High pH levels:
Escondido Creek

What does this mean?
pH measures hydrogen concentration in water and is presented on a scale from 0 to14: 0-6 is acidic, 7 is neutral, and 8-14 is basic. Natural waters usually have a pH between 6 and 9. CO2, minerals & soils, decaying vegetation, and nitric acid (HNO3) & sulfuric acid (H2SO4) caused by air pollution from car exhaust and power plants (also known as acid rain) can all affect the pH of the our water. The EPA has set standards for pH levels in drinking water- a pH lower than 6.5 or higher than 8.5 is considered unhealthy to drink. Extreme pH values are unsuitable for most aquatic organisms. Many biological processes, such as reproduction, cannot function in acidic or alkaline waters. Immature aquatic species are even more sensitive to extreme pH levels. High pH levels can harm fish by denaturing cellular membranes. Changes in pH can also affect aquatic life by altering other aspects of water chemistry.

USA Waterbodies

Waterbody	pH
Rose Creek	7.6
Buena Vista Creek, downstreem	7.9
Buena Vista Creek, upstream	7.8
South Shores Boat ramp, Mission Bay	8
Rattlesnake Creek	8.1
South San Diego Bay salt pond, Chula Vista Nature Center	6.9
J Street Marina	7
Batiquitos Lagoon	7
Calavera Lake, Carlsbad	7.5
Black Canyon, Mesa Grande Reservation	8
F Street Lagoon	6.8
Chula Vista Marina & Harbor	7.4
Escondido Creek	8.5
Mission Trails Regional Park	6.9
Mission Bay	6.9
Famosa Slough	7.5
Shelter Island	8
San Diego Bay, Point Loma	7
La Jolla Shores	7
WindnSea Beach	8

yellow = possible impairment; red = impairment

International Waterbodies

Waterbody	pH
Yokohama, Japan	8
Staroye Sumarokovo Pond, Russia	6.5
Bumaskihovsky Pond, Russia	6.6
Sula River, Russia, Russia	8.8

Pond on Sula River, Russia	7.4
Petrovka pond, Russia	7.5
Soldatsky Klyuch pond, Russia	7.8
Khakimovskovo Woods, Russia	6.7
Bugulma pond, Russia	7.2
Bugulminka River, Russia	7.1
Lake Almyetyevska, Russia	7.5
Pos. Podgmiy, Russia	7.6
The Garagum River, Turkmenistan	8
The Amudarya River, Turkmenistan	8
The Yanbash Creek, Turkmenistan	7
The Archabil Creek, Turkmenistan	8

Low DO levels:
Rose Creek
South San Diego Bay, Chula Vista Nature Center
J Street Marina
Batiquitos Lagoon
Black Canyon, Mesa Grande Reservation
F Street Lagoon
Chula Vista Marina & Harbor
Mission Trails Regional Park
Mission Bay
Shelter Island
San Diego Bay, Point Loma
La Jolla Shores
Wind'n Sea Beach

What does this mean?
Dissolved oxygen (DO) is a basic requirement for a healthy aquatic ecosystem. Most fish and aquatic insects breathe oxygen dissolved in the water column. Most fish species suffer if DO concentrations fall below 5 mg/L (or ppm) because there isn't enough oxygen available in the water to sustain life. Larvae and juvenile fish are even more sensitive and require even higher concentrations of DO. Oxygen concentrations in the water column fluctuate under natural conditions, but severe depletion usually results from human activities that introduce large quantities of biodegradable organic materials (like sewage & pet excrement) into surface waters. In polluted waters, bacterial degradation of organic materials can result in a net decline in oxygen concentrations in the water. Low DO levels can also result from chemical reactions from introduced chemicals in the water. Other factors, such as temperature and salinity, influence the amount of DO in the water too-warm water cannot hold as much oxygen as cold water.

USA Waterbodies

Waterbody	Dissolved Oxygen (ppm)
Rose Creek	3.8
Buena Vista Creek, downstreem	5.6
Buena Vista Creek, upstream	6.9
South Shores Boat ramp, Mission Bay	5.6
Rattlesnake Creek	7.1
South San Diego Bay salt pond, Chula Vista Nature Center	5
J Street Marina	4
Batiquitos Lagoon	4
Calavera Lake, Carlsbad	6
Black Canyon, Mesa Grande Reservation	4
F Street Lagoon	3
Chula Vista Marina & Harbor	5
Escondido Creek	8.5
Mission Trails Regional Park	4.3
Mission Bay	4.7
Famosa Slough	5.5
Shelter Island	4
San Diego Bay, Point Loma	4
La Jolla Shores	5
WindnSea Beach	4

