

A brief look at  
microplastic pollution –  
and what we can do  
about it

# THE PLASTIC PROBLEM

# How Plastic Affects Us

Overexposure to certain plastics can harm our wellbeing.

- Some plastics are made with dangerous chemicals, such as:
  - Bisphenols, common components in hard plastic that can interfere with hormone functions and can cause various defects.
  - Phthalates, common components in flexible plastic that can interfere with hormone functions and cause heart damage.

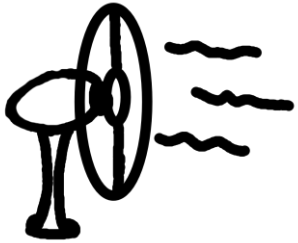
Plastic can also act as a sponge, soaking up other dangerous chemicals.

- Ingestion of these plastics can cause a variety of health problems, most notably cancer.

# What Are Microplastics?

- Microplastics are pieces of plastic less than 5 millimeters long. That's around the size of a grain of sand.
- Microplastics are usually created when they break off from a larger piece of plastic.
- Microplastics can be found almost everywhere on the planet.

The air we breathe



The soil we grow food from



The deepest seas

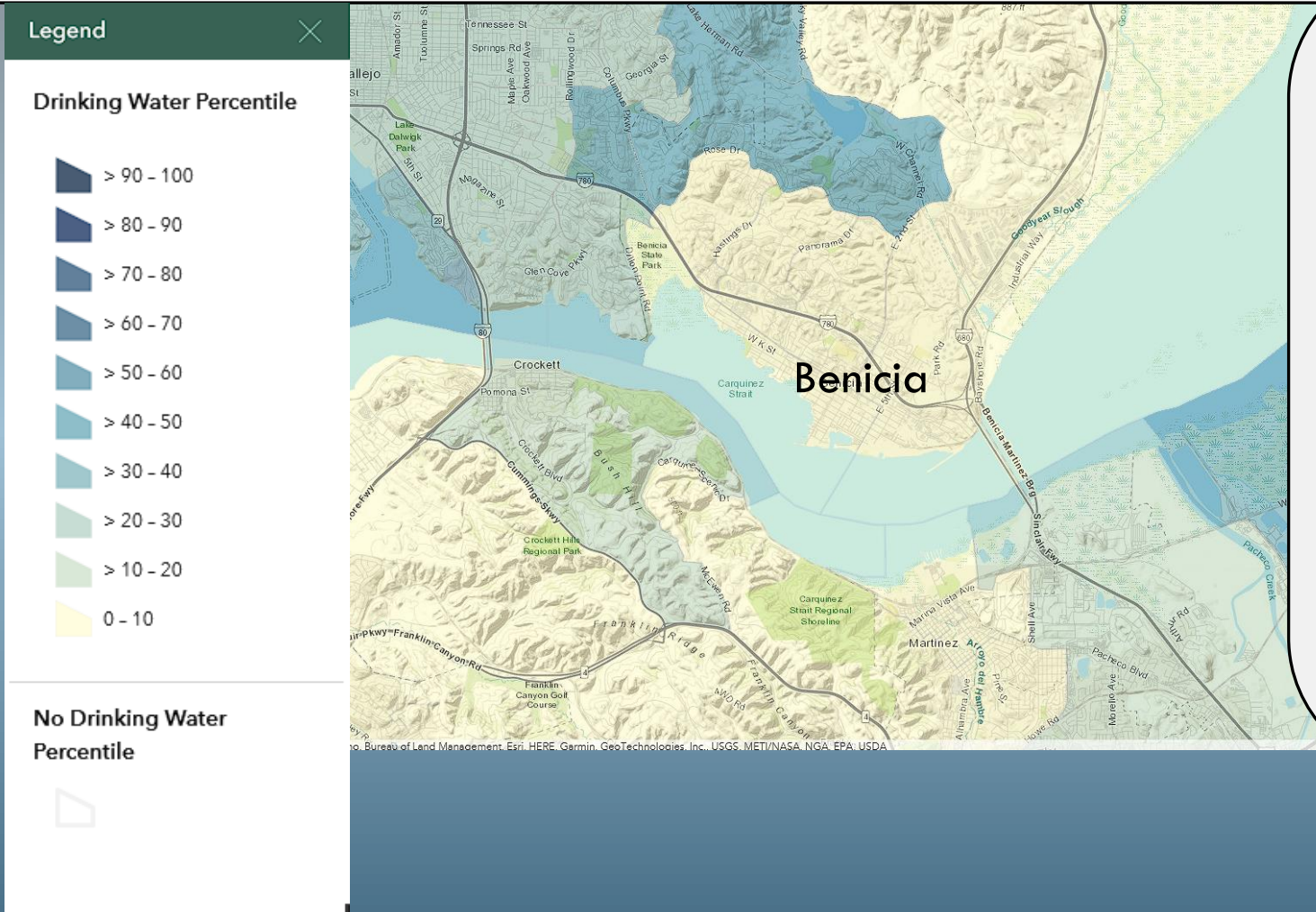


The highest mountains



There are an estimated ~150 million tons of plastic in the ocean alone, right now.  
~8 million tons enter the ocean yearly.

# Drinking Water Contaminants in Benicia



## What are drinking water contaminants?

Most drinking water in California meets health standards. However, drinking water sometimes becomes contaminated with chemicals or bacteria above the standards. Both natural and human sources can contaminate drinking water. Natural sources include rocks, soil, wildlife and fires. Human sources include factories, sewage, and runoff from farms.

# How Can We Protect Ourselves From Microplastics?

Avoid microwaving food in plastic containers. Heat can cause the release of harmful chemicals, causing them to leech into your food.

Avoid plastics with the recycling codes 3, 6, and 7. They look like this:



They're usually non-recyclable, and contain phthalates, styrene, and bisphenols, respectively.

If possible, avoid using plastic items at all. Alternatives to plastic include wood, paper, metal and glass.

Avoid eating meat and seafood. Animals often mistake microplastics for food and are considered a source of microplastics for humans.

Clean your house. Most carpets or rugs are made using plastic fibers, as well as furniture coverings, blankets, curtains, and so on. Dust, sweep, and vacuum regularly to prevent buildup of plastic particles in your home.

# What's Being Done

The biggest changes happen on the policy level. The good news? It's already happening.

Things being done:

- On July 2, 2021 the European Union (EU) ban on single-use plastics took effect. In the EU, this bans single-use plastics with existing alternatives, like plastic bags.
- On December 18, 2020 the Save Our Seas 2.0 Act took effect in the US. Among other things, this should improve America's responses to plastic pollution in the ocean.

# Thanks For Listening!

## References

- Trasande, Leonardo, et al – “Food Additives and Child Health” – *American Academy of Pediatrics* – Published: 8/1/18 – Accessed: 3/28/22
- “The Problem with Plastics” – *Ocean Conservancy* - Accessed 3/27/22
- “CalEnviroScreen 4.0” – *California Office of Environmental Health Hazard Assessment* – Accessed 3/20/22
- Hershberger, Scott – “Thousands of Tons of Microplastics Are Falling from the Sky” *Scientific American* – Published 6/11/20 – Accessed 3/30/22
- “European Union: Ban on Single - Use Plastics Takes Effect” – *Library of Congress* – Published 7/18/21 - Accessed 3/13/22
- "Text - S.1982 - 116th Congress (2019-2020): Save Our Seas 2.0 Act." *Congress.gov* – Published 12/18/20 – Accessed 3/13/22