

Water Quality Data



Site _____ Date _____

Depth _____ Weather _____ Creek Appearance _____

Parameter	Sample A	Sample B	Average
Temperature (°C) Normal Range 0-30°C			
pH Normal Range 6.5-9			
Total Dissolved Solids (mg/L) Normal Range 60-460mg/L			
Conductivity (micro or milliSiemens /cm) You MUST record the units from your meter Normal Range 50-1500µS/cm			
Dissolved Oxygen (mg/L) # drops = DO Normal Range 6-14mg/L			
Nitrates (mg/L) Reading from disk = N Normal Range 0-2.6mg/L			
Phosphorus (mg/L) Disk reading ÷ 150 = P Normal Range 0-0.43mg/L			
Alkalinity (mg/L) # Drops x 17 = Alkalinity Normal Range 20-200mg/L			
Turbidity (JTU) #0.5ml additions x 5 = Turb. Normal Range 0-45 JTU			

Dissolved Oxygen (DO) *Dissolved Oxygen Requirements by Fish Community*

Cold Water Fishes: 6 mg/l and above

Warm Water Fishes: 5 mg/l

Solubility of Dissolved Oxygen

Solubility: Amount of dissolved oxygen that distilled water can hold at given temperature

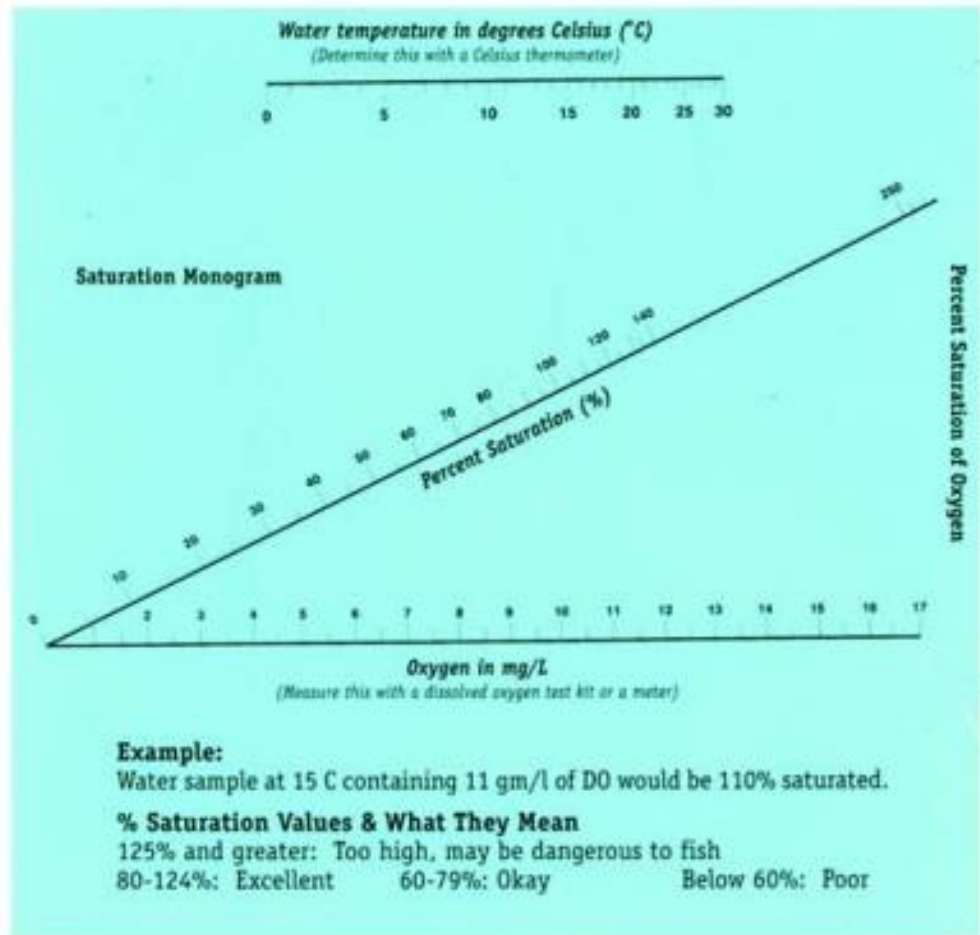
Temperature (C°): Solubility (mg/l)

0:	14.6
1:	14.2
2:	13.8
3:	13.5
4:	13.1
5:	12.8
6:	12.5
7:	12.2
8:	11.9
9:	11.6
10:	11.3
11:	11.1
12:	10.9
13:	10.6
14:	10.4
15:	10.2
16:	10.0
17:	9.8
18:	9.6
19:	9.4
20:	9.2
21:	9.0
22:	8.9
23:	8.7
24:	8.6
25:	8.4
26:	8.2
27:	8.1
28:	7.9
29:	7.8
30:	7.7

Dissolved Oxygen Percent Saturation

Directions

1. Determine water temperature in degrees C, and find that value on upper (temperature) scale. *To convert F to C: $[(F-32) \times 5] / 9 = C$
2. Determine dissolved oxygen and find that value on the lower (DO) scale.
3. Using a straight edge (ruler, piece of paper), draw a line from the temperature value to the dissolved oxygen value. The point at which the line crosses the middle (saturation) scale is the percent saturation of oxygen.



Adapted from: Water, Water Everywhere; Water Quality Factors Reference Unit, MACK, Inc., Loveland CO, 800-277-4224.

pH and Aquatic Organisms



Tolerant ranges for certain species

Mayfly	5.5 to 7.5	Brown trout	5.0 to 9.5	Carp	5.0 to 9.0
Caddisfly	5.5 to 7.5	Brook trout	4.5 to 7.5	Catfish	5.0 to 9.0
Stonefly	5.5 to 7.5	Yellow perch	4.5 to 7.5	Bullfrog	4.5 to 7.5
Snails, clams, mussels	6.0 to 9.0	Smallmouth bass	5.5 to 7.5	Wood frog	4.0 to 7.5
Crayfish	5.5 to 7.5	Pumpkinseed	5.0 to 7.5	American toad	4.5 to 7.5
Rainbow trout	5.5 to 9.5	Fathead minnow	6.0 to 7.5	Spotted salamander	5.0 to 7.5

Alkalinity

(Calcium carbonate): CaCO₃

Freestone Streams

10 mg/l or less: Very sensitive to acid precipitation
 10-20: Somewhat sensitive to acid precipitation
 20mg/l or greater: Not sensitive to acid precipitation

Limestone Streams

75 mg/l or greater