

Monitoring Water Quality

PURPOSE:

1. Understand the physical and chemical properties that affect waterway health.
2. Understand and identify problems within your waterway.

WHAT DOES WATER QUALITY MONITORING TEST FOR?

Water quality monitoring is used to test the chemical and physical properties of a waterway.

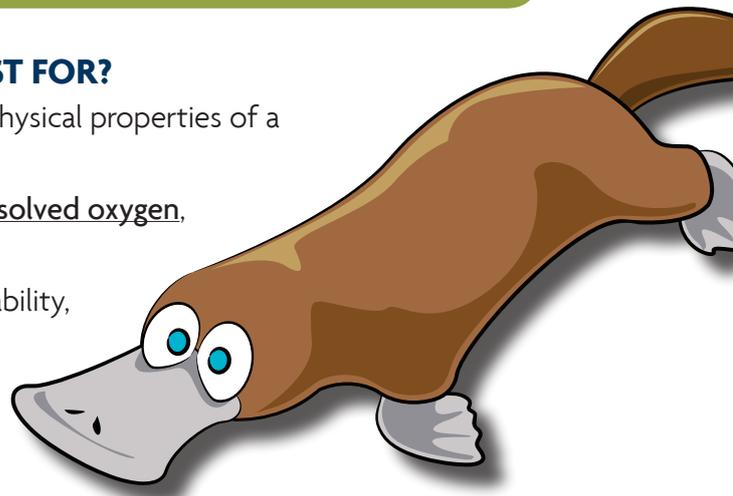
The **chemical properties** include: **turbidity**, temperature, **dissolved oxygen**, **pH**, **flow rate**, **conductivity** and **nutrient** levels.

The physical properties include: riparian vegetation, bank stability, erosion and benthic macroinvertebrates.

WHAT IS WATER QUALITY MONITORING?

Water quality monitoring is one of the most common ways to assess the health of a waterway. It gives a better insight into the health of the catchment and a clearer understanding of the impacts of land uses on **waterway health**.

Water quality samples are often collected on a regular basis (for example, once a month) or after a **rain event**. Regular testing is the best way to identify 'patterns' or changes in water quality over time.



ACTIVITY

Water Quality Monitoring

- Step 1 -** Choose a site along your waterway that is safe and easily accessible by all members of the group.
- Step 2 -** Contact Ipswich Water for hire of a Water Quality Monitoring Test Kit. Choose a day that will suit your group and remember to allow a few hours to complete the activity.
- Step 3 -** Familiarise yourself with the sampling techniques and safety aspects, as outlined on the colour coded instruction sheets in the kits, prior to testing.
- Step 4 -** Record your test results on the Water Quality Assessment Sheet.

NOTE: *Never conduct testing by yourself. Always have a supervising adult with you.*

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WATER QUALITY ASSESSMENT SHEET

Name(s): _____

Site: _____

Date: _____ Time: _____



PARAMETER	READING	UNITS	SHEET COLOUR
Temperature		°C	Yellow
Flow Rate		m/s	Yellow
Turbidity		NTU's	Yellow
pH		-	Pink
Conductivity		us/cm	Pink
Dissolved Oxygen		mg/l	White
Nitrates		mg/l	Blue
Phosphates		mg/l	Blue

Compare the above readings to the Water Quality Standards (provided on the **GREEN** sheet in the kits). Where readings differ significantly, think about the possible causes for the variations. It could be the time of year, recent rainfall in the catchment or a change in land use. Testing over time will show if this is a normal variation from the standards, or a once-off occurrence. Remember, the Water Quality Standards are only a guide and some catchments may vary naturally from these standards.

Some possible causes of variations in readings are:

- a nearby **point source pollution**
- an urban stormwater drainage outlet
- a recent rainfall event
- clearing of vegetation

Remember to be observant and take notes while at your site. Take notice of any drains or pipes that may be present. If there appears to be one close to your site, discuss where it may come from and how it may affect the water quality. Photos are always a great way to keep a record of changes at your site over time.

REMINDER!!! Did you find your **key words** for this activity?

PAGE 2