

services & information for new landholders



Do you own a small property in rural Victoria?

water for horses following fires

When you have been affected by a fire there are many things to consider. For horse owners, one of the most urgent, and important requirements relating to management of your animal, is to ensure immediate and ongoing access to sufficient clean, fresh drinking water. You should also consider putting together a longer term plan to ensure you will be able to protect your water supply, the environment, and in turn the quality of the water.

This note will outline many of the things you need to consider when it comes to horses and water, including;

- How much water do I need for my horses? and do I have enough water?
- What sort of quality water does my horse need?
- What effect will the fire have had on my water quality?
- What are my options in the longer term for managing my water quality?

How much water do I need for my horses?

Horses should have access to clean, fresh drinking water at all times. A horse's body consists of 70% water, so they cannot go without water for very long. The needs of individual horses will differ greatly. Factors that affect the amount of water a horse needs are:

- Temperature
- Whether they are in work, and what type of work
- Feed (moist grass v's dry feed)
- Pregnant or lactating mares drink more
- Size and condition
- Health

As a rule of thumb, you should allow between 20–70 litres a day per horse (maybe more in hot weather). This equates to up to 25,500 litres of water a year per horse.

When calculating how much water you have available, don't forget to factor in losses from evaporation, seepage, drought and other animals including wildlife drinking the water. About 1,500 to 2,000 mm of depth is evaporated from a dam each year although this can vary with the depth and orientation of the dam.

You should follow these steps for planning farm water after fire:

- carefully evaluate current reserves

- estimate how the status of these reserves may change over time
- consider how this will influence the management options available

More information about calculating how much water is in your dams, and how long it will last, please refer to • LC 0092: How long will my dam water last?

What sort of quality water does my horse need?

Horses would rather go thirsty, than drink water that has been contaminated by chemicals, insects, leaves, algae or manure, so where possible you need to site water supplies away from trees, change the water (if using troughs) and clean the water supply regularly.

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As fires generally occur in summer when water supplies may already be depleted, one of the most frequent water quality problems that occurs when water levels are low is high levels of salt. Young horses have difficulty thriving on water supplies with higher than 5,000 ppm (parts per million) salt. Adult horses can handle up to 6,500 ppm, especially once they get used to it. Levels above 6,500 ppm salt need to be treated with caution. You should not use water that contains more than 400 ppm magnesium salts.

If you feel that you may have a mineral problem (whether it be salt or something else) it would be advisable to get your water tested.

What effect will the fire have had on my water quality?

The publication, *Recovery after fire: Practical steps for landholders*, outlines the issues around water management directly after fire in more detail (eg. It goes into more detail about what to do if your essential stock and domestic water was used for fire fighting purposes), however some of the critical aspects regarding water quality are to:

● Protect dams from wind born contamination

After a fire, windborne material such as ash and soil from paddocks with inadequate groundcover may be blown into dams. Once in the water, organic materials provide ideal food for bacteria and algae. These organisms grow rapidly using up all free oxygen in the water (it becomes anaerobic) and putrefaction results.

Symptoms are dark water, a bad smell and black scum around the edge. Horses (and other livestock) find such water unpalatable. Thick scum around the water's edge may also prevent animals accessing the water. It is believed the water is not poisonous to livestock, but it may be harmful to young or weak stock.

Once material is in the dam, aeration of the water is necessary to improve its condition

and make it more palatable. This is best done by pumping to a tank and reticulating to a trough. If aerated water is returned to the dam then the organisms growing on the organic material will quickly remove all the air again.

Fencing can be used to trap blowing material before it reaches the water. A closed-wired fence on the windward side is a worthwhile investment. The offending material eventually settles and can be removed with an excavator.

● Protect dams from siltation

During summer, storms can move large volumes of silt. This can happen anytime until ground cover establishes.

What are my options in the longer term for managing my water quality?

Whether you are consider developing a whole farm plan for your property after the fire, or you have already got one in place, or whether you have not even thought about it yet, water quality is a crucial factor in managing your horses and property.

There are a number of ways water quality on your horse property can be improved, including:

- **Providing troughs** instead of relying on creeks and dams
- **Fencing off dams** and allowing horses restricted access, or alternatively no access and pumping water instead. This protects dam walls, and avoids silting up of dam inlets and overflows, and stops horses from churning up, and muddying their drinking water.
- **Restrict access to creeks**, which protects the watercourse and the stream banks
- Ensure horse paddocks have **good ground cover** at all times. Groundcover acts as a filter and disperses the water as it approaches creeks and dams or enters the groundwater supply.

- Consider planting **shelterbelts** to help disperse and absorb excess water
- **Direct water** from shed or stable roofs into a tank, or alternatively into drains or over a grass area.
- Disperse water from **washing your horse** over grass areas, and make sure it cannot enter waterways.

Further relevant material is available in the following publications that are available on the DPI website at www.dpi.vic.gov.au:

- **Recovery after fire: Practical steps for landholders**
- **How long will my dam water last?** Landcare note LC0073
- **How to maintain your farm dam.** Landcare note LC0092
- **Measuring the salinity of your water.** Landcare note LC0064
- **Water Quality for Farm Water Supplies,** Landcare note 0089
- **Water Conservation on Rural Properties** Landcare note 0065
- **Has your Dam got a Blue-Green Algae Problem?** Landcare note 0098
- **"Drought Feeding and Management for Horses"** RIRDC publication No 99/98, Australia

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