CHLOROPHYLL

What is chlorophyll?

Chlorophyll is the pigment that makes plants green and helps them photosynthesize. Measuring chlorophyll allows us to keep track of how much algae is in the water. Algae is an important part of aquatic ecosystems, but too much can be harmful, reducing water clarity and dissolved oxygen.

How do we measure it?

Chlorophyll is collected by taking a water sample and passing the sample through a filter to collect the algae, which contains chlorophyll. That filter is then sent to the lab for analysis to measure the concentration of chlorophyll in micrograms per liter (µg/L).

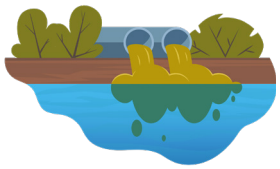
Equipment	Cost	Monitoring Time
Lab analysis	$$$	5–10 mins

Photo by Arundel Rivers Federation.

Why do we care?

Pollution

Nutrient pollution from sewage treatment plants, agricultural and urban runoff, or air pollution can cause algal overgrowth and elevated chlorophyll levels.



Aquatic Life

Some types of algae can produce toxins that are harmful to people, pets, and wildlife. These harmful algal blooms (HABs) can kill fish, degrade water quality, and create smelly, scummy conditions in the water.

Bay Health

A healthy concentration of chlorophyll means there is enough algae to fuel the food web, with clear water and enough dissolved oxygen for all the organisms that live there.

How is my water?

Chlorophyll levels are typically lower in the spring and higher in the summer. What's considered a healthy level can vary depending on how salty the water is. In general, chlorophyll measurements below 5 µg/L indicate good conditions, while levels above 25 µg/L may signal excessive algal growth.

PLEASE NOTE:

This fact sheet provides general information about chlorophyll, but water monitoring in specific locations may require more detailed methods and considerations.