created as a requirement of the Save Our Seas 2.0 Act (P.L. 116-224), this report provides an overview of microfiber pollution, including a proposed definition of "microfiber", an assessment of the problem, and recommendations for measuring and reducing microfiber pollution. It also outlines a plan for Federal agencies to reduce microfiber pollution in coordination with stakeholders.

What is the proposed definition for microfibers?

Microfibers are solid, polymeric, fibrous materials that include plastic and non-plastic fibers less than 5 millimeters in all dimensions.

How was the report created?

The report was created through an extensive development process with feedback and input provided by 12 Federal agencies and experts across the United States and Canada in the academic, government, and industry sectors, as well as public comment.

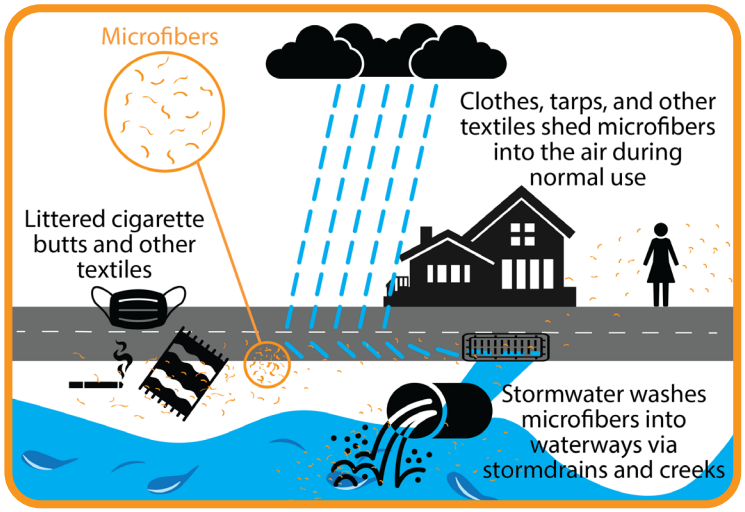
Where do microfibers come from?

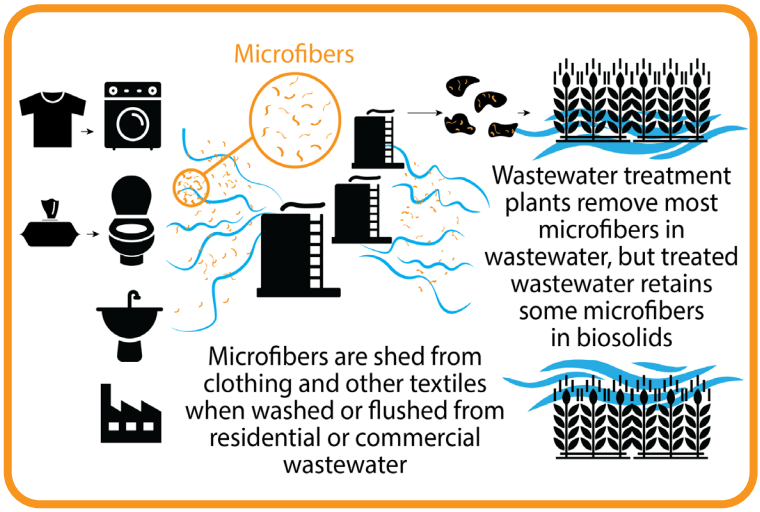
They come from items we use every day, such as clothing, carpets, cigarette butts, and other fiber-based products, and eventually end up polluting the environment.

- **Clothing and Apparel**
- **Carpets and Upholstery**
- **Cleaning Wipes**
- **Construction Materials**
- **Cigarette Butts**
- **Fishing Nets and Ropes**

How do microfibers get into the environment?

Microfibers shed from fiber-based products during production and manufacturing, regular use, washing, and cleaning. They travel into the environment through wastewater, stormwater and runoff, and atmospheric transport.





