Understanding Microplastics in the Great Lakes

Generally defined as plastic particles less than 5 mm in size, microplastics are present in all five Great Lakes.

The ***International Joint Commission Great Lakes Science Advisory Board*** assessed the current status of microplastics in the Great Lakes, and proposes tools to strengthen monitoring efforts through a regionally coordinated approach.

ADDRESSING KEY CHALLENGES TO A COORDINATED APPROACH ON MICROPLASTICS

Offering a common definition of microplastics

Without a common definition, it is difficult to compare studies and implement harmonized monitoring, risk assessment and management efforts.

This report proposes a size and composition-based definition of microplastics, consistent with others used in North America.

Standardizing sampling methods

Standardized sampling methods enhance collaboration and confidence in the quality of shared data.

This report offers standard operating procedures for collecting samples in open waters, rivers, biota and sediment.

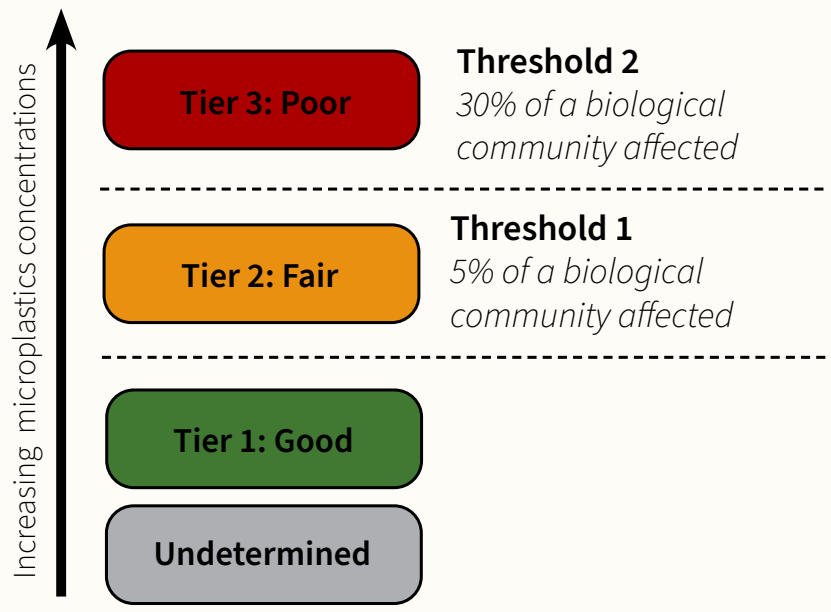
Indicating when management efforts are needed

Uncertainty about when and where actions to combat microplastics are needed slows management responses and increases the potential for environmental harm.

This report offers an environmental risk assessment and management framework to indicate where and when pollution management actions are needed.

Evaluating the Status of Great Lakes Microplastics

The board proposes a tiered rating system to help evaluate the status of microplastics in Great Lakes surface waters and sediment, aligned with existing water quality assessment frameworks.



The tiers are divided by two thresholds. Derived from available data, these thresholds represent the concentrations of microplastics that would impact 5 percent and 30 percent of a biological community of aquatic species.

Read the board report for the full findings and recommendations

MICROPLASTICS AND THE GREAT LAKES WATER QUALITY AGREEMENT

Under the Great Lakes Water Quality Agreement, Canada and the United States issue their ***State of the Great Lakes*** reports every three years. The reports assess the lakes' ecological health based on a suite of indicators, like the presence of toxic and harmful substances.

With support from the tools proposed by the Great Lakes Science Advisory Board, including microplastics as one of the toxic chemicals assessed as an indicator of Great Lakes water quality will ensure ongoing monitoring and assessment to track the status and trends of microplastic pollution in the Great Lakes.

The IJC was established in 1909 under the Boundary Waters Treaty to help Canada and the United States prevent and resolve disputes over shared waters. The Great Lakes Science Advisory Board provides advice on research and scientific matters on Great Lakes water quality issues.

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