LANDSCAPE SOUTH AUSTRALIA MURRAYLANDS AND RIVERLAND

# Bore purging

The purpose of groundwater sampling is to retrieve a water sample that represents the characteristics of water below the ground surface.


**To obtain a representative sample it is highly important to remove the stagnant water from the bore casing before a sample is taken. This is called purging.**

We recommend that at least **three columns** of bore water be removed and left to refill before sampling. This allows the pH, EC and temperature of the ground water to stabilise, ensuring that the obtained sample is truly representative of the groundwater.

**Important:** *A bore must be purged before each sample is taken.*

The volume of water to be purged before a sample can be taken depends on the diameter of the bore, as well as the depth of the water column.

**Calculate the amount of water to purge**

1. Calculate the water column length (total depth–water level):

- for total depth - measure from the top of the bore casing to the bottom of the bore
- for water level - measured from the top of the bore casing to the standing water level

2. Choose the approximate volume that needs to be purged, per meter, for your bore diameter:

- casing diameter=**50mm**, volume to purge per metre of water column=**6 litres**
- casing diameter=**80mm**, volume to purge per metre of water column=**15 litres**
- casing diameter=**100mm**, volume to purge per metre of water column=**25 litres**
- casing diameter=**125mm**, volume to purge per metre of water column=**40 litres**
- casing diameter=**150mm**, volume to purge per metre of water column=**55 litres**
- casing diameter=**200mm**, volume to purge per metre of water column=**100 litres**

3. Multiply the water column length by the per metre volume. This is the total quantity of water to purge. For example, a 100mm (or 4 inch) bore and a water column of 40 meters will require

1000L water to be purged: 25 litres x 40 = 1000 litres.

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