

Phosphorus is a nutrient that naturally occurs in water and is essential for all life.

It comes from the weathering of rocks and through the decomposition of organic material, such as decaying plants and animals.

There are different forms of phosphorus found in water. Reactive phosphorus is readily available and biologically active and is the form we test for when assessing water quality.



Why monitor phosphorus: Although phosphorus is a naturally occurring nutrient, phosphorus levels can change dramatically after a rainfall event following a prolonged dry period or as a result of poor land or stormwater management.

What causes phosphorus to change: Elevated phosphorus levels may result from a number of sources including erosion and the subsequent introduction of sediment containing phosphorus; accidental sewage discharge; detergents; input from stormwater drains; animal waste; industrial waste; and rural runoff containing fertilisers, animal or plant matter.

What are the environmental impacts: High levels of phosphorus can lead to excessive growth of plants, including invasive weeds. These can choke waterways, reduce habitat quality, limit the recruitment of native plants and affect sunlight penetration. An increase in rotting plant matter lowers oxygen levels, which impacts on the survival of fauna and flora. Phosphorus can stimulate algal blooms producing extremely toxic chemicals harmful to humans and livestock.

Managing phosphorus levels: Phosphorus enters waterways from a variety of places. Improved land management techniques such as fencing, revegetation and installing off-stream watering helps to separate crops and livestock from waterways and filter possible inputs. Management of stormwater, sewage and industrial waste are also vital strategies.

How to measure phosphorus: Reactive phosphorus is measured using a colour comparator test kit, or a colorimeter. The unit of measurement is milligrams per litre (mg/L).

When using the colorimeter, adding the required amounts of powder and liquid chemicals to one test tube will allow a comparison to be made with the sample water. Finding a colour match will enable a value to be determined. Check the ratings in your area to determine the rating.