Water Storage Requirements for Fire-Fighting Services

Bushfires are common in many areas of Australia, particularly in the dry, hot summer season when tinder dry vegetation and extremely hot weather conditions are conducive to runaway fires. If flare-ups are not quickly contained they can quickly get out of control, with devastating consequences.

In bushfire prone areas of Australia it is mandatory for homeowners to have a supply of water dedicated for fire-fighting purposes. Having a supply of water readily available on your property can mean the difference between saving or losing your home, should it be threatened by an encroaching bushfire.

How Much Water Allocated to Fire-Fighting?

The amount of water that needs to be specifically allocated for fighting fires varies from one location to the next and normally set by state or councils. It is usually determined by the size of your property and your fire risk.

Water storage requirements range from a minimum of 2,500 litres for a small property (less than 500 square metres) to a minimum of 20,000 litres for rural properties exceeding 1 hectare in size. In high fire risk areas, a minimum of 22,000 litres allocated for fire-fighting is recommended.

While swimming pools can be recognised as a reasonable reservoir of water for fighting fires, in many areas water retention tanks are required.

Fire-Fighting Water Retention Tanks

Water allocated for fire-fighting can be stored separately in a water tank specifically reserved for fighting fires, or it can be stored together with water allocated for normal household use in one storage tank as long as certain criteria are met.

Your water supply needs to be stored in a non-combustible tank if above ground, and fitted with an appropriate outlet compatible with your local fire service's hoses on the lower portion of the tank about 400mm above ground level.

It is important to note that when poly tanks are filled with water, they will not combust to those water levels. Tests revealed that above ground poly tanks can warp and melt above water levels under *extreme* bushfire conditions. Many are misled into thinking steel tanks will withstand similar fire conditions, however they also lost their structural integrity with water leaking at the seams.

For these reasons, when purchasing a rainwater tank, underground poly tanks are a great option, relatively inexpensive and can also harvest stormwater runoff. Being underground they normally comply with all requirements necessary for a bushfire fighting water retention tank.

Tank Plumbing and Fittings

If you need a rainwater tank in a bushfire prone area, then you will also need to consider its pipes and fittings. All above ground plumbing should consist of metal rather than plastic to ensure they can withstand high fire temperatures.

The draw-off outlet for the fire-fighting water allocation needs to be fitted with an appropriate hose connection so fire fighters to can easily attach hoses to your tank. The type of fitting varies from state to state — in NSW a 65mm STORZ outlet is required, while in Victoria the outlet needs to be fitted with a County Fire Authority (CFA) approved round male coupling (specs: 64mm 3 thread, 25 x 50mm nominal bore British Standard Pipe) with piping and valves running from the outlet to the water tank consisting of a minimum of 50mm nominal bore to maintain sufficient water pressure.

If you have a single water tank allocated to fire-fighting, it will need to be fitted with two separate outlets — one for domestic water use, the other for fire-fighting purposes. The outlet that is used to draw off water to supply the household's domestic water requirements needs to be installed further up the tank, reserving any water below this draw-off point for fire-fighting.

Water Pumps in Bushfire Prone Areas

If you live in a bushfire prone area, then since electricity often cuts out during bushfires your pump should be able to operate separately from the electricity grid. As such, petrol and diesel run pumps are normally recommended for fire-fighting water retention tanks. Pumps must be capable of pressurising water to a minimum power rating of around 3.7 kW (5hp).

Finally, the water supply allocated for fire-fighting needs to located in a position that is easy for fire-fighters to get to in a hurry. If it is located on the fire prone side of the home, additional practical measures should be taken to shield both the fire-fighting crew and any water pumps needed to deliver water from the tank. If fire-fighters can't access your water supply due to safety concerns, then it could obviously lead to the loss of your home.

If you are looking for a water tank, then check out Clark Tanks diverse range of poly tanks. For fire-fighting purposes, you might want to invest in one or more underground water tanks for the best fire protection of your water storage.

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