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**Care and maintenance
of your rainwater tank
system**

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love water
use it wisely

Name:

Address:

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**Do the earth a
favour,
be a water saver**
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Central
Coast
Council

Acknowledgement

We would like to acknowledge the following sources of information that were used to develop this guide.

Smart Approved WaterMark

The Hunter and Central Coast Regional Environmental Management Strategy (HCCREMS)

Rain Harvesting (Blue Mountain Co)

NSW Government Health



INTRODUCTION

A properly functioning and healthy rainwater tank system can have significant environmental and economic benefits including:

- reducing your water bills
- limiting the amount of stormwater pollutants entering our creeks, wetlands and other aquatic environments
- providing an alternate water resource that will help our water supply last longer.

Harvested water from your rainwater tank provides an alternate water resource that can be utilised for watering your garden plants and lawns and washing your car or boat. Your rainwater tank system can also be connected to your house plumbing and used for indoor activities including laundry and flushing toilets. This will help you reduce your water bills.

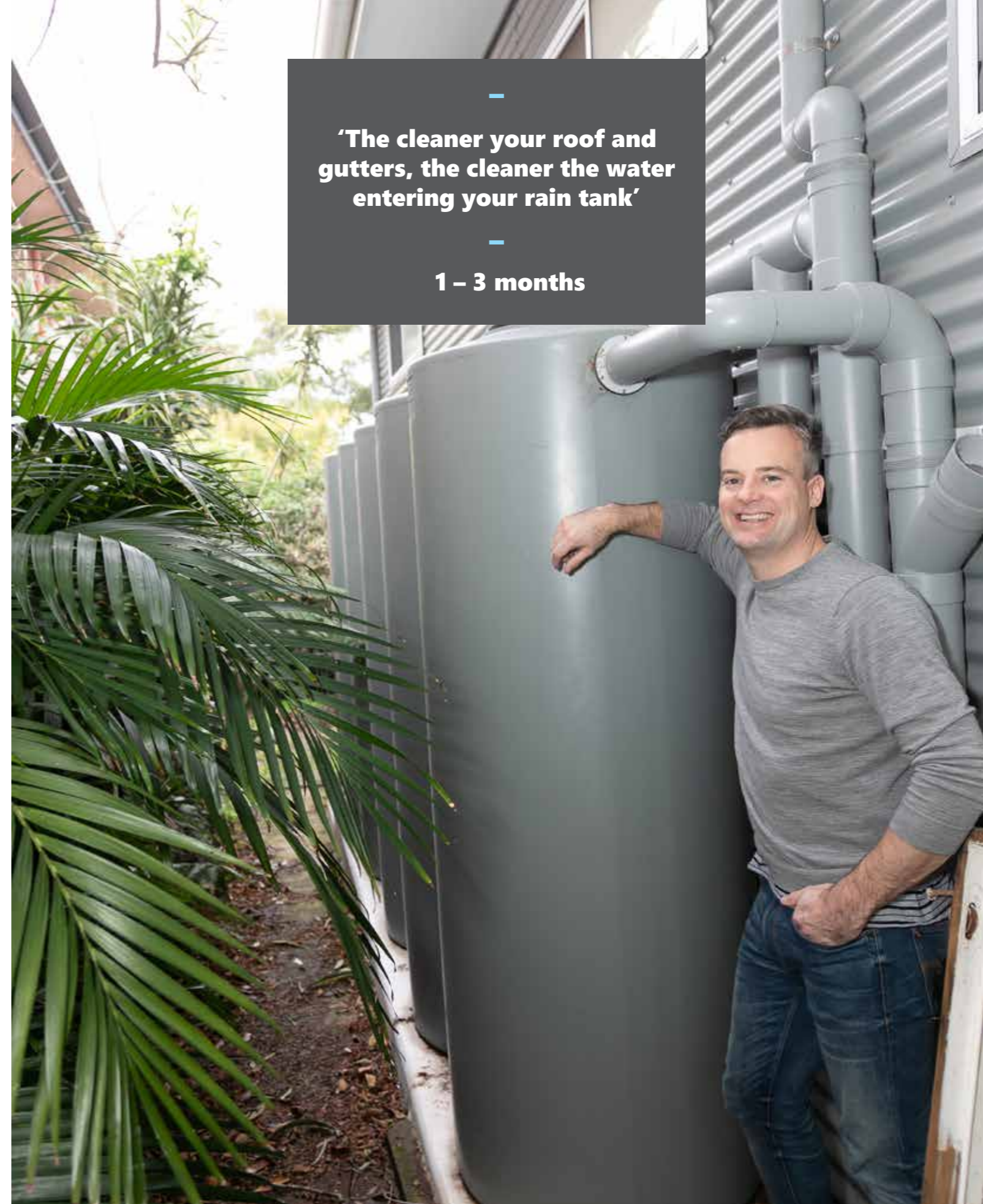
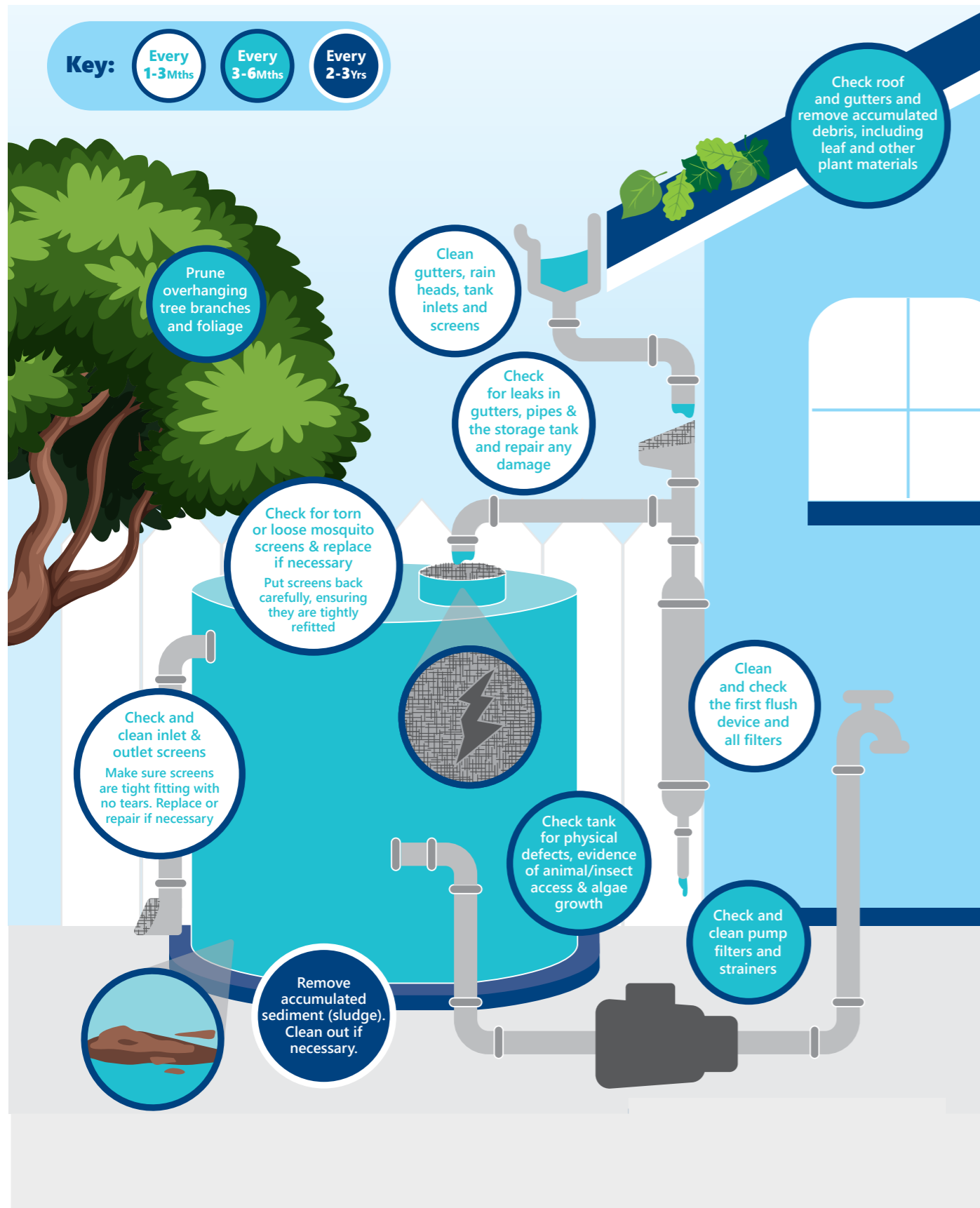
Non-maintained tanks which supply water for your toilet and laundry use are likely to be drawing most of their water from the town water supply instead of your tank. This can happen without your knowledge and means you will be paying higher water bills than you need to.

Poorly maintained tanks won't effectively catch water and overtime dirt and debris will start to accumulate. This can lead to insects breeding in your tank; clogged tank screens, filters and downpipes; water becoming discoloured and pumps failing.

By following a simple and regular maintenance guide and completing a service log on your rainwater tank, you can help maximise the benefits and keep your rainwater tank operating at peak efficiency.

Love water, Love your tank!

