

Introduction

This factsheet sets out guidelines for fencing farm dams and illustrates the associated benefits for both your farm and the local wildlife.

These guidelines are the minimum standard where protection of farm dams is a goal or project of the Environmental Works Grant, Sustainable Land Management Rebate Scheme or a Land Management Plan.

Often water quality is compromised by allowing stock to directly access a farm dam. This can result in reduced water quality through livestock:

- disturbing sediment.
- defecating and urinating in the water.
- eating and trampling vegetation which leads to bare ground and increased nutrients running off paddocks into the dam.
- damaging dam banks with their heavy hoofs and causing pugging around the edges.



Degraded dam bank as a result of livestock having direct access to water source. Note pugging around edge and minimal bank vegetation

Benefits of protecting dams and waterways

Availability of clean water for livestock should be a priority for landholders.

Research illustrates a correlation between dry matter intake and water consumption in livestock (DPI 2012, Murphy 1983). With access to good quality water, livestock will drink more, eat more dry matter, and thus gain weight faster. As weight gain is a priority for livestock producers it makes sense to ensure that stock water quality is high.

To ensure that livestock have access to good quality water, landholders should fence dams and establish alternative watering points. Water can often be made available to livestock via a gravity-fed trough located outside the fenced area. Research suggests that livestock may prefer to drink from a trough as the water is cleaner, more palatable and accessible without entering a dam (DPI 2012, Willms 2002).

Preventing stock from accessing dams directly will reduce the nutrient load in the water and decrease the risk of algal blooms, thereby increasing water quality.

Additional benefits include:

- **Healthier native vegetation:** Fencing allows native vegetation surrounding the dam to regenerate, or for revegetation programs to be carried out. This vegetation acts as a natural filter, reducing sediment and nutrient loads from entering the water. This vegetation will also provide habitat links across the landscape.
- **Healthier livestock:** Fencings reduces the chance of livestock entering dams, getting bogged and injuring themselves and dying.
- **Shelter for livestock:** As vegetation naturally establishes or is planted around the bank it acts as a shelterbelt for livestock, providing shade and protection from the wind.
- **Reduced evaporation:** As native vegetation establishes around a fenced dam, evaporation is reduced through shading and reduced wind speeds across the water.
- **Reduced erosion:** Erosion caused by livestock movement over dam banks is avoided.



Livestock reduce the water quality when they have direct access to farm dams.

Fencing Guidelines

Fence placement and design is important in determining how beneficial the protection of the farm dam will be. The following are the minimum standards required:

- **Fence a minimum of 4 metres from the top of the dam bank** to allow room for plant establishment and natural regeneration.
- **Use permanent fencing** that cannot be damaged by stock, and includes properly constructed corner and end assemblies.
- **Do not use barbed wire**, use a minimum of 5 strands of strained wire to ensure the fence is wildlife friendly.
- **Incorporate an access gate** to allow for management of the area, access for fire-fighting purposes and for and stock access to water on code red fire danger days.



Protected farm dam with indigenous vegetation established around the bank.

Ongoing Management

Ongoing maintenance of the area within the dam fence will be required. The following maintenance activities must be undertaken:

- control of environmental and noxious weeds.
- grass slashing to aid in revegetation / regeneration programs.
- protection of emerging seedlings.
- regular inspections of dam wall and spillway.
- regular inspections of pump or reticulation system.
- do not plant trees, or allow them to establish, on dam walls.

Further Information

Funding Assistance

City of Whittlesea Sustainable Land Management Program: www.whittlesea.vic.gov.au/sustainability-and-waste/sustainable-land-management

Melbourne Water Stream Frontage Management Program provides financial assistance to landholders to fence off waterways on their properties: www.melbournewater.com.au/getinvolved/applyforfunding/Pages/Stream-frontage-management-program.aspx

References

DPI (2012) Stock Perform Better When Drinking from Troughs

Willms, WD., Kenzie, OR., McAllister, TA., Colwell, D., Veira, D., Wilmhurst, JF., Entz, T., and Olson, ME. (2002) Effects of water quality on cattle performance. Journal of Range Management. 55:452- 460.

Murphy, MR., Davis, CL., McCoy, GC (1983) Factors affecting water consumption by Holstein cows in early lactation. Journal of Dairy Science 66:35.