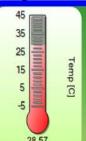
Belmont Bay Water Quality Parameters

Live Data Access via PODS: Potomac Online Data System http://perec.gmu.edu/pods.html

George Mason University Potomac Environmental Research & Education Center Woodbridge, VA

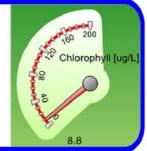


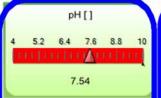
Temperature

Most aquatic animals are cold blooded, so surrounding water temperature determines how fast they grow and metabolize. The colder the water the more Dissolved Oxygen it can hold.

Chlorophyll

Chlorophyll is the green pigment that algae use during photosynthesis High amounts of chlorophyll a indicate nutrient pollution because excess nutrients fuel the growth of algae.





pН

Measures the H⁺ ion concentration. It determines whether a chemical, nutrient or metal can be dissolved or used by aquatic life. Photosynthesis uses up CO (acidic) which increases the pH during the day.



Specific Conductance

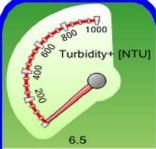
Measures how well water conducts electric current by measuring the ions. Because it measures solids like nitrate, phosphate, chloride, sodium, and calcium, SpCond can be used as an indirect measure of of water pollution in freshwater. Where salt mixes in, it measures salinity,



Oxygen enters water from wind and wave action and is bubbled in through photosynthesis by aquatic plants & algae. Moving

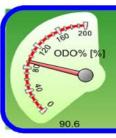
streams with riffles may have more DO than ponds with standing water. The colder the water the more DO it can hold. If decomposers like bacteria and aquatic animals breathe in more DO than algae, wind or waves produce, sensitive animals weaken or die.





Turbidity

NTUs are a measure of how light is scattered by particles. The greater the amount of suspended particles, like clay & silt from shoreline erosion and phtyoplankton, the murkier it looks and the higher the turbidity.



% DO Saturation

The amount of O₂ dissolved in water at a specific temperature. 100% saturated is maximum amount of O₂ at that temp.50% saturated only has half the amount of O₂ that it could hold at that temperature. Supersaturated water (>100%)

>125% poor 80-120% excellent

< 60% poor



- > 7 mg/L Spawning trout/eggs > 6 mg/L Trout
- > 5 mg/L Most aquatic life
- > 3 mg/L Bottom feeding fish, crabs & oysters > 1 mg/L Aquatic worms, clams & midges in mud
- <0.2mg/L ANOXIC can NOT support life





On the east coast, there are 2 high and 2 low tides daily. The depth gauge doesn't move much because the dock floats up