MAINTENANCE SCHEDULE

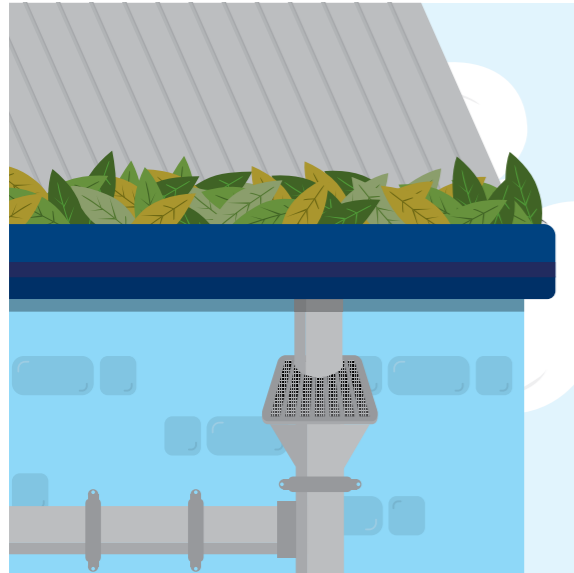


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‘The cleaner your roof and gutters, the cleaner the water entering your rain tank’
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1 – 3 months

1. MAINTAINING YOUR ROOF AND GUTTERS

It is important to keep your roof and gutters clean and clear from leaf litter, dirt, debris and other organic material. Maintaining clean gutters improves the quality of water flowing into your tank and can help prevent the following:

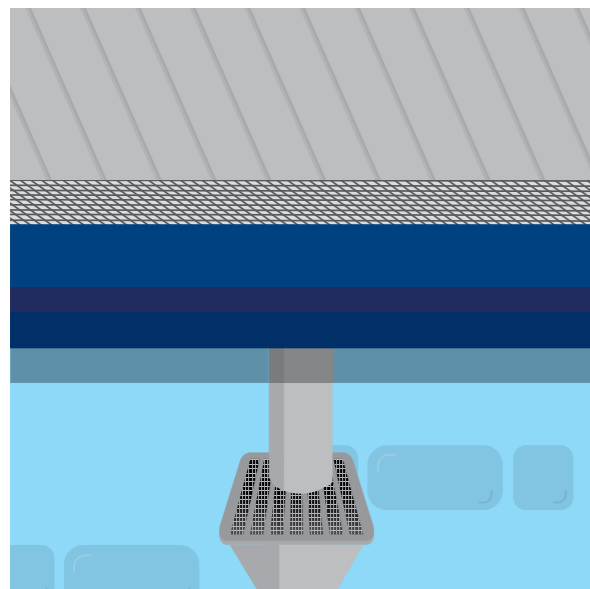
- animals and insects breeding in pooled water and entering your tank
- leaves catching fire during bushfire season
- overflows during a downpour
- leaves and debris blocking downpipes.



1.1 If you live in a leafy area, you may need to clean your gutters more often.



1.2 Remove accumulated leaves and debris from your roof and gutters.



1.3 Continue to clear your roof gutters every few months and consider fitting a gutter guard as this will help keep leaves out of your gutters.



TANK TIPS

- Avoid standing on your tank and always practice safe work methods and use personal protective equipment.
- Contact a licensed contractor if you are unable to clear your roof and gutters.
- Roof catchments used in the collection of rainwater for drinking should be inspected by a licensed contractor prior to use to ensure there is no risk of lead contaminants.

2. CLEANING AND MAINTAINING FIRST FLUSH DEVICE

A first flush device is an important part of your rainwater tank system. It prevents the first wash of dirty water from the roof entering your rainwater tank by diverting water to a separate chamber. Once this chamber is full, cleaner rainwater will flow into the rainwater tank.

After a rainfall event water should drain through a small hole located at the bottom of the first flush chamber. Over time the device will get a build-up of dirt and debris, so it is recommended that you clean it every few months to avoid any blockages and allow water to drain properly.

First flush devices come in a range of shapes and sizes and are a great way to reduce the build-up of grime and bottom sludge in your tank. First flush devices are optional and may not be installed in your rainwater tank system.



2.1 Locate your first flush device and place a bucket underneath.



TANK TIPS

- Installing and maintaining a leaf eater device can reduce maintenance on your first flush and limit larger debris entering both the first flush and stormwater system.
- A garden irrigation hose can be fixed to the bottom fitting of your first flush device to divert flushed water to your garden and prevent water pooling around footings and foundations.



2.2 Unscrew the small bottom fitting slowly. If you have an irrigation hose attached, remove this from the bottom fitting.

