

Water Quality & Stewardship Vocabulary

1. **Algae blooms** are a rapid increase in the amount of algae in a body of water. They can cause the water surface to turn green.
2. **Stewardship** is man’s responsible interaction with the environment.
3. **Eutrophication** is the process by which bodies of water collect excess nutrients, which in turn cause excessive plant growth.
4. **Sedimentation** is the process by which suspended particles in a body of water settle to the bottom via gravity and collect.
5. **Organic materials** are living materials, such as plants and animals, or materials that once came from a living thing, like decomposing leaves.
6. **Inorganic materials** were never alive. Examples are pure water, air, minerals, metals, and salts.
7. **Contaminant** is a substance that causes harm and renders water unfit for its intended use.
8. **Freshwater** has a much lower solute concentrations (less salty) than the ocean, or water containing less than 1,000 parts per million (ppm) of dissolved solids of any type.
9. **Parts per million (ppm)** is the number of "parts" by weight of a substance per million parts of water. This unit is commonly used to represent pollutant concentrations. One milligram per liter of water is approximately equal to a ppm.
10. **Potable** water is suitable for drinking. You can put it in a pot.
11. **Salinity** is a quantitative (can be given by numbers) measure of the amount of dissolved salts in a given volume of water.
12. **Solute** is any solid material that is dissolved in a liquid (the solvent).
13. **Solvent** is the liquid, usually water, in which solutes are dissolved; a substance that dissolves other substances, thus forming a solution.
14. **Turbidity** is the measure of cloudiness or opaqueness in the water.
15. **Water quality** is the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.
16. **Dissolved oxygen** (commonly called DO) is oxygen that is dissolved in water. It is a measure of the amount of oxygen in water that is available for use by aquatic organisms. Dissolved oxygen is used by all forms of aquatic life; therefore, it is measured to assess the "health" of lakes and streams. Dissolved oxygen levels vary with seasons, and over 24 hour cycles. When dissolved oxygen levels in a body of water decline, sensitive animals may move away, weaken, or die. High DO levels in potable water usually make it taste better.
17. **Turbidity** is a measure of how clear water is. The more suspended solids there are in a water sample, the less transparent it is. Turbidity is considered a good measure of water quality. In drinking water, high turbidity is generally not considered a favorable sign because it can be associated with organic pollution that might include pathogenic materials. In surface bodies of water, high turbidity can lead to increased water temperatures, low dissolved oxygen, and even physical impairment of aquatic organisms.
18. **Bioindicators or macroinvertebrates** are fish, insects, algae, plants and other aquatic life. They provide accurate information about the health of freshwater, coastal and marine waters. Bioindicators include living macroinvertebrates. Macroinvertebrates are easy for people to collect and identify. Because many macroinvertebrates are sensitive to pollution in water, they are a good indicator of whether or not a body of water is livable. Good water quality is indicated by a variety of macroinvertebrates. Poor water quality is indicated by a few of one type of macroinvertebrates in one place.
19. **– 21. pH** tells how acidic or basic water is. pH is important because it controls many chemical and biological processes that occur in the water. pH is measured on a scale that ranges from 0 to 14, with 7 considered neutral. Values of pH less than 7 are **acidic**, while values higher than 7 are **basic**. The pH scale ranges from 0 (strongly acidic) to 14 (strongly basic). In pure water, the pH measures exactly 7.
20. **– 23. Nitrates** and **phosphates** are nutrients that plants need that come from nitrogen and phosphorus. Nitrates and phosphates pose possible health risks to humans if their presence in drinking water is not controlled. The major sources of nitrates in surface water include runoff contaminated with fertilizers, septic tank leakage, sewage, and erosion of natural deposits. Phosphates, on the other hand, usually enter waterways from human and animal waste, laundry, cleaning and industrial effluents.
21. **Water reclamation** is when wastewater or sewage can be treated and reused.
22. **Water treatment** is the process of collecting and purifying water.
23. **Clean Water Act of 1972** is the primary federal law for setting standards of what constitutes water pollution. It protects fish and wildlife that live in and around water sources.
24. **Safe Drinking Water Act of 1974** was created to improve public health by regulating our drinking water.
25. **– 30.** **Pollution** occurs when water includes chemicals that are not safe. There are two kinds of solution: point source pollution and non-point source pollution. **Point source pollution** is when we can identify one source for the pollution, like a chemical spill or a broken pipe. **Non-point source pollution** is when we cannot identify the source of the pollution, like runoff or acid rain.