Microplastics: Regulations & Research

Jared Voskuhl
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California Association of Sanitation Agencies
Senate Bill 1422 (Portantino)

Health & Safety Code § 116376.
(a) The State Water Board, on or before July 1, 2020, shall adopt a definition of microplastics in drinking water.

(b) The State Water Board, on or before July 1, 2021, shall do all of the following:

(1) Adopt a standard methodology to be used in the testing of drinking water for microplastics.

(2) Adopt requirements for four years of testing and reporting of microplastics in drinking water, including public disclosure of those results.

(3) If appropriate, consider issuing a notification level or other guidance to aid consumer interpretations of the results of the testing required pursuant to this section.

(4) Accredit qualified laboratories in California to analyze microplastics.
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4. Accredit qualified laboratories in California to analyze microplastics.
Senate Bill 1263 (Portantino)

Public Resources Code § 35635.

(g)(1) On or before December 31, 2021, the Ocean Protection Council shall submit the Statewide Microplastics Strategy to the Legislature. The council may at that time also submit recommended policy changes, including statutory changes, that may be needed to implement the Statewide Microplastics Strategy.

(g)(2) On or before December 31, 2025, the Ocean Protection Council shall report on the implementation of the Statewide Microplastics Strategy and the council’s findings and shall make recommendations to the Legislature.
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(d)(1) The development of a comprehensive prioritized research plan that includes research that will support the development of risk assessments for microplastics in the marine environment habitat types of California.

(2) The development of standardized methods for sampling, detecting, and characterizing microplastics.

(3) The characterization of ambient concentrations of microplastics in the marine environment and an assessment of the associated environmental impacts, by microplastic particle age, size, shape, type, and location.

(4) An investigation of the sources and relative importance of pathways associated with the environmental impacts of microplastics determined to be significant pursuant to paragraph (3).

(5) The development of a risk assessment framework for microplastics, based on the best available information on exposure of microplastics to organisms, including humans, through pathways that impact the marine environment.
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SB 1422 - Drinking Water Monitoring

- Analytical Methods Evaluation Results forthcoming in Fall 2021

**Potential Tiered Monitoring Framework**

- Tier 1: Screening method(s)
- Tier 2: Measuring total plastics microplastics by mass
- Tier 3: Detailed characterization by individual particle
Developing the framework to apply microplastics thresholds

• Key questions addressed:
  - How many thresholds are needed?
  - What are their implications?

• We agreed on a tiered decision framework similar to the model used by the State Water Board

**Slide from 6-11-21 SCCWRP Commission Presentation**
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### Tentative thresholds proposed

<table>
<thead>
<tr>
<th>Threshold description</th>
<th>Food dilution (volume; um³/L)</th>
<th>Translocation (surface area; um³/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Invest in monitoring</td>
<td>263</td>
<td>16,712</td>
</tr>
<tr>
<td>2- Require discharge monitoring</td>
<td>1655</td>
<td>92,803</td>
</tr>
<tr>
<td>3- Listing as impaired waterbody</td>
<td>1294</td>
<td>218,962</td>
</tr>
<tr>
<td>4- Mandate pollution control measures</td>
<td>8160</td>
<td>1,018,046</td>
</tr>
</tbody>
</table>

*All studies met pre-defined quality criteria*
SB 1263 – Collecting Samples at Treatment Plants

June 2020 → 2021 → Report Due 2022
Central San Pilot Test – 7/28/21

Pilot Site Agencies
- Central Contra Costa Sanitary District (July/August)
- City of Oceanside (August/September)
- City of San Diego (August/September)
- East Bay Dischargers Authority (August/September)
- SOCWA (August)
Central San Pilot Test – 8/9/21

- ASTM Collection Method (24-Hr)
- ASTM Sample Preparation Method
- FTIR Analysis + subsample with draft ASTM Analytical Method
Developments & Upcoming Meetings

• June 2020 – SWB Adoption of a Definition of ‘Microplastic’
• June 2020 - OPC 2-yr POTW Study
• May 2021 – OPC Risk Assessment Framework Report and Recommendations
• Fall 2021 – SWB Adoption of a Drinking Water Method
• September 8 – SCCWRP Microplastics Health Effects Report
• Fall 2021 – POTW Sampling Phase 1
• December 2021 – OPC Microplastics Statewide Strategy
• Spring 2022 – POTW Sampling Phase 2
Questions

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