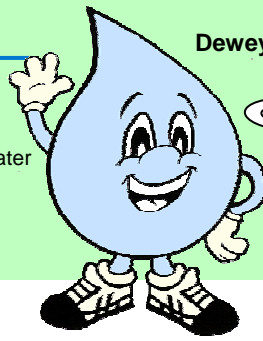


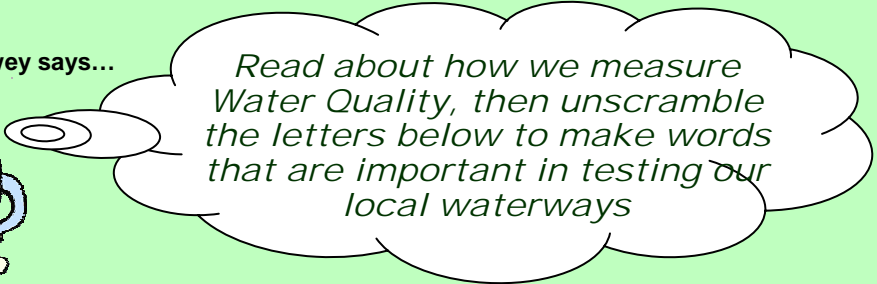


# Pierce County

Public Works & Utilities  
Water Programs Division  
(253) 798-2725  
www.piercecountywa.org/water



Dewey says...



Read about how we measure Water Quality, then unscramble the letters below to make words that are important in testing our local waterways

## How We Measure the Quality of our Waterways

We test our waterways so we can tell if the water is rated "GOOD" and fully supports its intended uses, or if it is rated as "IMPAIRED" because it does not support one or more intended uses. Below are the types of tests we conduct to rate the waterway.

**Temperature** - If the water is too hot or too cold, some living things can die. It can also change the chemistry - warm water holds less oxygen than cold water and fish like salmon or trout need oxygen to survive. Trees and vegetation next to a stream or river can provide shade to help keep the water cooler.

**Dissolved Oxygen or DO (dee-oh)** - This is a measurement of how much oxygen is in the water. Temperature, water flow speed, plants, algae, and a rocky bed bottom all affect how much "DO" is in the water.

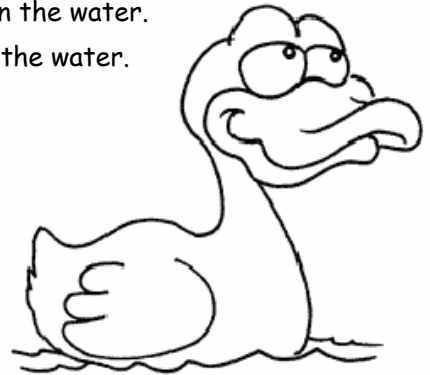
**pH (P=potential, H=Hydrogen)** - This is the level of **level of acidity or alkalinity** in the water. The range goes from 0 to 14. 7 is a "neutral" level. Most waters range from 6.5 to 8.5. If the pH is too low, water becomes acidic, which can kill fish and other living creatures in the waterway.

**Nutrients** - These are building blocks that are necessary to allow plants and animals to grow and thrive. The two main nutrients we test for are **nitrogen** and **phosphorus**. Too much of either can hurt the waterway by because it makes too much algae grow and can make the water look and smell bad too.

**Toxins** - These are mainly chemicals (natural and man made) that can pollute the water. Mercury, pesticides, and oil hurt wildlife that live in or use the waterway.

**Turbidity** - This is a measurement of how clear the water is. We can measure the clarity by figuring out how many tiny particles are floating around in the water. **Low turbidity** means that you might be able to see to the bottom of the waterway because there aren't many particles. **High turbidity** is when all the muck has been stirred up and the water is no longer clear. High turbidity can impact the ability of fish to breath through their gills.

**Bacteria** - Some bacteria are good and some are bad. We test for harmless indicator bacteria that alert us that there may be harmful bacteria and viruses present.



## CAN YOU UNSCRAMBLE THE WORDS BELOW YOU JUST LEARNED ABOUT?



- gendohyr \_\_\_\_\_
- trinutens \_\_\_\_\_
- wyatrwaе \_\_\_\_\_
- Hp \_\_\_\_\_
- rppuhoshos \_\_\_\_\_
- sodlisdev gexyon \_\_\_\_\_
- instxo \_\_\_\_\_
- alke \_\_\_\_\_
- brtudiity \_\_\_\_\_
- rotigenn \_\_\_\_\_
- pueuratetrem \_\_\_\_\_
- tasrme \_\_\_\_\_
- tecbarai \_\_\_\_\_