2. CLEANING AND MAINTAINING FIRST FLUSH DEVICE

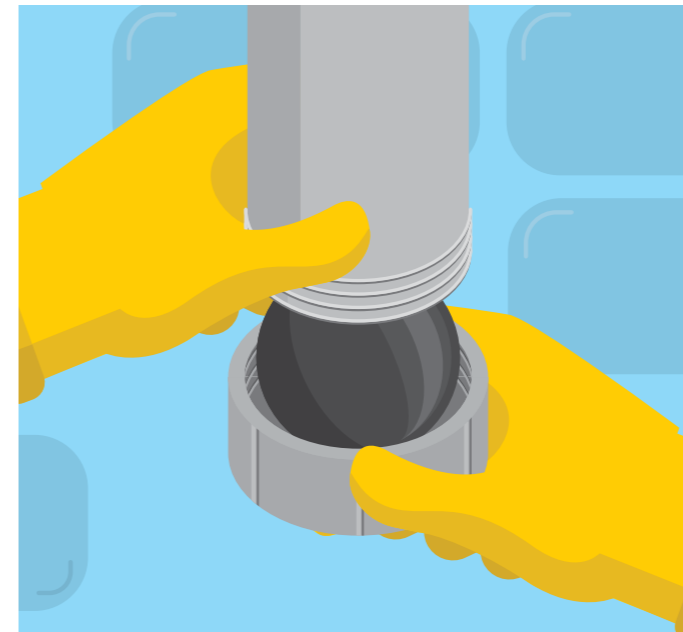


2.3. Remove the filter taking care to avoid being splashed by dirty water as it rushes out.



2.4 Unscrew the larger bottom cap containing the floater ball and debris caught by the first flush chamber.

2. CLEANING AND MAINTAINING FIRST FLUSH DEVICE



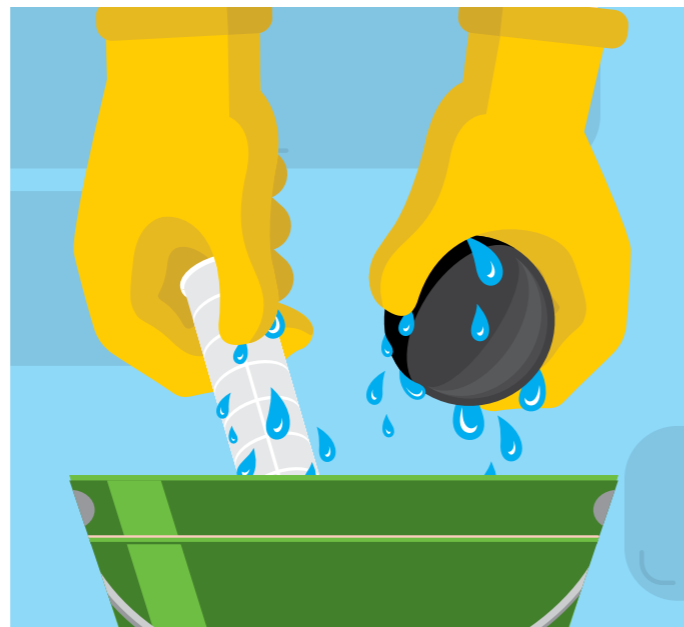
2.7 Reassemble components. When inserting the floater ball into the chamber take care to ensure that it is free to move in the chamber.



2.8 Check that the rubber disc is clean and not damaged. Replace if necessary.



2.5 Remove the top rubber disc from inside of the bottom fitting. Blockages here prevent water draining through the small hole after every rainfall event.



2.6 Rinse out the filter, bottom cap, floater ball, bottom fitting and rubber disc in a separate bucket with fresh water.



2.9 Place the rubber disc back inside the bottom fitting and ensure the word 'TOP' is visible. Reassemble filter and small bottom fitting to your first flush device.



2.10 Reuse the captured water from the buckets to water your garden.

3. CLEANING AND MAINTAINING INLET AND OUTLET SCREENS

Inlet screen

The inlet screen to your tank must be kept clean to allow the water from your roof to pass easily into your tank. Cleaning frequency of the inlet screen may vary depending on your location and the amount of debris coming from the roof.

It is recommended to check and clean the screen every few months to avoid clogging, overflows or rotting debris falling through into your tank



3.1 Locate your inlet screen. This is often found screwed into the hole below the inlet pipe at the top of the tank



3.2 Your inlet screen may need to be unscrewed to clean it. Always practice safe work methods when using a ladder.



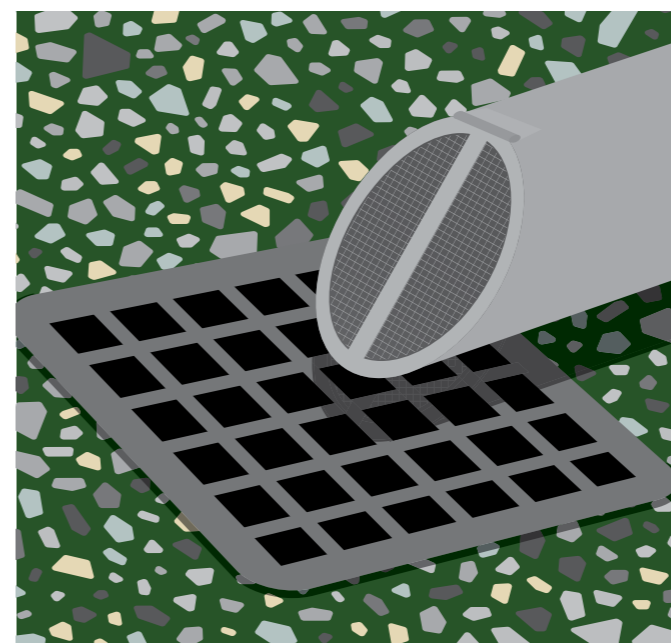
3.3 Brush, scoop or wash off any debris. Check the screen for tears and replace or repair if necessary. Ensure the screen is refitted properly to the tank with no gaps for access by mosquitos or other insects.

