Water Supply Requirements for Fire Fighting in Victorian Bushfire Prone Areas

Victoria has a sub-Mediterranean climate, and like the rest of Australia, experiences hot dry summers where bush fires are common and often devastating. Victoria is considered one of the highest bushfire risk areas in the world; the 2009 Black Saturday bushfires, which claimed 173 lives, and destroyed more than 2000 homes and 430,000 hectares of land, bear testament to this.

The tragic events of this day were investigated by the 2009 Victorian Bushfires Royal Commission, who have proposed several recommendations to protect human life in the event of future bushfires, including regulations pertaining to planning and building in bushfire prone areas. One of these recommendations is the need for a static water supply on every property that falls in the Bushfire Management Overlay.

In the event of a fire, fire-fighters need to be able to locate a water supply in a hurry. Consequently, every property needs to have either a fire hydrant attached to a reticulated water system serving the property, and/or an alternative static water supply dedicated to fire-fighting purposes, and this needs to be clearly marked as such so that fire-fighters can find it quickly in an emergency.

When Do I Need to Have a Fire-Fighting Water Supply?

According to the Victoria state government's bushfire planning and building framework (Clause 52.47 Bushfire protection: Planning requirements), any application related to the construction of a single new dwelling or renovations associated with an existing single dwelling (including those in a rural living zone) located in a Bushfire Management Overlay must meet certain building requirements in order to be granted approval. One of these requirements is that a static water supply must be provided on the property for fire-fighting purposes.

How Much Water Do I Need to Store?

If your property is located within the Bushfire Management Overlay, the volume of water you will need to store on your property purely for fire-fighting purposes will depend on the size of the property and whether there is a hydrant available within 120 metres of the rear of the building as outlined below:

- **Properties less than 500m²** – If your property is less than 500 square meters, you will need to have a minimum of 2,500 litres available (no special fire authority fittings are required, and no fire-fighter access needs to be provided)
- **Properties 500m² to 1000m²** – For properties 500m² to 1000m², if there is a hydrant servicing the property (the hydrant needs to be within 120 metres of the rear of the building) you will need to have a minimum of 5,000 litres of water stored for fighting bushfires. No fire authority fittings or access is required. If there is no hydrant available (or it is located more than 120 metres from the rear of the building), you will need to store a minimum of 10,000 litres for fire-fighting purposes, and you will need

to provide relevant fittings required by the local fire authority, as well as access for fire-fighting vehicles.

- **Properties greater than 1000m²** – For properties larger than 1000m², a minimum of 10,000 litres are required. In addition, relevant fittings required by local fire authority, together with access for fire-fighting vehicles is required.

Water Storage Options

This static water supply can be stored in a separate water tank or as a reserve supply in a larger water tank providing domestic water or stock drinking water. If using the latter, the water drawn off for domestic/stock water will come from the upper part of the tank, with the outlet fitted higher up the tank, while the outlet for the water supply reserved for fire-fighting will be positioned at the base of the tank, with the required minimum volume stored between the two outlets, as required for your property.

Water tanks that store water for fighting bushfires need to be constructed of fire-resistant materials such as metal or concrete. Plastic underground tanks can be used, but all above ground piping, fixtures and fittings must be metal rather than plastic.

Where Does the Water Supply Need to be Located?

The static water supply must be in a position that will allow firefighters to swiftly and safely access the water. If fire authority access is required (i.e. properties greater than 500m² with no hydrant available), fire trucks need to be able to get within 4 metres from the water tank outlet. Additional access requirements may also be applicable.

CFA Technical Specifications

To allow the CFA to connect to the water supply and deliver water at optimal pressure, the water supply reserved for fire-fighting needs to be fitted with Country Fire Authority (CFA) fittings as follows: An above-ground static water supply must be fitted with at least one 64mm, 3 thread/25mm x 50mm nominal bore British Standard Pipe (BSP), round male coupling. All pipes and valves connecting the water supply to the outlet must be at least 50mm nominal bore to ensure adequate water pressure.

For more details on these specifications, refer to CFA's Preferred Requirements: Water Supplies and Access for Subdivisions in Rural Zones.

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