

Textiles

The Problem

The main source of textiles in municipal solid waste (MSW) is discarded clothing, although other smaller sources include furniture, carpets, tires, footwear, and other nondurable goods such as sheets and towels. There also is data specific to clothing and footwear, and to towels, sheets and pillowcases. (EPA). The 2018 Waste Characterization Study estimates that nearly 1.2 million tons of textiles were discarded in California, not including other fiber products, like carpet. A recent study by the Ellen Macarthur Foundation indicates that our clothing consumption is increasing, while garment utilization is decreasing. In short, we are buying more clothing and disposing it more frequently. End-of-life management becomes a key element in creating a circular economy for textiles and clothing.

- [The Story of Microfibers \(youtube.com\)](https://www.youtube.com/watch?v=...)

The Product

Textiles are not limited to just garments, but also incorporated in many household and industrial products, like furniture and automobiles. Problematic textile products include “flushable” wet wipes and other single-use non-woven textiles that are flushed in the toilet, causing expensive sewer problems. Research has shown the synthetic micro-fibers from textiles products have been found to be the most common types of microplastic debris in the environment. They have been identified across a diversity of samples from streams, rivers, lakes, ocean water, the deep-sea, wildlife, arctic sea ice, seafood and table salt. A study in 2018 by the EU Federal Environment Agency and the Medical University of Vienna detected microplastics in human bodies of 8 international participants for the first time.

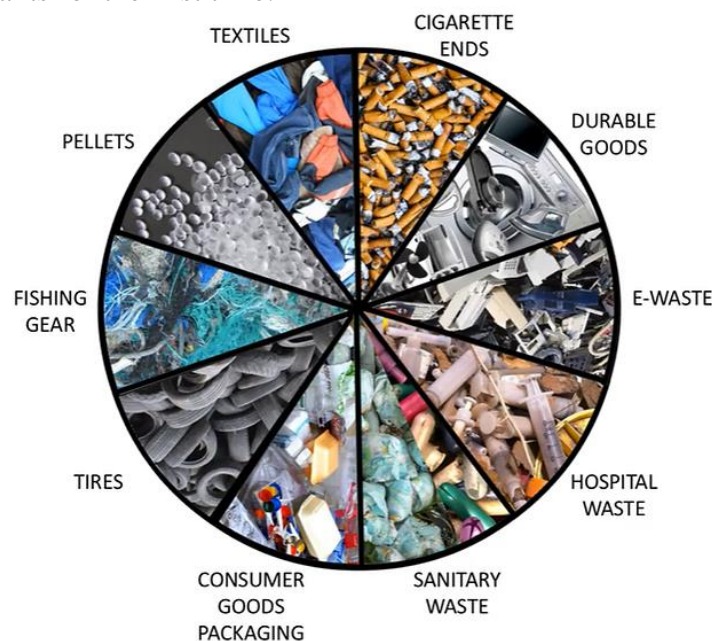


Figure (above): Sources of microfibers as presented at the UC Berkeley Microfiber Symposium held on 10/11/19

The Solution

There are many examples of voluntary producer responsibility to reduce the overall impact on textiles and apparel products. More examples and details coming soon. Watch the video below to learn about the Econyl recycled nylon fiber made from post-consumer carpet.

- [Prada Re-Nylon - Episode 1 - What We Carry \(youtube.com\)](#)

Department of Toxic Substances Control (DTSC) Safer Consumer Products

The Safer Consumer Products (SCP) program uses a four-step process to reduce toxic chemicals in the products that consumers buy and use. DTSC identifies specific products that contain potentially harmful chemicals and reviews safer alternatives. DTSC proposes to list treatments containing perfluoroalkyl or polyfluoroalkyl substances for use on converted textiles or leathers such as carpets, upholstery, clothing and shoes, as Priority Products under the SCP regulations.

- [Coalition Letter of Support for DTSC Listing Textiles with PFAS as a Priority Product](#)

Research & Relevant Articles

- [Pending California bill would require apparel producers to establish waste recycling programs](#) - Fashion Dive, 6/8/23
- [CEH Finds 63 Sock Brands with High Levels of BPA](#) - Center for Environmental Health, 10/4/21
- [Wet wipes contribution to microfiber contamination under COVID-19 era: An important but overlooked problem](#) - V.C.Shruti, 12/2021
- [Synthetics Anonymous: Fashion brands' addiction to fossil fuels](#)- Changing Markets Foundation, 06/21
- [A Feasibility Study of Textile Recycling in Canada](#)- Fashion Takes Action, 6/9/21
- [Recommendations to the New Zealand Government from the Clothing & Textile Industry](#)- Usedfully, 05/21
- [Modeling and Linking Report](#)- Accelerating Circularity, Spring 2021
- [Supply Chain of Waste Cotton Recycling and Reuse: A Review](#)- AATCC Journal of Research, 03/2021
- [Why today's 'fast fashions' can be bad for the planet](#)- Science News for Students, 12/10/20
- [Clothing Labels: Accurate or Not?](#)- Circle Economy, 2020
- [Plasticenta: First evidence of microplastics in human placenta](#)- Environment International, 12/2/20
- [COVID-19 Solutions Are Climate Solutions: Lessons From Reusable Gowns](#)- Frontiers in Public Health, 11/25/20
- [Circular investment opportunities to build back better fashion](#)- Ellen MacArthur, 8/20
- [Textile Recovery in the US: A Road Map to Circularity](#)- RSS, 6/30/20
- [Class Is In Session](#)- Sportswear International, 4/14/20
- [Is it time to take another look at reusable protective gear in the wake of COVID-19?](#)- The Star, 3/27/20
- [Fashion has a misinformation problem. That's bad for the environment](#)- Vox, 1/27/20
- [Microplastics detected in humans for the first time](#)- Medicine and Science, 10/23/18



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- [Environmental impact of textile reuse and recycling](#)- Journal of Cleaner Production, 2/27/18