3. CLEANING AND MAINTAINING INLET AND OUTLET SCREENS

Outlet screen

The outlet is where your overflow pipe releases excess water into your stormwater pipe or drain. To prevent mosquitoes and other insects and animals from entering your tank, a screen should be fixed to the end of the pipe.

This screen needs to be checked regularly for holes and tears and to ensure there is no debris blocking the flow of water. If you have a flap screen, ensure it is not jammed open or bent.



3.4 An outlet flap screen



TANK TIPS

- To further protect your inlet screen and prevent leaves, debris and animals from entering, a 'tank guardian' screen can be placed securely on top of the inlet screen. This is an easy to install and removeable device that makes cleaning the inlet area of your tank much easier.
- If you have a filter bag installed underneath the inlet strainer this will require additional and regular cleaning maintenance.
- Ensure you follow safe work practices when working at heights and contact a licensed contractor if you require further assistance.

4. CHECK FOR LEAKS IN GUTTERS AND PIPES

Take a walk around your rainwater tank and inspect for leaks from pipes, gutters and the storage tank itself. Small leaks over time can not only cause a huge amount of water loss but attract termites to your home, particularly if your tank is located next to your house. Repair any damage and contact a licensed plumber if necessary.

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**'Only a well-maintained tank
is water efficient'**
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3 – 6 months

5. MAINTAINING TREE BRANCHES AND FOLIAGE

Overhanging tree branches should be checked, pruned and maintained every three to six months to limit the amount of organic material entering your tank.

Over time untouched organic material can accumulate and lead to discoloured water and a build-up of sediment and sludge inside your tank. This can then become a breeding ground for algae and bacteria.

Another important consideration is how you landscape around your tank. Plants naturally gravitate towards water sources, especially in times of drought. Tree roots can make their way under your tank and in some cases empty tanks can become dislodged.

Some tips to help mitigate this can be as simple as assessing the proximity of planting to your rainwater tank and planting native and drought tolerant seeds which reduce the amount of water required.

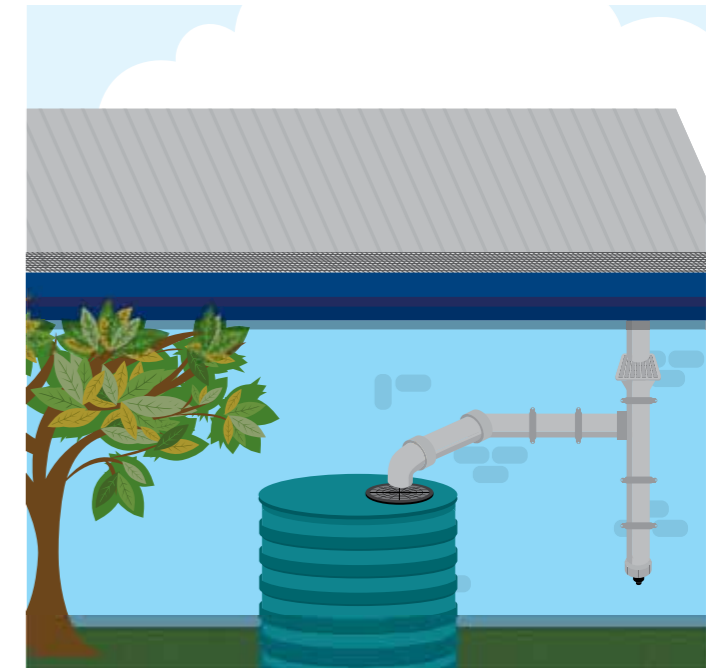


TANK TIPS

- If you want to prune or remove a tree it is important to check the Council trees and gardens fact sheet and permit requirements, as a Private Tree Works Application may be required.
- Consult a licensed contractor if you require further assistance.



5.1 Overhanging trees can increase the build-up of leaves and debris falling onto your tank.



5.2 Pruning and maintaining overhanging trees and foliage will support a healthy rainwater tank system.

6. CHECK FOR PHYSICAL DEFECTS, EVIDENCE OF ANIMAL/ INSECT ACCESS & ALGAL GROWTH

It is important to regularly check the structural integrity of your rainwater tank and look for any physical damage or defects such as gaps. Gaps can occur due to physical or corrosive damage, ripped inlet and outlet screens around access points and between the roof and main body of your tank.

