Using Settling Tanks to Improve Your Water Quality

When harvesting rainwater from your roof, a dam or river, or an underground bore, it is possible to increase the water quality through utilising two or more tanks. This article will examine settling tank systems – what they are and the benefits they can provide to the quality of water stored in your tank.

What is a Settling Tank?

A settling tank is simply a tank specially dedicated to have all water flow into it. As water fills up the tank, a floating valve allows water to be siphoned into a second tank used for water storage.

Setting up a settling tank isn't difficult, but quite easy to do. In fact, by just having two or more tanks coupled together, your first tank will naturally act as somewhat of a settling tank.

How is Water Quality Improved?

Sometimes the source of water you are harvesting will contain sediment and harmful particles like iron. If you are harvesting rainwater from your rooftop though, then you likely have little to fear.

Rainwater harvested from rooftops is one of the purest water sources, so will be largely free from harmful contaminants. Especially once water diverters and screens are installed. Nonetheless, even with rainwater, over a couple of years, organic matter and debris does find a way into your tank and can form a sludge layer at the bottom.

Water pumped from surface water sources such as dams or rivers, or bore water pump up from underground can contain more contaminants including iron. Having a settling tank means all heavy particles, including iron residue, will “settle” at the bottom of the first tank. Higher quality water then flows into your second tank which you access your water from.

Generally, with iron removal, you’ll want to also make use of aerators. The most common form are cascade aerators which is comprised of a series of steps which water flows over. This allows the iron in the water to oxidise and form particles, before flowing into a settling tank. Iron particles then fall to the bottom of your settling tanks, and iron-free water is siphoned into a water storage tank.

Benefit of a Two Tank Setup

As previously mentioned, installing two water tank means your first tank will in some way behave as a settling tank. There are many other reasons why a multiple tank setup might be preferable also. For example, sometimes, the best cost per litre is had at a specific size (for example, our 5,000 gallon and 5,400 gallon tanks), other times multiple smaller tanks will better fit on your property. So, if you are considering installing a water tank then you might want to consider two.
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