

# The effects and causes of low levels of dissolved oxygen in lake water

## What is dissolved oxygen and why is it important?

**Dissolved oxygen** (DO) is one of the most **important** indicators of water quality. It is essential for the survival of fish and other aquatic organisms. **Oxygen dissolves** in surface water due to the aerating action of winds. **Oxygen** is also introduced into the water as a byproduct of aquatic plant photosynthesis.

## What happens if the dissolved oxygen reduces in lake water?

**When dissolved oxygen** becomes too low, fish and other aquatic organisms cannot survive. The colder **water** is, the more **oxygen** it can hold. As the **water** becomes warmer, less **oxygen** can be **dissolved** in the **water**.

## How do oxygen levels affect water quality?

As dissolved **oxygen levels** in **water** drop below 5.0 mg/l, aquatic life is put under stress. The lower the **concentration**, the greater the stress. **Oxygen levels** that remain below 1-2 mg/l for a few hours **can** result in large fish kills.

## How do you fix low dissolved oxygen?

**Dissolved oxygen** levels are increased by supplementing wind and wave action, adding plants to water and exposing water to purified **oxygen**. Using the latter method can result in supersaturation, or levels of **oxygen** in excess of natural levels. Run a portable splash or spray type aerator in water.

## What does low dissolved oxygen in water sample indicate?

**Dissolved oxygen** levels below 3 ppm are stressful to most aquatic organisms. ... **Low dissolved oxygen** levels can be the result of elevated temperature and thus the inability of the **water** to hold the available **oxygen**. **Low dissolved oxygen** levels can also **indicate** an excessive demand on the **oxygen** in the system.

## What causes low oxygen levels in lakes?

**Low dissolved oxygen** (DO) primarily results from excessive algae growth **caused** by **phosphorus** (**fertilizers**). ... This can result in insufficient amounts of dissolved **oxygen** available for fish and other aquatic life. Die-off and decomposition of submerged plants also contributes to **low dissolved oxygen**.

## **What is a good dissolved oxygen level?**

Water at lower temperatures should have higher mg/L of **dissolved oxygen** and higher %DO while warmer, polluted waters will have lower mg/L and %DO. **Healthy** water should generally have **dissolved oxygen** concentrations above 6.5-8 mg/L and between about 80-120 %.

## **Does warm or cold water hold more dissolved oxygen?**

**Cold water** can **hold more dissolved oxygen** than **warm water**. In winter and early spring, when the **water** temperature is low, the **dissolved oxygen** concentration is high.