RAINWATER TANK

OWNER'S MANUAL

TANKSALOT
(09) 427 5281
info@tanksalot.co.nz
www.tanksalot.co.nz

Contents

Rainwater Tank Data

To be completed by the tank installer or property owner as appropriate.

Note: This information is required by the Council for entry into the On-site Stormwater Management Devices database. This document should be handed over to the new owner whenever the property is sold.

Property address	
Street name and number	
Suburb	
City	
Date of completion	
Resource consent number	
Building consent number	

Tank Details

Tank Material	AQUAPLATE® Steel
Tank Dimensions (mm) (W x L x H)	_____W x _____L x_____H
Nominal tank size (litres)	

Additional Data for Detention and "Dual Purpose" Tanks

Detention volume (litres)	
Single orifice diameter (mm)	
Single orifice height above base (mm)	
Second/upper orifice diameter, if any (mm)	
Second/upper orifice height above base (mm)	
Upstairs toilets	
Downstairs toilets	
Laundry Tub:	
Washing machine cold water supply	
Garden taps	
Other	
WARRANTY	20 YEAR CORROSION (from date of manufacture)
	10 YEAR MANUFACTURING (from date of manufacture)

1. Introduction

The purpose of this document is to provide the property owner with instructions and advice on how to operate and maintain the Tanksalot Corrugated Tank and associated non-drinking water supply system installed on their property. One copy of this document should be kept in a handy location on the property and a second copy should be provided to the Council for record purposes.

The Tanksalot Tank will supply water to the hose tap and potentially for non-potable water uses toilet on site as part of the stormwater drainage system for the property and has been installed as part of an approved resource and/or building consent.

The Tanksalot Tank and associated non-drinking water supply system serving the outside tap and toilet may not be removed or altered in any way without obtaining resource consent and building consent from the Council.

2. Purpose of Rainwater Tank

Hard surfaces created as part of urban development generate increased stormwater runoff which is ultimately discharged via the stormwater network into streams and the sea. The increased flow of stormwater can overload the downstream stormwater network causing flooding. Increased stream flows accelerate the erosion of stream banks resulting in damage to adjacent properties and the release of sediment which is later deposited downstream or in the sea causing harm to the stream and marine environment.

“Single Purpose” rainwater tanks capture stormwater runoff from the roof of the house and supply this throughout the year for toilet flushing and laundry purposes. “Dual Purpose” rainwater tanks have an additional volume which is used to temporarily store excess stormwater from larger rainfall events which is then released slowly to the stormwater outfall via a small diameter outlet or “orifice”. The reduction in the total volume of stormwater runoff from the property is achieved through the reuse of stormwater in the household and the attenuation (reduction) of peak flows as a result of slow release. This contributes significantly towards the protection of streams from erosion and alleviating flooding in the downstream stormwater network.

3. Rainwater Tank Operation

The rainwater tank captures rain falling on the roof of the house via the gutters and downpipes which discharge into the tank. On-demand the water in the tank is made available pumped to the outside tap.

A large diameter overflow pipe located near the top of the rainwater tank allows excess rainwater to safely drain away when the amount of rainfall exceeds the amount of water being used in the dwelling or which can be temporarily stored. This overflow is connected to

the approved stormwater "outfall" from the property, usually the Council's piped stormwater network.

The volume of rainwater that can be captured in the tank in an average year will be sufficient to ensure an adequate supply of non-drinking water for most of the year. However, to ensure an uninterrupted supply of water to the hose taps during extended dry periods, a backup supply of water is recommended, which can be achieved by the following:

1. The rainwater tank is connected to the property's mains water supply via a float-operated valve which opens when the water level in the tank drops to a pre-determined level and shuts off when the pre-determined top-up level is reached.
2. The non-drinking water supply pipe from the rainwater tank should not be cross connected to the mains water supply or connected to any taps that could be used for drinking, oral hygiene, or food preparation.
3. All rainwater outlets should be identified as non-drinking water with a label "Rainwater - not for drinking" or similar.

