Guidance on use of rainwater tanks in the Northern Territory
Peter Whelan, CDC, Darwin, Peter Rogers and Karen Beirne, Environmental Health, Darwin

Rainwater tanks

In Australia, fresh water is a valuable and limited resource. Rainwater can provide a renewable supply of natural, soft, clear and odourless water that we can use for a range of purposes including drinking, washing, bathing, laundry and gardening. In some places it may be the main source of household water and in others it can supplement mains water supplies.

Note: You must find out local water authority requirements before interconnecting tanks with mains water supplies and determine if water from rainwater tanks in that area is suitable for drinking.

Water quality

The microbiological quality of rainwater collected in domestic tanks may be lower than that of many mains water supplies. However, if systems are properly and fully screened, have first flush diverters, are not in fallout areas from industrial processes and are well maintained, the risk from harmful chemicals or organisms being present is low.

Rainwater in tanks generally contains few chemicals. However, there may be risk of rainwater pollution by airborne contaminants in major urban centres, industrial areas or in ash fallout areas.

There can be faecal contamination by flying foxes (fruit bats), possums and fruit eating birds if there are fruit trees or palms near to a roof. Overhanging trees can add leaves and trap organic materials in roof gutters that can lead to high organic levels in the tank. Some plants (iron woods Erythrophleum chlorostachys, Oleander etc) have toxic chemicals in their leaves or fruit.

Note: You should not collect rainwater for human consumption (drinking and food preparation) in areas affected by heavy traffic, industry, incinerators and/or smelters.

Flouride

Rainwater does not contain fluoride. If rainwater is your major source of water for drinking and food preparation, you should seek advice from your local dentist, school or community dental service or from the Australian Dental Association about alternative sources of flouride.

Safety

Rainwater is generally safe to drink providing it is clear, has little taste or smell, and is from a well maintained system. If you are very young or very old or immuno-compromised (a cancer patient, diabetic, have had organ transplants or are HIV positive) you should consider disinfecting the water before drinking or cooking with it. You can do this by boiling the water.

Protecting water quality

Making sure water quality is good depends on correct design and installation, followed by sensible maintenance of your rainwater tank and catchment area. Collecting rainwater involves low maintenance, not no maintenance.

The tank

Tanks are available in a range of materials (galvanised steel, concrete, fibreglass and plastic). All can be suitable, providing the tank has been made specifically for collecting rainwater. You may have to wash or flush some types of new tanks before use. The manufacturer should be able to tell you if this is necessary.

The tank should be of a design suitable for the Northern Territory (NT).

When installed, your tank should be covered and every access point, except the inlet and overflow should be sealed (unless in use). The inlet should incorporate a stainless steel mesh cover and strainer to keep out foreign matter and to stop mosquitoes and other insects getting into the tank. The overflow should be covered with a similar insect-proof screen.
**The catchment**

House and shed roofs are usually used as catchment areas. Rainwater can be collected from most types of roof, providing they have not been painted with lead-based paint or coated with bitumen-based material. Check that there is no corroded material in the catchment area on equipment such as hot water or solar systems. Some types of new tiles and freshly applied acrylic paints may affect the colour or taste of rainwater so you may need to discard the first few run off episodes.

Avoid using pesticide-treated timbers and lead flashing in roof catchments. Also, do not collect rainwater from parts of roofs incorporating flues from wood burners.

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

**First flush devices**

First flush devices stop the first portion of roof run-off being collected and will reduce the amount of dust, bird droppings and organic material from leaves that can collect on roofs or gutters from being washed into tanks. It is recommended that you use such devices.

**Maintenance**

Keep roof catchments and gutters clean and clear of leaves and debris. Remove overhanging branches. Regularly inspect gutters and clean if necessary. Consider using gutter guards.

You should clean insect-proof screens regularly. Do not allow tanks and gutters to become breeding sites for mosquitoes. A tell tale sign for blocked gutters and potential mosquito breeding is a constant drip in the down pipe. Mosquitoes that breed in blocked gutters or rainwater tanks include the receptacle mosquitoes (*Aedes notoscriptus* and *Aedes tremulus*). The dengue mosquito *Aedes aegypti*, a mosquito usually absent from the NT, can breed in non-draining or blocked roof gutters and unsealed rainwater tanks.

