

### Parameters

### Importance

### Source

### Units

### Limits

### Water Quality

<b>Parameters</b>	Importance	Source	Units	Limits	Water Quality
<u>\$100</u>	<u>\$100</u>	<u>\$100</u>	<u>\$100</u>	<b>\$100</b>	<u>\$100</u>
<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<b>\$200</b>
<u>\$300</u>	<b>\$300</b>	<u>\$300</u>	<u>\$300</u>	<u>\$300</u>	<u>\$300</u>
<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>
<u>\$500</u>	<b>\$500</b>	<u>\$500</u>	<u>\$500</u>	<b>\$500</b>	<u>\$500</u>



## This parameter measures total concentration of coliform bacteria.

\$100

### What is fecal coliform?



## This parameter is a measure of cloudiness in water.



#### What Is Turbidity?



## This parameter is a measure of Hydrogen lons (H<sup>+</sup>).



### What is pH?



# We can measure the electrical conductivity of substances present in water to measure this parameter.



## What Are Total Dissolved Solids (TDS)?



# This parameter is a measure of how much oxygen microorganisms use in aerobic oxidation of organic matter.



## What Is Biochemical Oxygen Demand (B.O.D.)?



## Changes in this parameter can affect the solubility of dissolved oxygen.



## What Is Water Temperature?

\$200

# This parameter is necessary for cellular respiration in fish and macroinvertebrates.



## What is Dissolved Oxygen (D.O.)?



# This parameter is the limiting factor for algal growth.



#### What Is Phosphate (PO<sub>4</sub>)?



# Raw sewage increases this parameter – a measurement taken after a 5-day incubation period.



## What Is Biochemical Oxygen Demand (B.O.D.)?



# Plants and animals need this nutrient to build proteins and nucleic acids.



#### What is Nitrogen?



## Riffles increase the amount of this element in water.



## What Is Dissolved Oxygen (D.O.)?



# The volume of water that moves over a designated point over a fixed period of time.



## What Is Discharge (stream flow rate)?



## Erosion and excess algae growth increase the value of this parameter.



#### What Is Turbidity?



# Mining drainage, acid rain, and limestone rock can affect this parameter.



### What is pH?





# Algal blooms are usually the first sign of this — an accelerated natural cycle.



## What Is Cultural Eutrophication?

\$100

° Celsius.



## What Is Water Temperature?



#### Colonies/100mL.



#### What Is Fecal Coliform?



## Jackson Turbidity Units (JTUs).



#### What Is Turbidity?



#### No unit, just a number.



#### What Is pH?

\$500

#### % Saturation.



#### What Is Dissolved Oxygen?

#### \$100

## Optimal range for fresh water organisms is 6.5 – 8.2.



#### What Is pH?



### ∆ < 4 or 5 degrees over time or area. </p>



## What Is Change in Water Temperature?



## Less than 4.4 mg/L is an optimal range for this nutrient.



#### What Are Nitrates (NO<sub>3</sub>)?



## < 500 mg/L for Drinking Water.



### What Are Total Dissolved Solids?



# 1.0 mg/L considered excellent in natural bodies of water.



## What Are Phosphates (PO<sub>4</sub>)?



# This is the standard index created by the National Sanitation Foundation.



## What Is the Water Quality Index (WQI)?

\$200

# Drains an area of approximately 14,700 square miles with over 5 million residents.



### What Is the Potomac River Watershed?



# This is the treatment center in southeast DC that processes waste.



#### What Is Blue Plains?



# This President declared the Potomac River "A National Disgrace" in 1965.



### Who Is Lyndon B. Johnson?



This law was an attempt by the federal government to achieve "fishable and swimmable" waters for all Americans.



## What Is the Clean Water Act (1972)?



#### Who Did It?

The WQI (Water Quality Index) was created in 1970 by this non-profit organization headquartered in Ann Arbor, Michigan.

### What is the National Sanitation Foundation?

