WATERWATCH
Australian Capital Territory
Communities Caring for Catchments

3. Measuring water temperature

1. Place the thermometer a few centimetres into the waterway or immediately into the water sample upon collection.
2. Wait one minute, until the reading stabilises.
3. Read the temperature to the nearest 0.5 degrees C, while the thermometer bulb is still immersed in the water. Ensure you take the reading as close as possible to eye level.
4. Record the temperature onto your Field Data Sheet.
5. Clean, dry and store your thermometer.

Hints, suggestions and techniques

- Ensure there is sufficient time for the thermometer to reach equilibrium temperature with the water.
- Read the thermometer whilst the bulb is still in the water sample.
- Regularly check the thermometer for defects or breaks in the liquid.
- Temperature should be taken at the same place and time you collect your dissolved oxygen sample.
- If point sources are thought to be elevating the temperature, it is desirable to obtain two measurements, one above the discharge and one below.
- Never store your kit in a hot place such as cars or in the sun as high temperatures can split the liquid inside the thermometer, rendering it inaccurate.

ACT Guidelines

Temperature changes should not be more than 2 standard deviations from the long-term mean temperature for the relevant month.

Source: Australian Capital Territory, Environment Protection Regulations, Table of Provisions, Water Quality Standards, Ecosystem maintenance 1997.

ANZECC 1992 Guidelines

Recommends that the maximum permissible increase in water temperature should be less than 2 degrees C. Aquatic organisms can experience stress where a temperature change of more than 2 degrees C occurs in a 24 hour period.