

The State of Microplastics

Valerie Mitchell Hanley, Ph.D.

Senior Toxicologist

CA Department of Toxic Substances Control (DTSC)

ITRC Microplastics Team Co-Lead



Department of
Toxic Substances
Control



Challenges in Toxicity Research

- Exposure $\neq$ Adverse health effect
- Numerous non-human mammalian studies available but usability varies
- Uncertainties due to study design, exposure concentration, data quality, reporting, data gaps



Source: Thornton Hampton et al. 2022

California's Approach to Microplastics

State Actions

California Safe Drinking Water Act: Microplastics

Adopt a definition of microplastics in drinking water



Adopt a standard methodology to test drinking water for microplastics



Establish requirements for four years of testing and reporting microplastics in water



POLICY HANDBOOK ESTABLISHING A STANDARD METHOD OF TESTING AND REPORTING OF MICROPLASTICS IN DRINKING WATER

August 9, 2022

Prepared by:
THE DIVISION OF DRINKING WATER
STATE WATER RESOURCES CONTROL BOARD
STATE OF CALIFORNIA

[CA Health and Safety Code 116376](#)

State Actions

CA Statewide Microplastics Strategy - 2 Track Approach

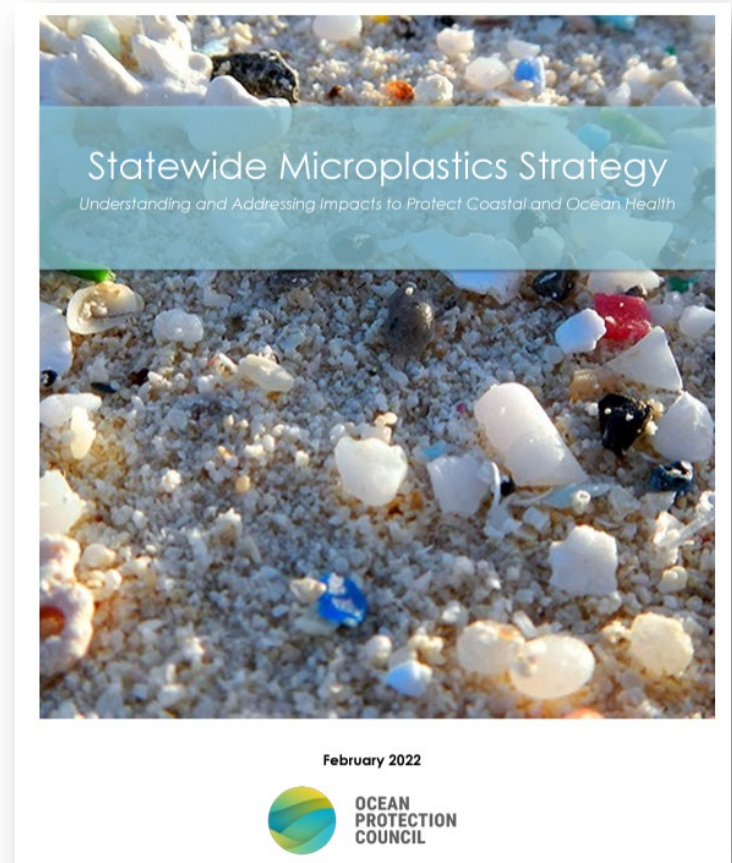
Track 1: Solutions

- **Pollution prevention**
- **Pathway interventions**
- **Outreach & education**

Track 2: Science to inform future action

- **Monitoring**
- **Risk thresholds & assessments**
- **Sources & pathways prioritization**
- **Evaluating new solutions**

[CA Public Resources Code, Division 26.5, Chapter 3.2](#)



State Actions

CA DTSC Safer Consumer Products Program

1 Candidate Chemical List

Chemicals listed as a concern by Authoritative Bodies

2 Priority Products

Product-Chemical combinations that may cause harm

3 Alternatives Analysis

Manufacturer evaluation of safer alternatives

4 Regulatory Response

Wide range of possible actions to protect human health and the environment

State Actions

California Senate Bill 1147



Study Health Effects of Microplastics

- Drinking water
- Bottled water



Evaluate Toxicity Characteristics

- Set levels not anticipated to cause adverse health effects



Identify Data Gaps

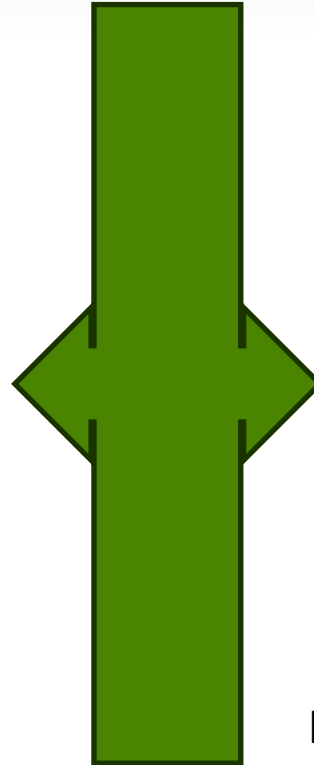
- If public health goals cannot be set

ITRC Microplastics Team

Technical
Guidance



<https://mp-1.itrcweb.org/>



Outreach
Toolkit

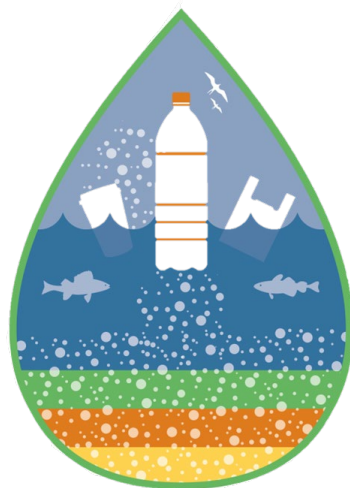


<https://mp-toolkit.itrcweb.org/>

Thank You!



Department of
Toxic Substances
Control



Contact Information: Valerie.Hanley@dtsc.ca.gov (916) 255-6440