If you detect mosquitoes in a tank, locate and seal or screen the entry point. A specific mosquito control insecticide (methoprene) can be added as a charcoal briquette in a piece of panty hose with a float for retrieval for 3 month maximum control as a temporary control measure. There are other surface floating products that can prevent mosquito breeding, so check with the local health authority or the Medical Entomology section. As a last resort, for most types of tanks, you can add 10 mls of domestic kerosene to 1 ml of clove oil to the top of the water every month to stop mosquitoes from breeding.

Note: *Kerosene is not suitable for use with some tank materials, for example, Aquaplate R.*

Check tanks for sludge accumulation at least every 2-3 years. If sludge is covering the bottom of the tank, siphon it our or completely empty the tank. Professional tank cleaners operate in many areas.

**Disinfection**

Regular disinfection should not be necessary. If you suspect that water in the tank is contaminated with organic material, you can chlorinate rainwater by adding 40 ml of liquid sodium hypochlorite or 7g of granular calcium hypochlorite per 1000L of water (approximately 5mg/L chlorine) until you remove the contamination source.

For further information refer to NT Department of Health resource: Environmental Health Fact Sheet No. 400: Disinfection of water tanks.

**Size of tanks**

The size of tank you need to provide the total supply of household water will depend on a number of factors, including the amount and pattern of rainfall, roof area and water usage. The most important issue will be continuity of supply.

If your tank is to provide an alternative supply to mains water, the size of the tank is not a critical issue and will often depend on your needs (drinking and food preparation, bathing, laundry) balanced against cost.
**Regulations**

Before you purchase or install a rainwater tank, find out the health, building or planning regulations about rainwater tanks in your area.

In the NT there is legislation that states all rainwater tanks must be sealed and mosquito proof so that they can not breed mosquitoes (NT Public and Environmental Health Act, Mosquito Regulations).

For further information refer to NT Department of Health resource: [Environmental Health Fact Sheet No. 404: Requirements for the use of rainwater tanks.](#)

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**Advice**

You can obtain more details from the Medical Entomology unit or your local Environmental Health Officer.

**Medical Entomology**

CDC NT Department of Health
Telephone: 08 8922 8901
Email: peter.whelan@nt.gov.au
Internet: [www.health.gov.au](http://www.health.gov.au)/Medical_Entomology/

**Environmental Health**

Phone: 1800 095 646 or your local office.
Email envirohealth@nt.gov.au
Internet: [www.health.nt.gov.au](http://www.health.nt.gov.au)/Environmental_Health/

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**Hope for hepatitis sufferers**

The Australian Therapeutic Goods Administration (TGA) has approved VICTRELIS® for the treatment of chronic hepatitis C, genotype 1, the most common form of the condition affecting 55% of all sufferers. The approval of VICTRELIS® provides another option in the treatment of hepatitis C, a condition that has been without another treatment option in more than 10 years.

Chronic hepatitis C is a major public health burden in Australia and affects around 220,000 Australians, with 10,000 new cases reported annually. Without other treatment options and appropriate intervention, estimates of new cases stand at approximately 500,000 by 2020. If left untreated, hepatitis C can cause serious liver disease including cirrhosis, liver cancer and death.

In the last 10 years there has been little development in the availability of treatments for hepatitis C and a significant proportion of patients fail to respond to the current standard of care. VICTRELIS® is an approved treatment that works directly on the hepatitis C virus and prevents it from replicating and therefore reproducing.

VICTRELIS®, a direct acting anti-viral agent (DAA), is used in combination with the current standard of care peginterferon alfa and ribavirin. VICTRELIS®, a protease inhibitor, interferes with an enzyme involved in the replication of the hepatitis C enzyme.

Unfortunately, hepatitis C is a silent disease where there is very little awareness of the condition and patients often present late with severe complications. Hepatitis C is a huge burden for individuals and is still very heavily stigmatised. Having another new treatment option marks progress in the management of patients with this disease.

The product information for VICTRELIS® is available on request from the TGA website [https://www.ebs.tga.gov.au](https://www.ebs.tga.gov.au)
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