

UNCW Aquatic Ecology Laboratory

Water Quality Parameter State Standards and Ranges

N.C. State Standard For:

Parameter Aquatic Life Human Health Drinking Water **Suggested Ranges***

Freshwater

Water Temperature °C	0-35			0-35
Salinity (ppt)	< 0.5			<0.5
Dissolved Oxygen (ppm)	5.0 (swamp 4.0)			5-14
Turbidity (NTU)	50			<25
pH	6.0-9.0 (swamp 4.0)			4.0-9.0
Conductivity (μ-siemens)				<300
Nitrate-Nitrogen (ppm)			10	<0.5
Orthophosphate (ppm)				<0.2
Ammonia-Nitrogen (ppm)				<0.2
Total Nitrogen (ppm)				<1
Total Phosphorus (ppm)				<1
Chlorophyll <i>a</i> (ppb)	40			<30
BOD-5 (ppm)				<4
Fecal coliform (cfu/100 ml)		200		200

Tidal Saltwater

Water Temperature °C	0-35			0-35
Salinity (ppt)				0.5-37
Dissolved Oxygen (ppm)	5			5-14
Turbidity (NTU)	25			<25
pH	6.8-8.5			7.0-9.0
Conductivity (μ-siemens)				300-50,000
Nitrate-Nitrogen (ppm)				0.2
Orthophosphate (ppm)				0.1
Ammonia-Nitrogen (ppm)				<0.2
Total Nitrogen (ppm)				<1
Total Phosphorus (ppm)				<1
Chlorophyll <i>a</i> (ppb)	40			<30
BOD-5 (ppm)				<4
Fecal coliform (cfu/100 ml)		200	shellfishing=14	200

* these ranges represent those commonly found in the lower Cape Fear River watershed and our staff considers them as acceptable ranges for "healthy" waters