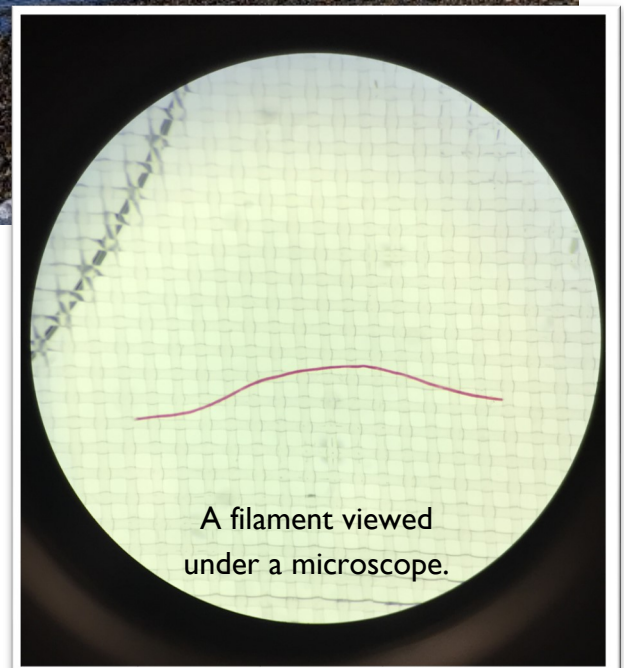


MICROPLASTIC DISTRIBUTION IN THE GREEN-DUWAMISH WATERSHED

2020-2021



In the fall of 2020, volunteers across the Green-Duwamish Watershed collected water samples to survey for microplastics (plastic fragments and fibers smaller than 5mm). Microplastics are an emerging concern to the health of our waterways, the organisms that inhabit them, and the humans who rely upon them. Measuring their prevalence in local waterways can increase public awareness and help inform restoration efforts that will protect this ecologically and culturally important watershed.



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Why are we studying microplastics?

Today, microplastics can be found nearly everywhere on earth. They come from a variety of sources including car tires, synthetic clothing, larger plastic debris, fishing gear and cigarette butts. Separate studies have found microplastics in fresh and salt water, fish, shellfish, honey, beer, and even our drinking water. Plastics never biodegrade into the environment, they just break up into smaller pieces. This leads to organisms mistaking them for food and ingesting them. Plastics can also contain harmful additives like phthalates (used to make plastic more flexible) and PBDEs (flame retardants). In addition, plastics can adsorb toxic compounds already present in a waterway such as PCBs, nonylphenols, heavy metals, pesticides (DDTs), and pathogens.

Results from 2020 sample collection:

Puget Soundkeeper volunteers collected samples from the Green-Duwamish watershed. Due to COVID precautions, Soundkeeper's Stewardship Team analyzed the samples instead of volunteers. In total, volunteers collected 33 samples. Of the samples taken, 94 total microplastics were found and 96.8% contained at least one microplastic. Of that, 97.9% were filaments, 2.1% were fragments and 0% were pellets. On average, each sample contained 3 microplastics.

Full results: https://www.google.com/maps/d/u/0/edit?mid=1-fLBfBrt-tr4RRTCwQLpW5F_sQV5cxnS&usp=sharing