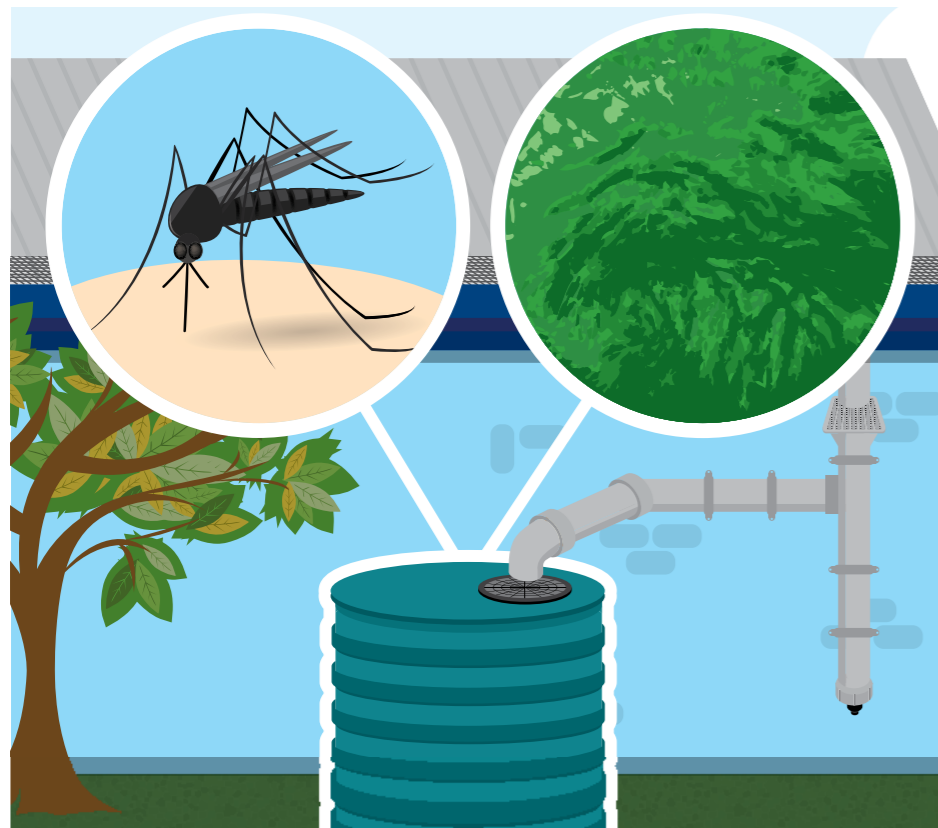
The presence of an opening can result in:

- mosquitoes and other insects and animals entering and breeding inside your tank
- algae growing due to light penetrating into the tank
- signs of algal growth may be the presence of green growth or scum in the water.
- The best approach for preventing algal growth or the entry of mosquitoes and other insects and animals entering your tank is to ensure all gaps are repaired and that the tank is completely roofed so no light cannot penetrate inside.



TANK TIPS

- If further maintenance is required contact a licensed contractor or tank cleaning company.



- 6.1 Regularly check your rainwater tank for the presence of insects, animals, larvae and algae.

7. MAINTAINING CONTROLLERS, PUMPS AND FILTERS

It is important to check that there is water in your rainwater tank, your pump is always turned on, and controllers connected to your tank and mains water supply are working properly. This is designed to ensure you receive water from the drinking water supply when your tank is empty, or your pump has stopped.

When there is sufficient water inside your tank, the pump will be switched on by the controller and tank water is pumped from your tank. If your rainwater tank is empty or the pump has stopped, the controller switches to the mains water supply, whereby water bypasses your rainwater tank and connects directly to your home. Pumps and controllers can fail after an electrical storm or blackout, so you may have to reset manually.



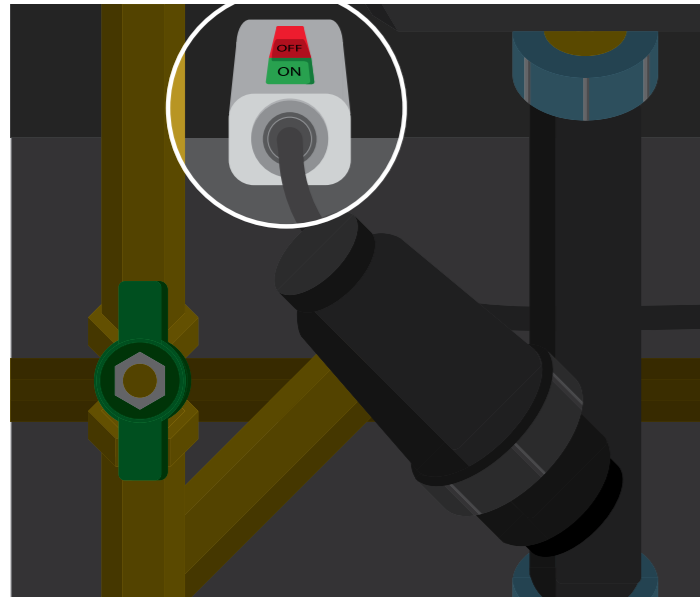
HAVE YOU HEARD YOUR PUMP OPERATING?

