

A Guide to help the house holder to make the best decision, in harvesting and sustainable use of rainwater!

Tank water, your water. Lower your town water bills and save our natural resource.



After filtering, drinking water. [Check with local health authority and the Australian Drinking Water Guidelines]

Irrigation systems for your garden.

Guilt free hosing down your drive way.

Attach high pressure pump and wash your house.

Wash cars.

Top up swimming pools and spas.

Connect to toilets and clothes washing machines.

Fire fighting and emergency reserve.

Have a plumber connect to your house, get a rebate.

Modtank P/I claim copyright of this guide as the author, who have compiled the guide from information in the market place, normally derived from sources that use this information for their own product marketing purposes.

Where we have modified the information as a series of options, to give a complete overall view, to assist the assessor to give on the site suggestions relevant to a particular house hold. Please contact www.modtank.com.au should you have any suggested upgrades to this guide.

All prices shown are indicative only and should be used as a guide to planning, before requesting a quotation by a reputable supplier and/or installer. Implication of these assessor suggestions by the house holder, whether by, do it your self, experienced trained installer, or green plumber, all must rely on the following Australian Standards.

Rainwater Tank Design and Installation Handbook HB 230: 2008.

http://www.nwc.gov.au/resources/documents/RAINWATER_handbooknwc_logo.pdf

Urban Greywater Installation Handbook for Single Households HB 326: 2008

http://www.nwc.gov.au/resources/documents/GREYWATER_handbook_nwc_logo.pdf



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For every square metre of roof or collection area,
one millimeter of rainfall equals one litre of water!

Let's use it before it goes out to sea.



Rainwater diversion pit. At some point all stormwater joins at one pit before it leaves your property. The rainwater diversion pit is fitted before your existing pit, has a rough filter and pump to lift storm water to your tank.

Has the advantage of collecting all storm water, roof, driveway, paths, etc, it also collects associated impurities.

Price per pit \$1700, can be very expensive to fit, as this pit must be fitted by a registered plumber and power must be run underground by a registered electrician.



Collecting rainwater from the roof directly into the water tank.

If the tank position is not close enough to the tank, as 3/, fit a gutter pop to gutter to move closer.

Gutter pop \$3

Most water tanks have a mesh leaf diverter, however it is important to protect the quality of rainwater from debris such as leaves and twigs, the following is recommended depending on the area.

As 2/ fit gutter mesh. \$3 per metre.

As 4/ fit a leaf diverter with mozzi mesh. \$50 each.

As 5/ fit a first flush diverter to divert the initial dirty rainwater. \$85 each.

Each case is different, but the estimated labor installment cost for the above, including pipe, elbows and tees to the tank and overflow from the tank should start around \$300

To obtain the lowest cost per litre of water stored, always fit the largest tank in the area available!

A huge country 50,000L tank will cost \$4000 and a small 500L tank will cost \$350

Australian Standard 4766 was developed to protect the consumer from sub-standard tanks always ensure the tank chosen complies to this standard.



Round tanks available manufactured from FRP, steel and food grade polyethylene.

Litres	Plastic	Steel
500	350	650
1000	700	900
1500	800	1100
2000	1000	1300
3000	1200	1500
5000	1500	1800
10000	2000	2300



Slimline

Litres	Plastic	Steel
500	350	900
1000	700	1100
1500	1050	1500
2000	800	1800
3000	1000	2200
5000	2000	2700



Bladder Tanks

Litres	Plastic	Steel
2000	2000	
3000	2300	
5000	2800	

Modular tanks to fit into small spaces and maximize water storage!

77 litre module \$65



500 litre slim line \$350



Underground Tanks

Concrete water tanks can be prefabricated and buried or poured on site. Given the high cost, it is more economical to fit a large capacity tank.

Rough example, 40,000 litre tank \$50,000



Fabricated similar to milk crates, wrapped in water impervious material and buried.

Rough price example 30,000 litres installed \$30,000



Rotary moulded polyethylene buried tank.

Again given the cost of excavation, licensed plumbers and electricians, the bigger, the more cost effective.

5000 litre tank \$3000

Rough installation and pump price \$3500

Base Preparation.

Commonsense needs to be applied when you consider every litre of water stored weighs a kilo. A 2000 litre slimline tank of weighs at least 2 tons, it is imperative that the base is of a construction to allow NO subsidence which could lead to the tank falling over!