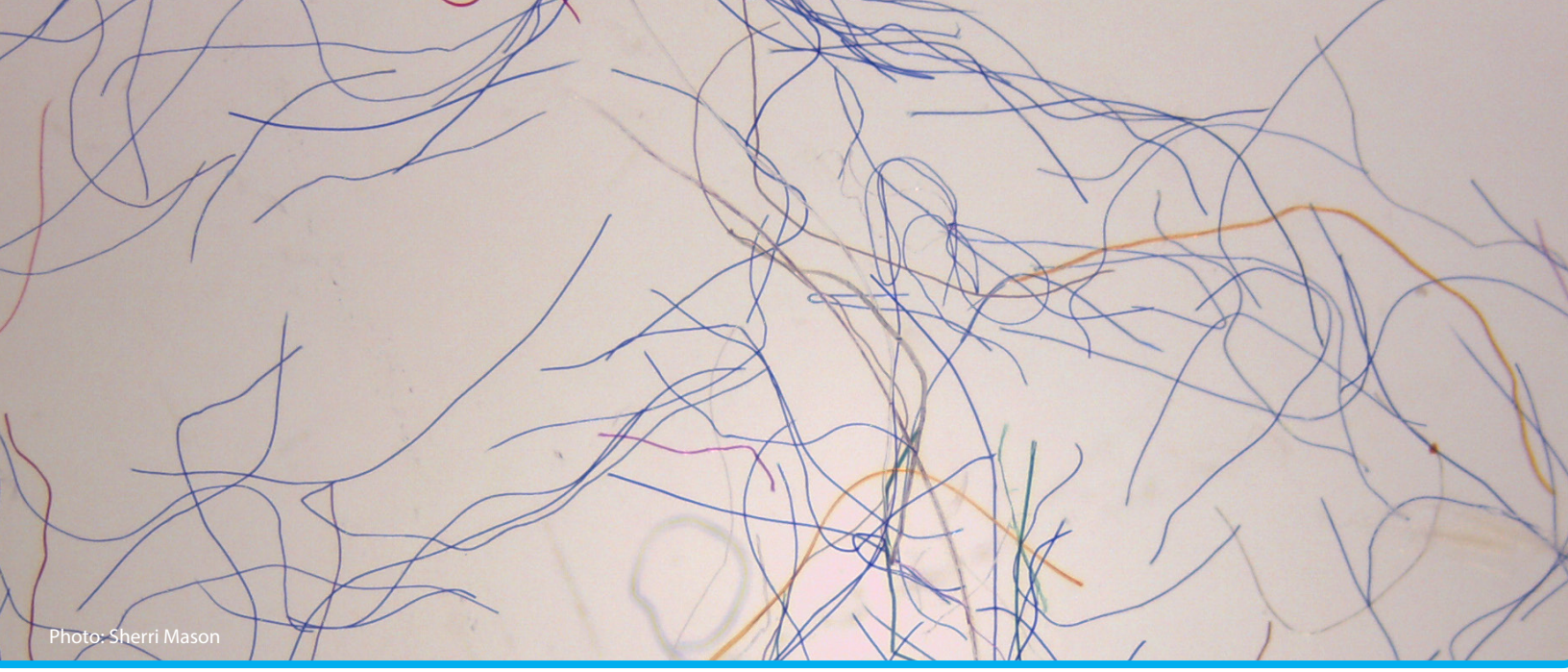


Photo: Sherri Mason

Why is microfiber pollution a problem?

Microfibers have been found almost everywhere, including every continent, many environments (e.g., sea ice, soil, indoor and outdoor air, drinking water and food), and within marine and freshwater animals. **These tiny fibers are one of the most pervasive types of microplastics.** The potential effects of microfiber pollution on human health and the environment remain largely unknown and may depend on the various physical and chemical properties of microfibers. This is a growing area of research.

How can we measure microfibers?

Research on microfibers has increased rapidly over the last decade, but with limited harmonization across study design, methods, and reporting. The report outlines recommendations for standardized methodologies for research design, quality assurance and control measures, field sample collection, and laboratory techniques for characterizing and counting microfibers.


Photo: Sherri Mason

How can we reduce microfiber pollution?

Microfiber pollution can be reduced through changes to the design of products and manufacturing facilities, capturing fibers while products are being used, and advancing wastewater treatment.

What is the Federal Government doing about microfiber pollution?

This report outlines a new five-year plan with **five goals** that United States Federal agencies should consider to reduce microfiber pollution in coordination with stakeholders. Actions identified in this plan are not commitments.

1. **Conduct and support research to address the most critical research needs related to microfiber pollution**
2. **Prevent and reduce microfiber pollution from textiles and other sources from entering the natural environment**
3. **Capture microfibers in major microfiber pollution pathways**
4. **Minimize toxicological hazards associated with microfiber pollution**
5. **Coordinate and share microfiber pollution accomplishments, best practices, and science**