The purpose of pumps is to pressurise the water that we store in our rainwater tank for use in our home and garden.

External pumps can easily be checked by looking at the lights, switch or listening for the pump to start up when you use water, for example flushing the toilet or turning on the tap.

Submersible pumps sit inside the tank. The water is pumped from the tank, through the pipework system and across to the controller. This can be more difficult to check due to the noise being masked by the water. A helpful way to assess whether your submersible pump is working or if you are using water from your tank is to install a rainwater gauge.

7. MAINTAINING CONTROLLERS, PUMPS AND FILTERS – CHECKING YOUR TANK SYSTEM IS WORKING



7.2 Check that your mains switching device and pump are plugged in and switched on.

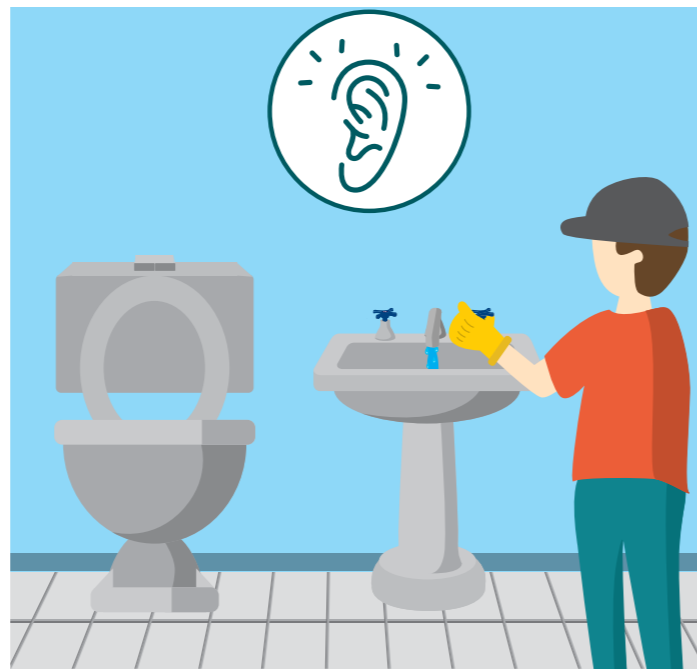


TANK TIPS

- For more information on pump issues and trouble shooting visit page 24.
- If further maintenance is required contact a licensed contractor.
- Always practice safe work methods and use personal protective equipment.

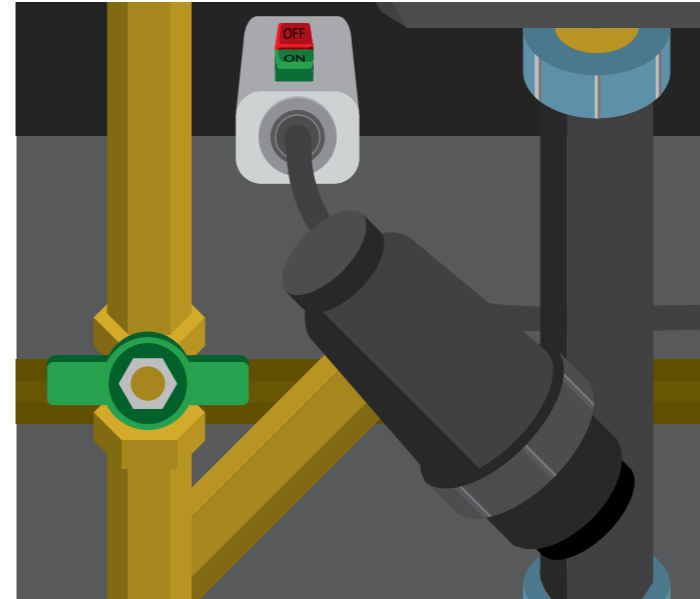


7.3 Check there is water inside your tank. Look inside and knock on the side of your tank.



7.4 If your tank is connected to your home plumbing, turn on the tap, flush toilets or start the washing machine and listen for sounds that your pump is starting up.

