



## **WATER TANKS** for the Home or Business improve WATER QUALITY of the Derwent Estuary

### **WHAT'S THE PROBLEM?**

Rainwater that falls on roofs, roads, driveways, gardens, and parks around our towns and cities creates water runoff that becomes stormwater. As stormwater travels over the ground it picks up a range of contaminants, such as rubbish dropped on the streets, oil dripping from cars and dog droppings we've not picked up.

When stormwater drains into pipes and travels underground to creeks or the coast, where the contaminants can cause serious environmental and potential human health problems.

### **WHAT'S THIS GOT TO DO WITH MY ROOF?**

Stormwater from our roofs increase the total amount of stormwater runoff! Before the building and roof was constructed some of the rainwater would have been able to soak into the ground, but now all this water may be draining into the stormwater system. In the Hobart region, many storm water systems discharge into creeks and rivulets, and ultimately flow into the Derwent Estuary.

**Excess stormwater** from your roof can be **causing creeks** around the city **to scour** (bank and base erosion) **& increases the size (volume) of the stormwater pollution problem** that needs to be treated before entering the estuary.

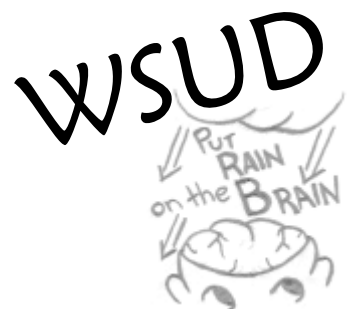


**Figure.** There are lots of slimline models & makes for different tastes & the smallest of spaces.

### **Things to consider about Rainwater Tanks**

- how will the captured rainwater be used?
- size and type of tank to suit your needs
- available area to locate the tank, can you elevate the tank?
- area of your roof & your average annual rainfall
- extras like a pressure pump, a backflow prevention device volume detector, and a first flush device
- the suitability of your roofing materials
- your budget
- what's involved in installation and maintenance

**Water Sensitive Urban Design (WSUD)** is a way to manage urban stormwater as a resource and protect receiving waterways and aquatic ecosystems from stormwater pollution. WSUD involves the use of infrastructure, landscape or garden features to improve stormwater quality and reduce an excessive amount of stormwater entering our waterways. Installing water tanks is one easy way you can use WSUD.



## HOW MUCH WATER COULD I CAPTURE?

If every house in Hobart collected all the water that falls on their roof in a water tank, it would be enough to fill an Olympic swimming pool 5000 times or fill a tank of similar size to the Wrest Point Casino tower 115 times! By using a water tank you could save about half of your annual water use! Calculate water capture:

**Possible annual capture of water (Lt) = Roof area (m<sup>2</sup>) x Annual average rainfall (mm) x 0.9**  
**(see map figure below for approximate average annual rainfall across Hobart)**

NOTE: Typical annual usage per household is 51000 Lt (garden), 50400 Lt (laundry), 40800 Lt (toilet)

## CAN I DRINK MY TANK WATER?

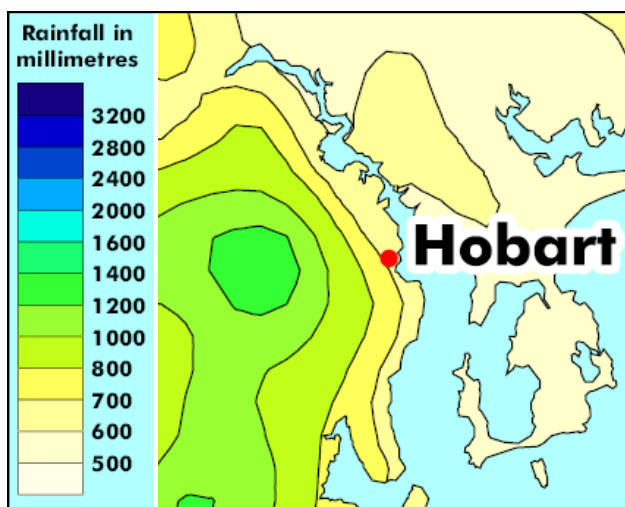
A number of things need to be known before deciding if your tank water is safe to drink. Water collected on private property is considered a private water supply and is the responsibility of the property owner. Any water to be used for drinking is required to meet the National Health & Medical Research Council's guidelines. Care should be taken to avoid contamination.

Great advice can be found on the Hobart City Council website about water tank health issues and maintenance:

[http://www.hobartcity.com.au/HCC.5701844:STANDARD::pc=RAINWATER\\_TANKS](http://www.hobartcity.com.au/HCC.5701844:STANDARD::pc=RAINWATER_TANKS)

Federal Government guidelines on rainwater tanks can be found at:

<http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-publicat-doc->



Map provided by the Bureau of Meteorology

**The Derwent Estuary Program (DEP)** is a regional partnership between local governments, the Tasmanian state government, commercial and industrial enterprises, and community-based groups to restore and promote our estuary. The DEP was established in 1999 and has been nationally recognised for excellence in coordinating initiatives to reduce water pollution, conserve habitats and species, monitor river health and promote greater use and enjoyment of the foreshore. Our major sponsors include: Brighton, Clarence, Derwent Valley, Glenorchy, Hobart and Kingborough councils, the Tasmanian state government, Southern Water, TasPorts, Hydro Tas Norske Skog Boyer and Nyrstar Hobart Smelter.

**For further enquiries please contact your local council or visit the DEP website**  
[www.derwentestuary.org.au](http://www.derwentestuary.org.au)

## WHERE CAN I USE THIS WATER?

You can use the water you collect for watering the garden, flushing toilets, supplying water to the laundry and even your hot water system.

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### EASY STEPS FOR INSTALLING A WATER TANK:

1. **Speak to your local council**  
what permits are required & do they offer any rebates?
2. **Work out what you want to use the tank water for**  
Using the tank for garden watering only means that it will provide very little benefit throughout winter when you don't need to water the garden. It is most effective to use the water inside the home for toilet flushing and laundry use so that the water is used consistently all year round (however this also involves the use of a pump and additional plumbing, making it a bit more expensive)
3. **Choose the size of tank you need**
  - For urban areas where space is limited and the town water supply is also available you don't need a very big tank. If you plan to use the tank water for laundry and/or toilet a 2000L tank should be more than enough. If the tank is only for garden watering, you might consider a 5000L tank to provide a little more storage so that you don't run out during longer dry periods. It's even possible to get special designed rain storage guttering!
4. **Think about your tank set-up**
  - You should have a 'first flush diverter' installed to trap the first 1-3L of roof runoff that contains any dirt or other contaminants that may have collected on your roof since the last rain
  - install leaf guards on guttering if trees over hang your roof.
  - If tank water is used inside a switch device can be installed to detects when your tank is empty & converts supply to mains.
  - Can the tank be elevated to avoid water pumping?
  - Think about plumbing the overflow from the tank to a rain garden or soakage pit / area (if allowed by your local council).
5. **Find a plumber and talk to him/her about the tank set-up.**

Figure. Average rainfall in the Hobart area to assist in calculating your potential water capture volume



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