

# pH

## ***What is pH?***

pH is a measure of how acidic or basic water is. It provides a measure of habitat suitability of a water body for aquatic life. The pH scale ranges from 0-14, with 7 being neutral. A pH less than 7 indicates acidic water, and a pH greater than 7 indicates basic water. Because pH can be affected by chemicals in the water, it is an important indicator of water quality.

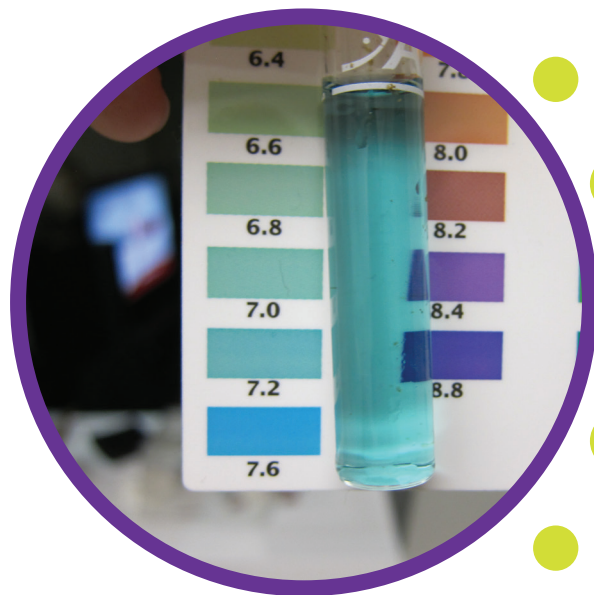
## ***How is pH measured?***

pH can be measured in the field using a pH probe, a colorimetric kit, or test strips. When using a probe, pH can be measured multiple times throughout the whole water column. When using a kit or strips, pH can be measured at the surface only.

## ***What can pH tell us about the Bay?***

The pH of water determines the solubility and biological availability of certain nutrients and metals that are important for aquatic life. Different levels of pH in the water can have different effects on nutrients such as nitrogen and phosphorus. Phosphorus can be readily released from sediments if pH levels are low, and higher pH can increase the rate that nitrogen changes from one form to another. A pH level that is out of the normal range will be harmful to the plants and animals living in the water. pH levels also affect the growth of shellfish, like oysters and scallops.

pH can be an indicator of point source pollution, such as discharge from mining, and ocean acidification, which is a result of increased carbon dioxide in the atmosphere from the burning of fossil fuels.



*Top: Monitoring pH using a water quality probe (Travis AFB / CC BY-NC 2.0). Bottom: A water sample being compared to a pH color kit (E. Gillingham / CC BY 2.0).*