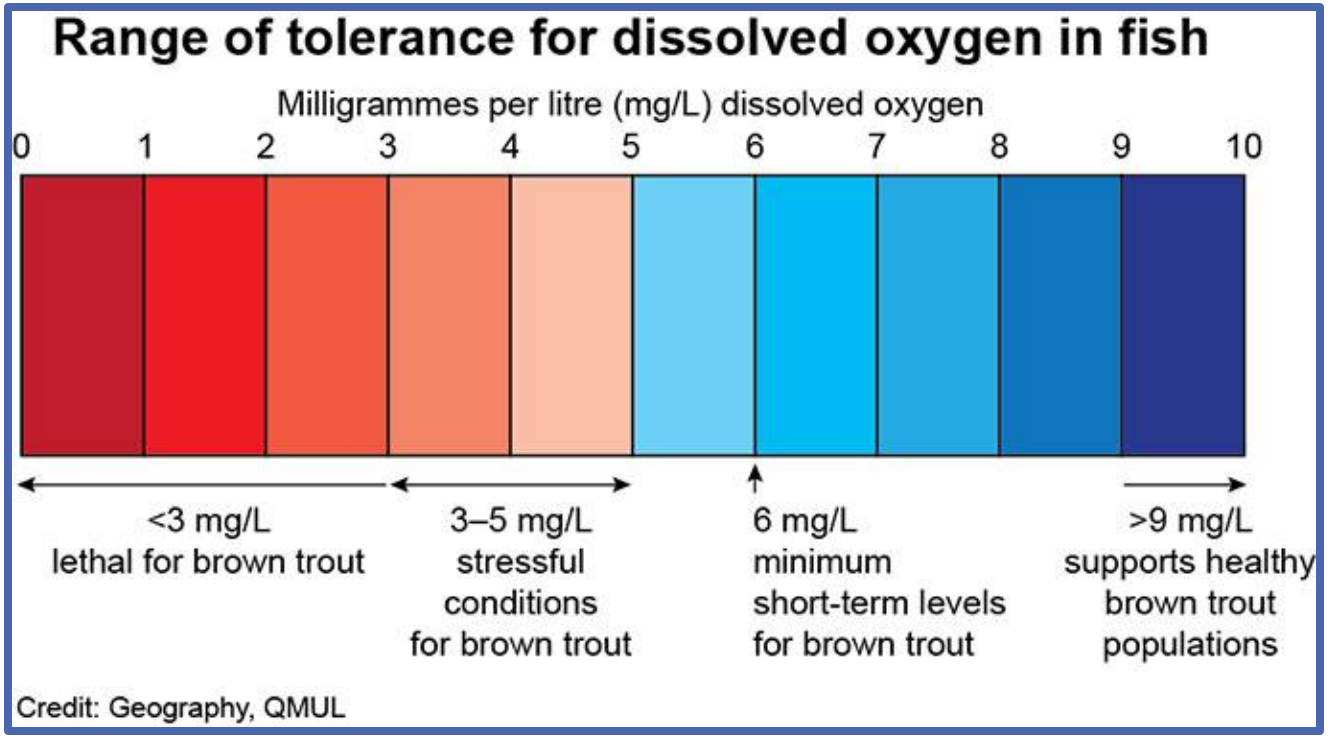
Dissolved oxygen

- **Dissolved oxygen** is the concentration of oxygen gas in water.
- It is typically measured in units of parts per million (ppm) or milligrams per liter (mg/L). **1 ppm = 1 mg/L**
- Many aquatic organisms require dissolved oxygen to survive.



Dissolved oxygen and water temperature

- Colder water can carry more dissolved oxygen than warm water (see figure).