4. Operation and Maintenance Requirements

4.1 Preventing Contamination

Although water from the rainwater tank is only used for toilet flushing, laundry and possibly supply to outside taps, some basic precautions should be taken. These include:

- Keeping roofs clear of overhanging branches to minimise leaf litter and eliminate potential roosting points for birds. This also reduces opportunities for access to the roof by rodents, cats, and possums.
- Preventing access by small animals and birds into the tank by screening all inlets and overflows and keeping access hatches closed.
- Preventing the entry of surface water runoff from areas other than the roof into buried tanks and ensuring the integrity of buried tanks prevent the ingress of groundwater.

4.2 Routine Maintenance

Property owners should periodically inspect their property's plumbing and drainage system for leaks and faults. Similarly, the rainwater tank and associated non-drinking water supply system require periodic inspection and maintenance.

Most actions are relatively simple to perform and may easily be carried out by the property owner. Some actions such as pruning branches overhanging roofs, servicing the pump, de-silting the tank and repairs to top-up valve and backflow prevention devices may require professional assistance.

The following table sets out the recommended inspection and maintenance actions for a typical rainwater tank installation. The installed system may not be provided with all of the components listed and may have additional features not listed. If in any doubt, contact the Tanksalot team to confirm.

Inspection	Frequency
Backup water supply	Monthly
Tank hatches and covers	Quarterly
In-line filter	3 monthly
First flush diverter	3 monthly
Overflow, outlet pipes and orifices.	3 monthly/When the tank is cleaned
Roofs, gutters, downpipes, gutter guards and leaf diverters	6 monthly
Tank	2 to 3 yearly
Backflow prevention valve	Annually
Pump	2 to 5 yearly
Non-return valve	When the pump is serviced

Note: The maintenance frequency suggested above is the recommended minimum. After storms and in the autumn months additional inspections may be warranted.

5. Safety Considerations

- Extreme care should be exercised when cleaning roofs and gutters. Ensure that the ladder is secure, away from power lines and that there is another person present. If in doubt, seek professional assistance.

- It is recommended that professional rainwater tank cleaning contractors be employed to clean and service the rainwater tank. Should it be necessary to enter the tank for any reason, ensure that the tank has adequate ventilation and that there is another person present. The risks involved with working in confined spaces should not be underestimated.

- Access hatches and covers to rainwater tanks should be secured at all times to prevent access by children.

6. Trouble Shooting

Problem	Possible solution
Discoloured water	Discoloured water could be caused by a build-up of leaves in the gutters, inlet system and tank or by the stirring up of sediment in the tank. If discolouration appears to be caused by leaf tannins, consider: • Cleaning the gutters and inlet system. • Installing leaf guards, a leaf slide, inlet filter or first flush device if one is not installed. • Pruning overhanging trees that drop leaves on the roof. If discolouration appears to be caused by sediment, consider: • Installing a bottom inlet system. • Installing an in-line filter. • Cleaning the tank.
Power outage	During a power outage the pump will not operate which means that the water supply to the toilets and laundry from the rainwater tank may not be available. Mains water will still be supplied to the kitchen and bathroom. If the system is provided with a proprietary 3-way solenoid valve this should automatically switch over to mains supply in the event of a power outage. Automatic or manual tank top-up systems will require toilet cisterns to be manually filled until power is restored. Once the power returns the pump may need to be “reset”. To do this, follow the instructions that came with the pump or seek advice from the pump supplier or local service provider.
Pump not working	• Check that the power supply to the pump is switched on. • Check the circuit breaker. • Try “resetting” the pump. To do this, follow the pump manufacturer’s Instructions or seek advice from the supplier or local service provider.
No water getting to the toilets or laundry	• Check that there is water in the tank. If the water level is below the pump inlet the top-up valve may be blocked or the mains water supply may be turned off.

	• Check that the water supply valve from the tank to the pump is open. • Check that the pump is switched on and is working. • Check that the pump inlet is not blocked. • Check that the in-line filter is not blocked.
Mosquitoes in and around tank	• Ensure that all connections and entries to the tank are sealed. • Check that gutters are not holding water. • Clean out mesh screens on inlet filters, leaf slide and gutter guards. • Ensure that access hatches and covers are closed at all times.
Excessive mains water usage	• Check that the float-operated rainwater tank top-up valve is closing correctly and is not leaking. • Check that the proprietary 3-way solenoid valve is switching over to tank supply when tank water is available.