All bases need to be flat, level and smooth.

Round tank bases can be constructed of 100mm thick crusher dust and cement, 300mm larger in diam. than the tank to be fitted. Either by excavating to 100mm or building a treated wood frame.

Or as with all other tanks, a 100mm concrete slab with F62 mesh half way through the mix.

Existing concrete should be leveled with floor leveling cement.

Approximate cost per square meter \$300

Tank to Pump.

If the pool to be topped up, or the garden to be irrigated is the same level as the bottom of the tank, then you can use gravity for this purpose and just need a ball cock to turn the water on or off.

A ball cock or gate valve needs to be placed between tank and pump. Also suction hose the same diam. or larger than the inlet of the pump needs to be used.

Suction hose and valve and fittings \$90

Pumps with pressure switch.

All pumps for tanks have a maximum 32 metre head pressure, similar to town water pressure.

The main difference between pumps is the flow rate in litres per minute.[LPM].

25 to 35 LPM ideal for topping up a pool or average household irrigation system. \$250

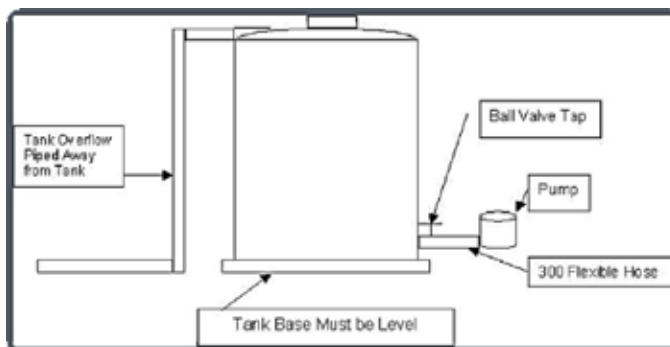
35 to 50 LPM for irrigation, washing machine and toilet \$400

50 to 80 LPM for running a normal average household \$600

50 to 80 LPM higher pressure for two story household \$800

For automatic sensing of an empty tank and change over to town water, add \$450

Pump cover \$70



Rebates.

Generally, rebates are offered, for having a licensed plumber connect to a toilet and clothes washing machine in your house. This rebate amount is credited to your town water supplier bill.

Rebates vary from federal, state and local municipality across all Australia. Please choose for your area the rebate offered.

MAJOR REBATES FOR INSTALLATION OF RAINWATER TANKS AND CONNECTION TO RESIDENTIAL PROPERTIES IN STATES AND TERRITORIES OF AUSTRALIA

State Approval required to obtain rebate. Link to website

ACT ACT Government www.thinkwater.act.gov.au

NSW NSW Department of Environment and Climate Change
www.environment.nsw.gov.au/rebates/ccfrtw.htm

NT Northern Territory Government www.nt.gov.au/nreta/water/wise

Qld Queensland Government, Dept. of Natural Resources and Water
www.nrw.qld.gov.au/water/saverscheme

SA SA Water www.sawater.com.au/SAWater/YourHome

Tas Hobart City Council www.hobartcity.com.au/HCC/STANDARD/PC_1041.html

Vic Our Water Our Future www.ourwater.vic.gov.au/ourwater

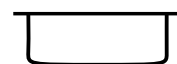
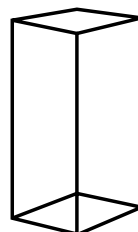
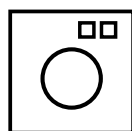
WA Water Corporation, Waterwise Rebate <http://portal.water.wa.gov.au/portal/page/portal/WiseWaterUse>

Federal rebate initiative.

<http://www.environment.gov.au/water/programs/nrgi/index.html>

Greywater.

Grey water can be collected from the laundry, shower or bath outlet.



Grey water collection and usage is a very large and complex area.

All installation and application of greywater must be executed by a plumber trained in this area who complies with the standards and guidelines for the area.



The most common method is to use a greywater diversion device connected to the washing machine. These range from **\$500 to \$2100**.

The in built pump then distributes grey water to irrigation areas in your garden, in a place and method as directed and approved by the specialist qualified plumber. All the above installation starts at **\$1000**.

This plumber will then be able to apply for a rebate relevant to your area, generally **\$500**.

For full information, and a huge amount of restrictions, visit, http://www.nwc.gov.au/resources/documents/GREYWATER_handbook_nwc_logo.pdf