7. MAINTAINING CONTROLLERS, PUMPS AND FILTERS – CHECKING AND CLEANING FILTERS



7.5 Locate and turn off mains water and power to the pump.



7.6 Slowly unscrew the body of the cartridge filter to release pressure and excess water.



7.7 Remove and clean the filter with fresh water. Replace filter if damaged.



7.8 Reassemble back together and ensure the switch to mains water and pumps are turned back on.

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'Rainwater tanks have become a major strategy to enhance water conservation'
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2-3 Years

8. REMOVING SEDIMENT AND SLUDGE

Over time small amounts of fine sediment are likely to accumulate at the bottom of your tank which is a natural process and unlikely to be harmful.

In some instances however large amounts of sediments and sludge layers exceeding 20 mm thick may be a source of chemical contamination, foul odours and off-tastes and can be a breeding ground for bacteria and microorganisms.

It is important that your rainwater tank is examined for a build up of sediment and sludge every two to three years.



TANK TIPS

- To clean your tank out, empty your tank and wash out with a hose or high-pressure washer and where possible, re-use water on your garden or to wash vehicles.
- Avoid standing on your tank and always practice safe work methods and use personal protective equipment.
- It is not recommended to climb inside your tank, instead contact a professional tank cleaning business or licensed contractor or plumber to examine the condition of your tank and arrange the best method for cleaning.
- For more information on rainwater tank water quality guidelines visit www.health.nsw.gov.au



RAINWATER TANK MAINTENANCE CHECKLIST

How often?	Maintenance requirements	Service date																
1 – 3 months	Check and clean roof and gutters, rain heads, tank inlets and screens.																	
	Clean and check the first flush device and all filters.																	
	Check for torn or loose mosquito screens and replace if necessary. Place screens back carefully, ensuring they are tightly refitted.																	
3 – 6 months	Check roof and gutters and remove accumulated debris, including leaf and other plant material (more often if trees are overhanging).																	
	Prune overhanging tree branches and foliage.																	
	Check the tank for defects and repair and replace as required.																	
	Check for evidence of animal, bird or insect access, including mosquito larvae and algal growth inside the tank.																	
	Check and clean the pump, filters and strainers.																	
2 – 3 years	Remove accumulated sediment and sludge and clean out if necessary.																	

RAINWATER TANK TROUBLESHOOTER

Problem	Root cause	Possible solution
Pump is turning on and off repeatedly	<p>The pump will turn on when the pressure in the discharge piping is low. It will turn off when it has pumped the pressure high.</p> <p>The pressure in the household piping can only go down if there is a tap open or a leak in the system.</p>	<p>Check all taps for leaks. If the rainwater supply is connected to internal use, check all toilets to ensure there is no slow leak into the bowl. Check washing machine by turning off water isolation tap. Repair leaks if necessary. If a leak cannot be found contact a plumber to investigate leaks that may not be visible.</p> <p>Check that the switching device between mains and rainwater use is working properly.</p>
Pump continually operates	<p>The pump will operate continually if there is a tap open or a severe leak. If this is not the case then the pump controller may be faulty.</p>	<p>Check for an open tap or leaks in the system from toilet or pipework. Contact a plumber if there is a leak. If no leak is detected, contact the pump manufacturer, repairer, or retailer.</p>
Pump doesn't operate when rainwater in tank	<p>Rainwater tanks can be connected to toilets and laundry of a home. This helps to maximise the benefits from the rainwater tanks as water can be used.</p> <p>The pump should operate when a tap is opened or a toilet is flushed. There could be electrical supply problems to the pumps or even pump failure.</p>	<p>Turn the pump off and then on at the power point.</p> <ol style="list-style-type: none"> 1. If the pump does not start, test power point by using another appliance. If other appliance doesn't operate, check circuit breaker at switchboard. Reset circuit breaker and test appliance again. If circuit breaker trips again contact electrician. If pump is causing circuit breaker to trip contact pump manufacturer or retailer. 2. If the pump starts but doesn't continue, the problem maybe the switching device. Contact the pump manufacturer, repairer, or retailer.
No water to tap or toilets or washing machine	<p>Tank top-up systems rely fully on the pump to deliver water to toilets and/or washing machine.</p> <p>Systems that have electronic or hydraulic switching to mains water should deliver water at all times even when there is no rainwater in tank.</p>	<p>Check pump operation and power supply by following procedure in section above.</p> <p>Clean all filters and strainers to ensure there are no blockages.</p> <p>Contact the pump manufacturer, repairer or retailer.</p>
Low flow to tap or toilet or washing machine	<p>There could be blockages in the system that is restricting flow.</p> <p>It is possible that the pumping system or mains switching system supply is designed for low flow.</p>	<p>Clean all filters and strainers to ensure there are no blockages.</p> <p>If the flow is still not acceptable contact the pump manufacturer, repairer, or retailer.</p>

SERVICE RECORD

Service date	Service performed	Self/plumber/business

For current information on rainwater tanks, water restrictions and water saving tips visit centralcoast.nsw.gov.au/lovewater



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love water
use it wisely



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