

## About the Florida Microplastic Awareness Project.

Small plastics (less than 5 mm in size) are becoming an increasing concern in the marine environment. The Florida Microplastic Awareness Project (FMAP) is a citizen science project to raise awareness about the sources of and threats posed by microplastics in the coastal environment. Volunteers are collecting and analyzing water samples from around the state, documenting the presence of microplastics.



*Microplastics found in beach sand*



Want to get involved or learn more? Please contact:

**Maia McGuire, PhD**

UF/IFAS Extension Sea Grant Agent  
150 Sawgrass Road  
Bunnell, FL 32110

<http://www.plasticaware.org>

Phone: 386-437-7464  
E-mail: [mpmcg@ufl.edu](mailto:mpmcg@ufl.edu)



**Florida Microplastic**  
AWARENESS PROJECT

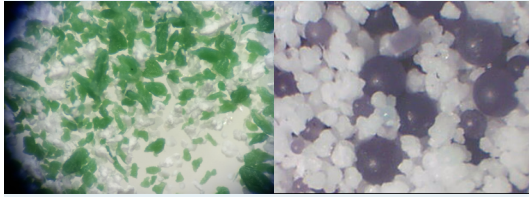


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[www.MarineDebris.noaa.gov](http://www.MarineDebris.noaa.gov)  
*Keep the sea free of debris*

*This project is funded by a 2015 NOAA Marine Debris Outreach & Education grant.*



*Microplastics isolated from toothpaste (left) and facial scrub (right).*

## What are microplastics?

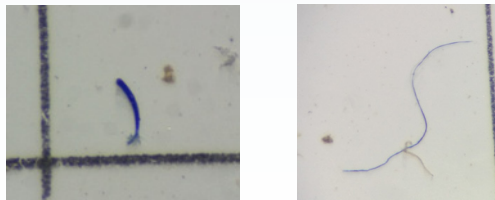
Microplastics are small plastic items that are less than 5 mm (0.2") in size.

- **Primary microplastics** are small plastics that are made as fillers, as “sandblasting” media, or as a way of transporting raw plastic (as pellets called “nurdles”) to companies that manufacture plastic items. Primary microplastics include “microbeads,” which are found in many personal care products.
- **Secondary microplastics** come from the breaking down of larger plastic items through ultraviolet light, chemical, or microbial processes.

## How do microplastics get into the ocean?

Scientists estimate that about 8 million metric tons of plastic enters the ocean each year. Polyethylene microplastics found in personal care products (toothpaste, facial scrubs, body washes, deodorants and makeup), as well as plastic fibers from washing synthetic clothing (acrylic, nylon, polyester and polypropylene) can enter coastal waters in wastewater effluent.

Wastewater treatment plants (WWTPs) are not designed to remove these tiny, very buoyant plastic pieces and fibers. Unlike most solids, the plastics do not sink, and are too small to remove without clogging the filters. It is currently not feasible for WWTPs to remove all microplastics from the incoming wastewater.



*Microplastic fragment and fiber found in coastal water. Photographs were taken using a microscope*

## What’s the problem ?

Petroleum-based plastics never biodegrade. Over time, they just break down into smaller and smaller pieces.

In the ocean, toxins stick to the surface of plastics. They may be a million times more concentrated on the plastic than in the water. Plastics can also contain toxic chemicals like BPA.

Aquatic animals eat plastic thinking that it is food. Filter-feeders can eat microplastics. The plastic can clog an animal’s digestive system, leading to starvation. Toxins on/in the plastic can get into the animal’s body.

## What can we do?

**Read labels.** Choose personal care products that do not contain polyethylene.

**Reduce, reuse, recycle and refuse plastics.** Do you really need that plastic bag or drinking straw? Use a refillable water bottle instead of buying a single-use plastic one.