



Is The Water In Your Rainwater Tank Safe To Drink?

Rainwater from your roof can be a valuable resource and can be quite safe to drink when stored in a properly installed and maintained water catchment system. Follow the information in this guide to minimise the risk of disease to you and your family.

WHAT HAPPENS TO THE WATER IN YOUR TANK?



Heavy materials in rainwater settle on the bottom of the tank and form a thick layer of sludge.



Rainwater generally contains few chemicals. However, airborne contaminants in major urban and industrial centres may increase pollution.



Micro-organisms from the roof or gutters can build up in the sludge layer.



Most micro-organisms are harmless and do not pose a health risk. However, some organisms commonly found in rainwater tanks can cause stomach aches, diarrhoea and similar ailments and can be quite dangerous for the very young and the very old.



Amoebae may also be found in rainwater which may cause amoebic meningitis if water is forced up the nose.

HOW TO REDUCE POLLUTION



Roof catchments should be kept clean and clear of leaves. Overhanging branches of trees and shrubs should be removed.



Cover the inlet and turn the down pipe to one side so the water from the first good rain rinses down the roof (especially if newly clad) and gutters then runs to waste.



The inlet and overflow of the tank should be screened with a mesh to prevent birds, animals and insects from gaining access to the water.



A well maintained leaf trap will reduce the amount of organic matter that enters the rainwater tank through the inlet.



The tank should be covered to prevent light from reaching the water as it will encourage the growth of bacteria. The cover should have a tightly sealed manhole, to allow access to the tank for cleaning and inspection purposes.



Use only "food grade" plastic pipe and fittings if you intend to drink the water as some pipes are manufactured with low levels of lead.

HOW TO MAINTAIN YOUR TANK

Proper maintenance of the tank, catchment system, roof, gutters and inlet is essential to ensure a safe supply of water. This is best carried out before the rainy season. You should:



clean the gutters and tank inlet every three or four months; and



remove the sludge every two to three years (desludging).

Gutter cleaning is not complicated but don't tackle it alone; seek the help of another person to hold the ladder, pass any equipment, etc.

If overhead wires are too close for safety, contact the Western Power Corporation for advice.

DESLUDGING

Desludging will depend on the tank's design and size.

Small tanks with a 'cone scour' base are easier to clean than flat-bottomed tanks. Both should be drained, rinsed with a hose and, if necessary, tilted to drain.

The most common method of cleaning big flat-bottomed tanks is to get inside with a bucket, shovel and broom and dig out the sludge. A second person should be present to ensure the safety of the person inside the tank. Clean a big tank early in the morning or when the area is shaded to avoid heat exhaustion.

For light inside the tank, use a battery lantern not a flame or electric extension. If chemicals are being used for repairs inside, a respirator may be necessary.



Your tank could crack if it dries out.



Check the tank supplier to find out if the type you have can safely remain empty for a few weeks. It might be necessary to put tap water in the tank to stop it cracking.

If the tank is your only source of water and, therefore, cannot be desludged regularly, the water should be treated chemically with chlorine, and/or boiled before consumption. The best arrangement is to have two tanks and clean them out alternately.

CHLORINATION

Regular chlorination of your rainwater tank should not be necessary. However, if you suspect the water in your tank is contaminated, it should be treated by adding swimming pool calcium hypochlorite 60-70% or sodium hypochlorite 12.5%.

The initial dose to treat the contamination should be 7 grams of calcium hypochlorite or 40mL of sodium hypochlorite per 1000 litres of water in the tank at the time of treatment. The water should be stirred then left to stand for at least 24 hours to allow the chlorine taste and smell to dissipate.

It is also important that the chlorine you use is not stabilised.

To maintain a safe water supply after the initial dosage, 1 gram of calcium hypochlorite or 4mL of sodium hypochlorite per 1000 litres should be added to the rainwater tank weekly and allowed to stand for a minimum of two hours.

The water will be safe to drink provided the chlorine smell is not too strong.

It is important to mix the chlorine in a plastic bucket **IN THE OPEN AIR** before adding it to the tank. Mix it thoroughly with the tank water.

Do not pour water onto chlorine. Always add chlorine to water.

ASBESTOS

Asbestos-related diseases are mainly caused by breathing very small air borne fibres into the lungs over a period of time. There is no evidence to suggest such diseases occur from drinking rainwater collected from an asbestos cement roof.

VERY IMPORTANT



Lead-based paint and flashings must not be used on the roof if it is in the catchment area for a tank which supplies drinking water.



To stop mosquito breeding put a cup and a half of liquid paraffin or lighting kerosene into your tank. This should be done at the end of the winter rains and again if the tank overflows. Both will evaporate over time so check the tank a couple of times during the summer.



Do not use power kerosene as it will taint the water.



Zinc in the galvanising of an iron tank may cause an unpleasant taste. However, the consumption of low levels of zinc does not pose a health risk. Fibreglass tanks usually do not taint the rainwater.



The inlet pipe should have a sieve guard to prevent birds or animals getting into the tank. After the annual clean out, the inlet should be firmly covered until it is time to reconnect the pipe.

SUMMARY

1. Do not allow the first rainwater to enter the tank.
2. Keep gutters and roofs clean and in good repair.
3. Use a leaf trap on the inlet.
4. Screen the inlet and overflow for insects/animals.
5. Cover and seal the tank to prevent the entry of sunlight, dust and animals.
6. Install a tightly fitting manhole cover for cleaning and inspection purposes.

FURTHER INFORMATION

For further information contact an Environmental Health Officer at your local government
or

Applied Environmental Health

Environmental Health Service

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<http://www.public.health.wa.gov.au>

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