

Water quality standards and guidelines

Water quality standards and recommendations are developed to specify acceptable amounts of various components in water to preserve human health, environment, and animals. These standards are frequently established by governmental or regulatory institutions and serve as guidelines for water quality management. The following are some of the most prevalent parameters addressed by water quality standards and guidelines:

Temperature

Turbidity

Dissolved Oxygen (DO)

Nutrients (Nitrogen and Phosphorus)

Heavy Metals (e.g., Lead, Mercury, Cadmium)

Organic Compounds (e.g., Pesticides, PCBs)

Biotic Integrity

Radioactive Elements

Microbial Parameters

Sediment Quality

Emerging Contaminants

Aesthetic Parameters

Color, Odor, and Taste

Oil and Grease

Limits on Hydrocarbons

Radioactive Elements

Pesticides

Groundwater Quality Standards

Surface Water Quality Standards

Scientific research, risk evaluations, and public health considerations are frequently used to produce standards and guidelines. They are examined and updated on a regular basis to take into account new information and technological improvements. Compliance with these criteria is essential for long-term water resource management and the preservation of human and environmental health.