yellow = possible impairment; red = impairment

International Waterbodies

Waterbody	Dissolved Oxygen (ppm)
Yokohama, Japan	4
Staroye Sumarokovo Pond, Russia	2.4
Bumaskihovsky Pond, Russia	2.2
Sula River, Russia, Russia	2
Pond on Sula River, Russia	1.5
Petrovka pond, Russia	1.9
Soldatsky Klyuch pond, Russia	1.1
Khakimovskovo Woods, Russia	4.9
Bugulma pond, Russia	5.1
Bugulminka River, Russia	2.1
Lake Almyetyevska, Russia	3.2
Pos. Podgmiy, Russia	2
The Garagum River, Turkmenistan	4
The Amudarya River, Turkmenistan	4
The Yanbash Creek, Turkmenistan	4
The Archabil Creek, Turkmenistan	6

Turbidity levels:

What does this mean?

Turbidity is the measure of cloudiness of water- the cloudier the water, the greater the turbidity. Turbidity is measured on a 0-100 scale; 0 being clear water, and 100 meaning extremely cloudy. Suspended matter, such as clay, silt and organic matter, causes cloudiness. Other microscopic organisms that interfere with the passage of light through the water can as well. Turbidity itself is not a major health concern, but high turbidity can provide a medium for microbial growth, or indicate the presence of microbes. High turbidity can be caused by soil erosion, urban runoff and high flow rates.

USA Waterbodies

Waterbody	Turbidity (0-100)
Rose Creek	5
Buena Vista Creek, downstreem	11
Buena Vista Creek, upstream	15
South Shores Boat ramp, Mission Bay	6
Rattlesnake Creek	3.9
South San Diego Bay salt pond, Chula Vista Nature Center	40
J Street Marina	40
Batiquitos Lagoon	40
Calavera Lake, Carlsbad	40
Black Canyon, Mesa Grande Reservation	0
F Street Lagoon	
Chula Vista Marina & Harbor	
Escondido Creek	0
Mission Trails Regional Park	18.1
Mission Bay	40
Famosa Slough	40
Shelter Island	40
San Diego Bay, Point Loma	40
La Jolla Shores	0
WindnSea Beach	0

yellow = possible impairment; red = impairment

International Waterbodies

Waterbody	Turbidity (0-100)
Yokohama, Japan	0
Staroye Sumarokovo Pond, Russia	
Bumaskihovsky Pond, Russia	
Sula River, Russia, Russia	
Pond on Sula River, Russia	
Petrovka pond, Russia	
Soldatsky Klyuch pond, Russia	
Khakimovskovo Woods, Russia	
Bugulma pond, Russia	
Bugulminka River, Russia	

Lake Almyetyevska, Russia	
Pos. Podgmiy, Russia	
The Garagum River, Turkmenistan	100
The Amudarya River, Turkmenistan	100
The Yanbash Creek, Turkmenistan	0
The Archabil Creek, Turkmenistan	0

Air and Water Temperatures:

USA Waterbodies

Waterbody	Air Temperature (°C)	Water Temperature (°C)
Rose Creek	16.7	20
Buena Vista Creek, downstreem	19	18.5
Buena Vista Creek, upstream	22	17.7
South Shores Boat ramp, Mission Bay	25	21
Rattlesnake Creek	22.4	19.6
South San Diego Bay salt pond, Chula Vista Nature Center	20.8	19.4
J Street Marina		21
Batiquitos Lagoon	20	20
Calavera Lake, Carlsbad		23
Black Canyon, Mesa Grande Reservation	26	22
F Street Lagoon	20.8	17.2
Chula Vista Marina & Harbor	20.8	17.1
Escondido Creek	21.5	17
Mission Trails Regional Park	19	17.8
Mission Bay	24	20.2
Famosa Slough	22	21.8
Shelter Island	22	20
San Diego Bay, Point Loma	22	20
La Jolla Shores	21	19
WindnSea Beach	22	18

yellow = possible impairment; red = impairment

International Waterbodies

Waterbody	Air Temperature (°C)	Water Temperature (°C)
Yokohama, Japan	24	20
Staroye Sumarokovo Pond, Russia		
Bumaskihovsky Pond, Russia		
Sula River, Russia, Russia		
Pond on Sula River, Russia		
Petrovka pond, Russia		
Soldatsky Klyuch pond, Russia		
Khakimovskovo Woods, Russia		
Bugulma pond, Russia		
Bugulminka River, Russia		

Lake Almyetyevska, Russia		
Pos. Podgmiy, Russia		
The Garagum River, Turkmenistan	25	24
The Amudarya River, Turkmenistan	26	22
The Yanbash Creek, Turkmenistan	24	18
The Archabil Creek, Turkmenistan	22	16