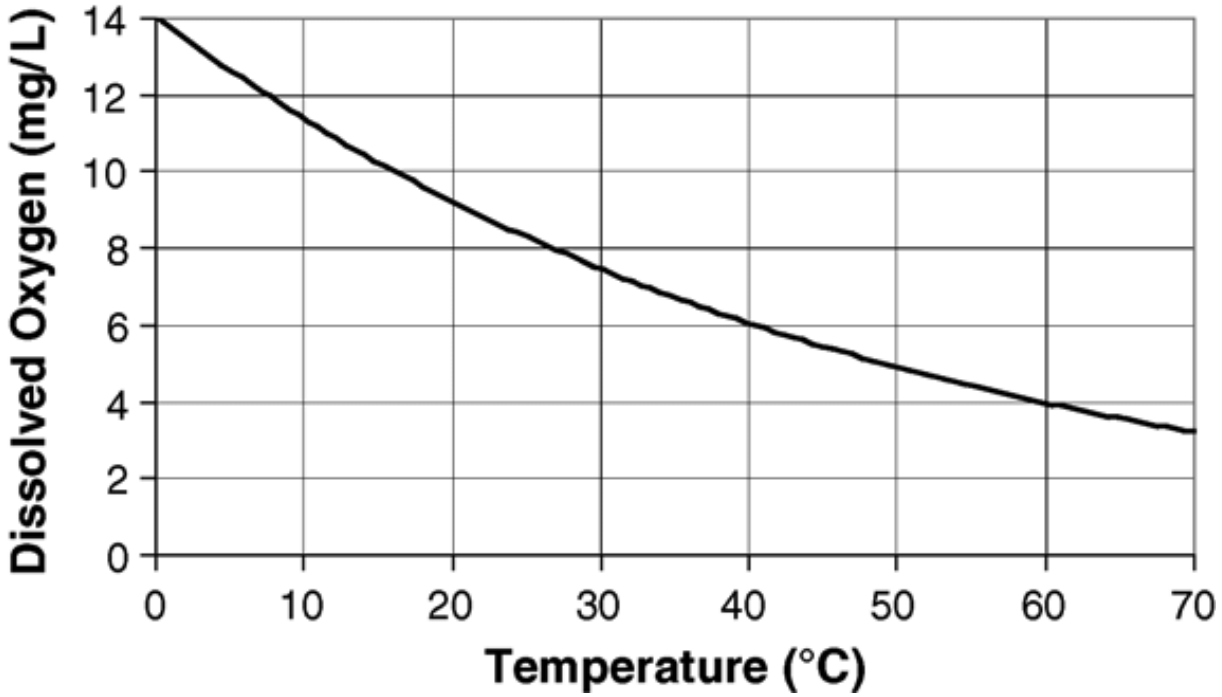
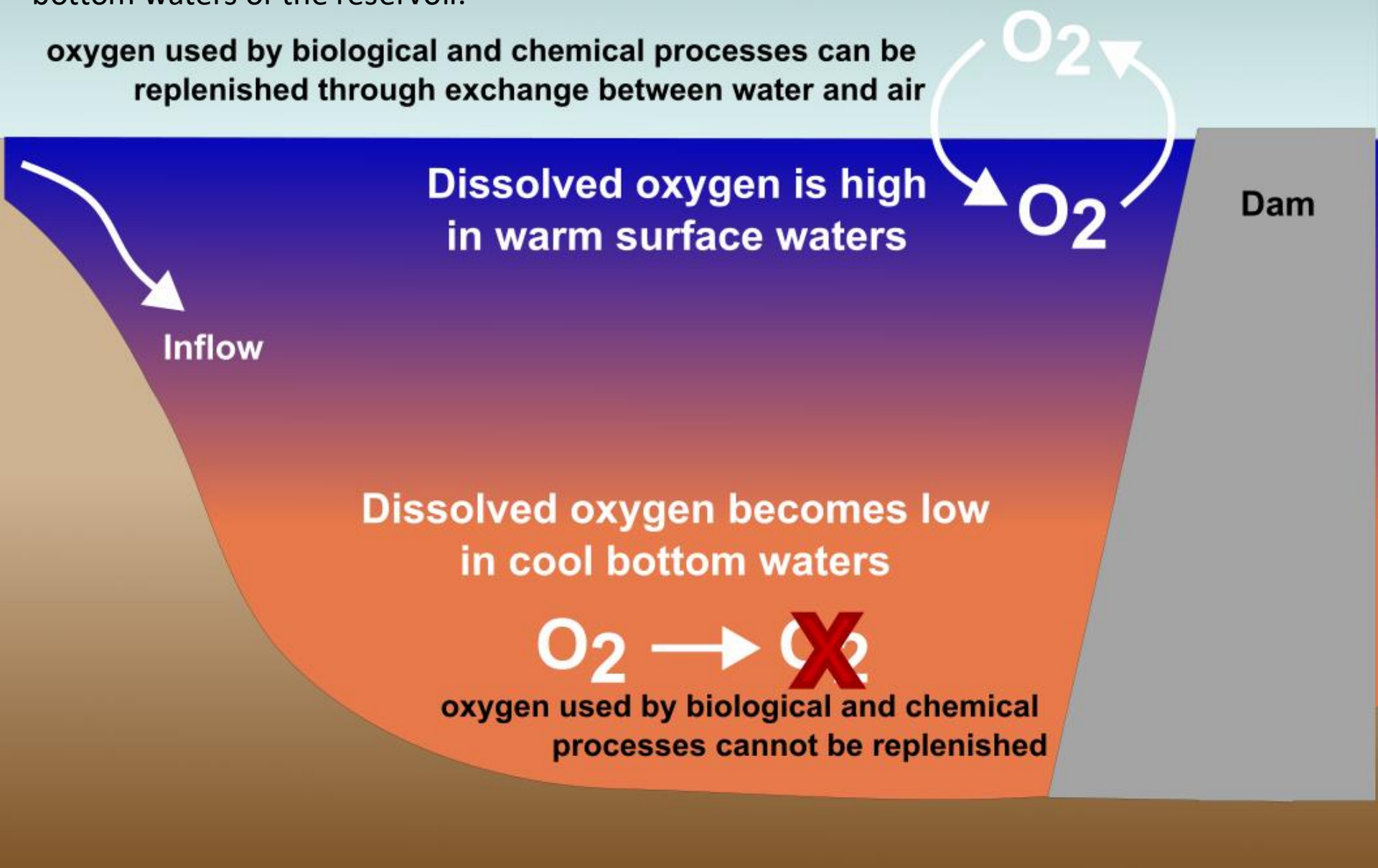


Image source: Kenneth C. Waterman, accessed at: https://www.researchgate.net/figure/Effect-of-temperature-on-oxygen-solubility-in-water-generated-by-extrapolation-of-data_fig5_7957124

Possible Effects of Summer Thermal Stratification on Water Quality

During summer thermal stratification, dissolved oxygen may become depleted in the cold, bottom waters of the reservoir.



Possible Effects of Summer Thermal Stratification on Water Quality

Often, higher levels of dissolved oxygen indicate better water quality, while lower levels of dissolved oxygen indicate worse water quality. This is because low levels of dissolved oxygen can cause the release of metals (iron, manganese) and nutrients (phosphorus, nitrogen) from the sediments, which may cause taste and odor concerns and stimulate harmful algal blooms.