PROJECT *OCEANOLOGY*

Standard Ranges for Fresh and Salt Water Chemistry

Temperature- **Celsius (℃)**

1-24 ℃ Range for Long Island Sound

Salinity- **Parts per thousand (ppt)**

Fresh Water 0 ppt
Long Island Sound 28 ppt
Open Ocean 35 ppt

Dissolved Oxygen- **Milligrams per liter (mg/L)**

Lethal 0-3 mg/L
Stressful 3-5 mg/L
Healthy 5-14 mg/L

pH

Acidic 0-6.9
Neutral 7.0
Basic 7.1-14
Sea Water 7.4-8.5

Carbon Dioxide (CO_2)- **Milligram per liter (mg/L)**

Low 0-14 mg/L
Normal 14-20 mg/L
High >20 mg/L

Coliform Bacteria- **per 100ml sample**

Drinking Water < 1 colony
Shell Fishing < 14 colonies geometric mean
Beaches SW < 104 colonies
Beaches FW < 235 colonies

Turbidity- **Nephelometric Turbidity Unit (ntu)**

< 0.3 ntu bottle drinking water
< 5.0 ntu public drinking water

Secchi Disk

Disappears at 10-20% of available Surface light.
>2.28 m (A- to A+)
2.12 to <2.28 (B- to B+)
1.95 to <2.12 (C- to C+)
1.8 to <1.95 (D- to D+)
0 to < 1.8 (F)
**calculated by Save the Sound*

Forel Ule Color Scale

Blue I
Green VII
Yellow XIV
Brown XXII

Organic Carbon

Open Ocean
Normal .5%
High > .5%
Near Shore
Normal 1.3%
High > 1.3%

Chlorophyll a- **Milligrams per cubic meter**

normal 3-20 mg/m^3

Density

Fresh water 1.000
Long Island Sound 1.021
Ocean 1.026

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Ammonium Concentrations (NH_4^+)

Fresh Water	Normal	< 0.1 mg/L
	High	0.1 mg/L
	Enriched	> 0.1 mg/L
Long Island Sound		
	Normal	0-0.2 mg/L
	High	0.2-0.4 mg/L
	Enriched	>0.4 mg/L

Phosphate Concentrations (PO_4^+)

Fresh Water	Normal	< 0.1 mg/L
	High	0.1-5.0 mg/L
	Enriched	5.0-30.0 mg/L
Long Island Sound		
	Normal	< 1 mg/L
	High	>1 mg/L
	Enriched	5.1- 30.0 mg/L

Nitrate Concentrations (NO_3^-)

Fresh Water	Normal	0-2.5 mg/L
	High	2.5-3.7 mg/L
	Enriched	>3.7 mg/L
Long Island Sound		
	Normal	0-0.5 mg/L
	High	0.5- 1.0 mg/L
	Enriched	>1.0 mg/L