



Dissolved Oxygen

Dissolved Oxygen serves as an indicator of the biological health of a water body. Concentrations vary naturally with water temperature and altitude. DO levels can fluctuate throughout the day and are affected by changes in water temperature and the concentration of organic materials. Industrial or municipal wastes can increase the concentration of organic matter. Lack of shade availability and increased thermal discharges can raise water temperature and, therefore, impact dissolved oxygen levels.



Tule River at Tule River Indian Reservation

Understanding the Effects of Dissolved Oxygen on a Water Body: Dissolved oxygen levels vary for a number of reasons. If more oxygen is consumed than is produced, and oxygen levels drop below their natural levels, some sensitive animals may weaken, move away, or die. Because of this naturally occurring fluctuation, interpreting data may be difficult. It would be most important to keep track of metadata when monitoring dissolved oxygen. Because dissolved oxygen readings can be variable (daily and seasonally), it is important to have enough data to adequately determine trends and/or compliance with tribal, state, or federal standards.



Monitoring Equipment: Depending upon monitoring objectives set forth in an environmental program, the following equipment options are commonly used to collect DO data from the field.

Readily available and economically priced:

- Dissolved Oxygen Kits

Greater precision and higher cost:

- Meters
- Multi parameter Probes
- Contract Laboratories (if necessary)

For additional information:

www.epa.gov/owow/monitoring/volunteer/stream

Using a multi parameter probe to measure DO at Yavapai-Prescott