

## Shoalhaven Water Rainwater Tank – Guide to Plumbing

Rainwater tanks can make an important contribution towards reducing the demand for treated water. However, certain requirements are necessary to protect reticulated drinking water and wastewater systems and to ensure public health is not compromised.

If the installation of a rainwater tank (regardless of size) involves work affecting the water supply system, sewerage system, stormwater drainage system, or any part of Councils systems, then such work can only be undertaken with Councils approval.

Shoalhaven Water has developed the following guide on the technical and regulatory requirements.

Shoalhaven Water has a responsibility to ensure that the drinking water supplied to our customers is maintained. As the plumbing regulator in our area of operation, Council also has responsibility to ensure that the drinking water quality is maintained within the customer's property.

### Requirements

- Shoalhaven Water needs to be informed of all proposed rainwater tank installations so that it can ensure an appropriate *backflow prevention device* is installed.
- If there is a *direct connection* between the rainwater tank and Shoalhaven Water's reticulated drinking water supply Shoalhaven Water will require the property owner to install a testable *Backflow Prevention device* at the property owners cost.
- An application must be made to Shoalhaven Water if the property owner wants a top-up from Shoalhaven Water's drinking water supply to the rainwater tank, as this is defined as an *indirect connection*.
- Top-up will be limited to a *trickle top up* to ensure that the water pressure to other customers is not compromised
- Top-up to the rainwater tank is **not** permitted from any **recycled** water supply.
- In certain circumstances, Shoalhaven Water can refuse to allow a connection from its system to the rainwater tank.
- Where a higher risk is assessed, Shoalhaven Water may require the property owner to install a higher hazard *Backflow Prevention Device* at the property owner's cost.
- The overflow from the tank should be directed to the stormwater system. It must not discharge to Shoalhaven Water's sewerage system.
- All tank outlets and pipes carrying rainwater must be labelled "Rainwater".

### Rainwater tank plumbing regulatory requirements

All plumbing work is to be done by a licensed plumber in compliance with these guidelines and the *NSW Code of Practice: Plumbing and Drainage*

#### Proximity to other services

Rainwater pipes must be separated from any parallel drinking water service.

#### Above ground pipes

Any rainwater pipe installed above ground must be a minimum of 100mm away from any drinking water pipe.

#### Below ground pipes

Any rainwater pipe installed below ground must be a minimum of 300mm away from any drinking water pipe.

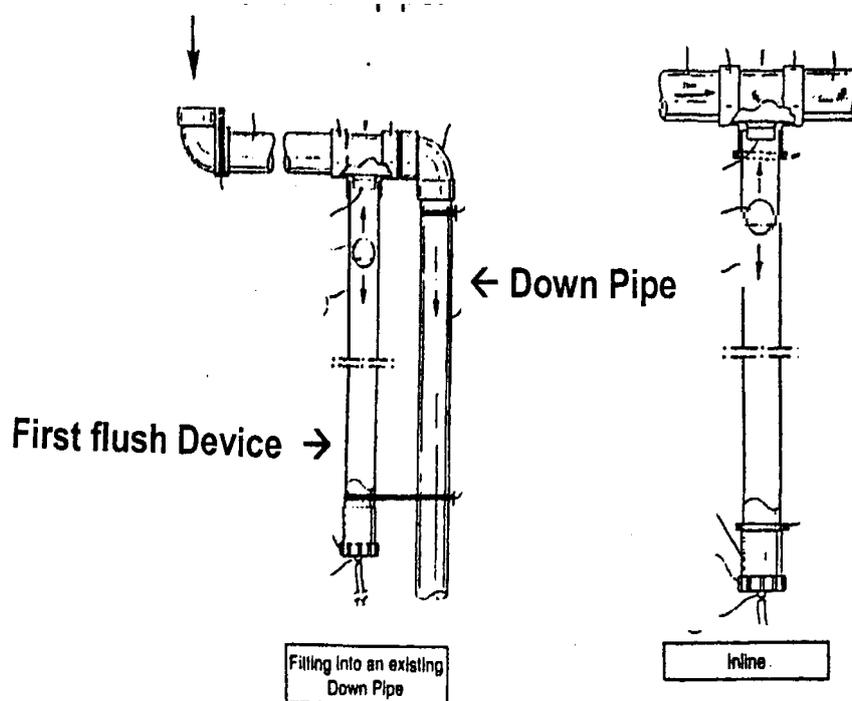
#### Backflow Prevention

A backflow prevention device must be installed at the property meter to protect the mains supply. See “Backflow Prevention Fact Sheet” which is located in A Guide to Rainwater Tanks.

#### A first flush device

The tank must be fitted with a first-flush device, being a device that causes the initial run-off of any rain to bypass the tank to reduce pollutants entering the tank. This is a diverter commonly a tee and chamber made from pipe.

Examples of a first flush diverter:



## Definitions

<b>Above ground rainwater tank</b>	A tank collecting roof water only which is either: <ul style="list-style-type: none"><li>• Fully above ground or</li><li>• At least half the tank is above ground and the view of and access to the inlet pipe, air gap external and overflow pipe are unobstructed.</li></ul>
<b>Backflow prevention device</b>	A <i>backflow prevention device</i> is a device used to prevent the reverse flow of water from a potentially polluted source into the drinking water supply. All <i>backflow prevention devices</i> need to comply with AS/NZS 3500
<b>Below ground rainwater tank</b>	A tank collecting roof water only which is either: <ul style="list-style-type: none"><li>• Fully or mostly underneath the ground</li><li>• Where the view of and access to any one of the air gap, inlet pipe or overflow pipe is obscured by the ground or something similar eg. Rockery or garden bed.</li></ul> There should be no possibility that surface run-off eg. On a sloping site will drain to a rainwater tank.
<b>Connection</b>	See <i>direct or indirect connection</i> .
<b>Direct connection</b>	Direct connection occurs: <ul style="list-style-type: none"><li>• Where a pipe containing water from Shoalhaven Water’s reticulated supply is directly connected into a tank or pipe containing water from a rainwater tank, or</li><li>• Where the outlet of a pipe containing Shoalhaven Water’s reticulated supply is submerged beneath the surface of water from a rainwater tank.</li></ul>
<b>Dual check valve (DCV)</b>	A device to prevent backflow caused by backpressure, which incorporates two independently operation force loaded non-return valves.
<b>Indirect connection</b>	Indirect connection occurs between a rainwater tank and the Shoalhaven Water supply where the outlet of a pipe containing drinking water from the Shoalhaven Water reticulated supply is separated from the water in the rainwater tank by a visible air gap. This ensures that there is no possibility of the rainwater backflow into the Shoalhaven Water supply.
<b>Reduced pressure zone (RPZ) Standard connections</b>	A backflow prevention device for high risk connections. Connections to 20-25mm meters.
<b>Testable double check valve (TDCV)</b>	A device to prevent backflow caused by backpressure, which has two independently operating force loaded non-return valves and incorporates specific test points for in-service testing.
<b>Trickle top-up</b>	Trickle top-up is the slow filling of the tank from the drinking water supply. It is designed to minimise effects on the reticulated system and allow for a reasonable re-supply into the tank over a period of several hours.
<b>Visible air gap (External)</b>	The unobstructed vertical distance through the free atmosphere between the lowest opening of a water service pipe or fixed outlet supplying water to a fixture or receptacle and the highest possible water level of such fixture or receptacle.

If you would like more information about selecting, using and maintaining rainwater tanks, please refer to our brochure “**A Guide to Rainwater Tanks**”, or alternatively phone Shoalhaven Water on 02 4429 3214.