

## GLOSSARY

### A. ACIDITY

The concentration of hydrogen ions in a solution, measured on the pH scale, indicates how acidic or basic the solution is. Higher acidity corresponds to a lower pH value.

### B. ACCESS POINT

A device that provides wireless devices with access to a wired network, often using Wi-Fi, and acts as a bridge to enable communication between the two. It extends the range and capacity of the network.

### C. AERATION

The process of introducing air into a substance to increase oxygen content, commonly used in water treatment to enhance oxygen levels or in soil to improve its quality. This helps in processes such as biological treatment and soil conditioning.

### D. ALKALINE

It refers to substances with a pH greater than 7, indicating a basic solution that neutralizes acids. Alkaline solutions are typically used to counteract acidic conditions and in various chemical processes.

### E. DATA VISUALIZATION

The graphical representation of data to help users understand and interpret complex information easily. It includes charts, graphs, and maps that make patterns and trends in water quality data more accessible.

#### F. ELECTRICAL CONDUCTIVITY (EC)

The measure of a water's ability to conduct electricity, which reflects its ion concentration. Higher EC values indicate greater levels of dissolved salts and minerals.

#### G. FILTRATION

The process of removing solids from liquids or gases by passing the mixture through a porous material that captures the particles. It is commonly used to purify water or air by trapping impurities.

#### H. HYDROLOGY

The scientific study of the movement, distribution, and properties of water on Earth, including its cycle through the atmosphere, surface, and groundwater. Hydrology informs water management and environmental protection efforts.

#### I. HYDROSENSE

An integrated system designed to monitor, analyze, and provide recommendations for improving water quality based on various data inputs. It combines hardware and software to offer actionable insights and guidance.

#### J. MICROCONTROLLER

A small, self-contained computer on a single integrated circuit designed to perform specific tasks or control operations in embedded systems. It processes inputs from sensors and executes programmed instructions.

**K. pH LEVEL**

A measure of how acidic or alkaline a solution is, determined on a scale from 0 to 14. A pH level below 7 indicates acidity, while a pH level above 7 indicates alkalinity.

**L. RECOMMENDATION SYSTEM**

A feature that suggests actions or solutions based on the analysis of water quality data. It helps users make informed decisions to improve or maintain water quality.

**M. SALINITY**

The measure of dissolved salt concentration in water, which affects its quality and suitability for various uses. High salinity levels impact aquatic life and water treatment processes.

**N. SEDIMENTATION**

The process where solid particles settle out of a fluid due to gravity or centrifugal force, forming sediment at the bottom. It is used in water treatment to remove suspended particles.

**O. SPECIFIC GRAVITY (SG)**

The ratio of a substance density compared to the density of water. It is used to identify and characterize substances based on their density relative to water.

P. SERVICE SET IDENTIFIER (SSID)

It is the unique name assigned to a wireless network to identify it to users and devices. It allows devices to distinguish between different Wi-Fi networks within range.

Q. TOTAL DISSOLVED SOLIDS (TDS)

It refers to the measure of all dissolved substances in water, including minerals, salts, and organic matter. High TDS levels negatively affect the taste of water and its overall quality. Elevated TDS may also indicate the presence of harmful substances, making water unsafe for consumption.

R. TURBIDITY

The cloudiness or haziness of a liquid caused by large numbers of suspended particles. It affects water clarity and indicate the presence of contaminants or sediments.

S. WATER CONTAMINATION

The presence of harmful or undesirable substances in water, which affect its safety and quality. Contamination come from various sources, including pollutants and pathogens.

T. WATER DISTILLATION

A purification method that involves heating water to create vapor and then condensing it back into liquid form. It effectively removes impurities and contaminants by separating them from the purified water.