

FACT SHEET

Rainwater Tank Safety

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Tanks are available in a wide range of materials including galvanised; Aquaplate, or zincalume steel; concrete; fibreglass; or plastic. All of these materials can be suitable providing the tanks have been manufactured specifically for the collection of rainwater. Some types of new tanks may have to be washed or flushed before use. The manufacturer should provide advice on whether this may be necessary.

When installed, the tank should be covered and every access point except the inlet and overflow should be sealed unless in use. The inlet should incorporate a metal mesh cover and a strainer to keep out materials such as leaves and to prevent the access of mosquitoes and other insects. The overflow should also be covered with a metal insect-proof screen.

New tanks

In Queensland, all new tanks must be fitted with mosquito-proof screens and/or flap valves on every opening, including overflows.

The screens must be made of brass, copper, aluminium or stainless steel gauze, have a mesh size of 1 mm or less, installed in a way that does not cause or accelerate corrosion, and stops mosquitoes passing through the openings.

Flap valves must be able to stop mosquitoes passing through the openings when they are closed.

The catchment

In general, house and shed roofs are used as catchment areas. Rainwater can be collected from most types of roof, including asbestos roofs, providing they have not been painted with lead-based paints or coated with bitumen-based material. Some types of new tiles and freshly applied acrylic paints may affect the colour or taste of rainwater and the first few run-offs may need to be discarded.

As a precaution, the use of pesticide-treated timbers and lead flashing should be avoided in roof catchments. Also, if possible, rainwater should not



be collected from parts of roofs incorporating flues from wood burners.

Overflows or discharge pipes from roof mounted appliances like evaporative air conditioners or hot water systems should not be allowed to discharge onto the roof catchment area.

How to reduce risks

If managed well, rainwater tanks can provide a source of water suitable for drinking or other domestic purposes. There are several things you can do to help reduce the likelihood of your rainwater tank becoming contaminated;

- Install a first flush device to divert the initial dirty water flow away from the tank.
- Use a 1mm (or less) mesh screen to prevent material from entering the tank when roof run-off water is collected.
- Inspect tank for bottom sediments and flush tank to remove debris if possible (every 6 to 12 months).
- Prune or remove all overhanging vegetation and debris from roofs, gutters or tanks (every 3 to 6 months).
- Check for evidence of animal access to tank and repair and close any openings to the tank (every 6 months).
- Regularly disinfect the rainwater tank by adding a suitable disinfectant (e.g. 40ml of liquid sodium hypochlorite per 1000L of water).

Maintaining your tank

Maintaining your rainwater tank is an important responsibility. Maintenance is needed to maintain good water quality and prevent mosquitoes breeding. A recommended maintenance schedule is provided in the below;

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Every 3 months...

- Check and clean first flush device.

Every 6 months...

- Check tank, mosquito-proof screens and flap valves for rips, holes and defects. Repair straight away.
- Check roof and gutters for accumulated debris including leaf and other plant material. Remove all debris and prune overhanging tree branches and foliage.
- Check for evidence of animal, bird or insect access. If present, identify and close access points.

Every 2 - 3 years

- Check inside the tank for accumulated sediment. If sludge is covering the bottom of the tank, siphon it out or completely empty the tank. Professional tank cleaners operate in many areas. Contact details can be found in telephone directories and local newspapers.

Is the water safe to drink?

Generally yes. Providing the rainwater is clear, has little taste or smell, and is from a well maintained system it is probably safe and unlikely to cause any illness for most users. For those who are immunocompromised such as very young or old people, cancer patients, people with diabetes, organ transplants, or those who are HIV positive disinfecting the water before drinking should be considered. This can be achieved by heating and holding the water at a rolling boil for 1 minute or more.

How can water quality be protected?

First flush devices

First flush devices prevent the first portion of roof run-off from being collected and will reduce the amounts of dust, bird droppings and leaves that can accumulate on roofs, from being washed into tanks. The use of these devices is recommended.

Alternatively, the tank inlet should be disconnected so the first run-off of rain after a dry spell is not collected.

Disinfection

Regular disinfection should not be necessary. If it is suspected that water in the tank is contaminated, rainwater can be chlorinated using 40ml of liquid sodium hypochlorite or 7grams of granular calcium hypochlorite per 1000 litres of water (approx. 5mg/L chlorine).

Regulatory roles and responsibilities

Local Governments

Local Governments are responsible for the administration and enforcement of Part 1A, Division 2 of the *Public Health Regulation 2018* which, amongst other things, details the requirements of rainwater tanks to prevent mosquito breeding. They are also responsible for determining if the owner or occupier of premises is maintaining the rainwater collection and distribution system in accordance with other relevant legislation including, but not limited to, public health, amenity, building, and plumbing and drainage requirements.

Local Governments may undertake investigations, inspections and/or audits to monitor and determine compliance with relevant legislation or in response to complaints. They may also use a range of activities such as risk-based surveillance, education and communication-programs to increase awareness and manage public health risks.

Home/business owners and occupiers

The occupier of a place where a rainwater tank is installed (or if there is no occupier, the owner of the premises) must ensure that the tank is maintained to ensure every opening includes mosquito-proof screens that;

- Are made of brass, copper, aluminium or stainless steel gauze, and
- Have a mesh size of not more than 1mm, and
- Are installed in a way that does not cause or accelerate corrosion, and
- Stop mosquitoes passing through the openings, or
- Flap valves that, when closed, stop mosquitoes passing through the openings.