

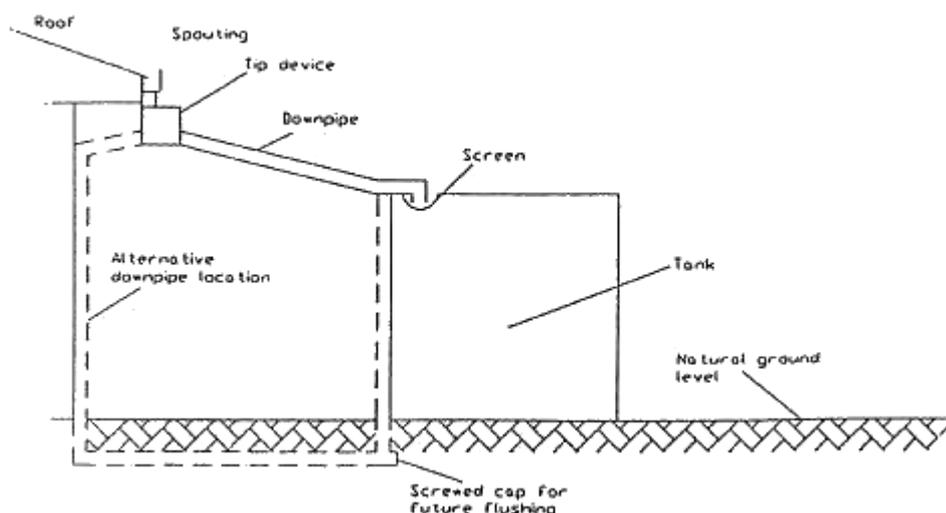
# How to Live on Tank Water

## Introduction

Roof collected water may falsely be perceived as fresh pure water. Whilst rain may not contain the same chemicals that river water or bore water may, it can easily become contaminated once rainwater is collected on the roof and distributed into the tank/s.

## Maintenance

Roof surfaces and guttering can easily become contaminated with animal faeces, leaves, dusts and other debris. Regular cleaning is required to remove foreign bodies. In addition leaf guards can be placed over guttering and screens placed over inlets to the tank. Tip devices (water diverters) can be fitted to downpipes that discard the initial dirty water that forms, when rain falls after long dry periods and washes away dust that has built up on the roof. This will ensure that a small amount of dirty water doesn't contaminate the remaining water in the tank. To prevent mosquitoes breeding in water tanks install a fine screen on the inlet to the tank. The screen must be regularly checked and cleaned out to clear blockages.



## Disinfection of Tank Water

Tank water may become contaminated with micro-organisms (bacteria, virus etc) that can cause gastroenteritis and other diseases. One option is to disinfect that water with chlorine. Other forms of disinfection include ultra violet light sterilizes and boiling the water for at least 3 minutes.

## Chlorination

Two common forms of chlorine compounds can be used, those disinfectants that contain Sodium Hypochlorite (household bleach) or Calcium Hypochlorite swimming pool chlorine powder). It is very important that Chlorine is added to the water at the correct dosage. Firstly, calculate the amount of water in the tank by using the following formula;

$3.14 \times \text{radius}^2 \times \text{height of water in the tank} \times 1000$   
(The radius is half of the width of the tank)

Once you have calculated the volume of water in the tank then place 40 millilitres of Sodium Hypochlorite or 7 grams of Calcium Hypochlorite for each 1000 litres of water in the tank. For example, if the tanks dimensions are 5 metres wide, 3 metres high and there is 2.5m of water in the tank, the calculations would be as follows;

Volume of water in the tank is;  
 $3.14 \times (5\text{m} \times 1/2)^2 \times 2.5\text{m} \times 1000$  (litres)  
Volume = 49,062.5 (litres)

$40 \times \frac{49,000}{1,000} = 1960$  mls of Sodium Hypochlorite

Or

$7 \times \frac{49,000}{1,000} = 343$  grams of Calcium Hypochlorite

**Note:**

**Chlorination of tank water is not recommended for continual application. It is more important that the tank water doesn't become contaminated by ensuring that the roof, guttering and tanks are regularly cleaned.**

**Boiling**

Boiling water for at least 3 minutes is the cheapest and simplest way to disinfect water.

**Water Filtration**

Domestic water filtration devices are also used to improve water quality by removing suspended solids, some inorganic compounds and micro-organisms. Filters are usually fitted to the pipe between the water tank and the house or free standing 'jug type' filters can be used for treating. Water filters must be maintained in accordance with the manufacturer's instructions. This may only involve replacing the filter cartridge.

For Further information see '*Guidance on use of rainwater tanks*' enHealth Council 2004.  
<http://enhealth.nphp.gov.au/council/pubs/pubs.htm>