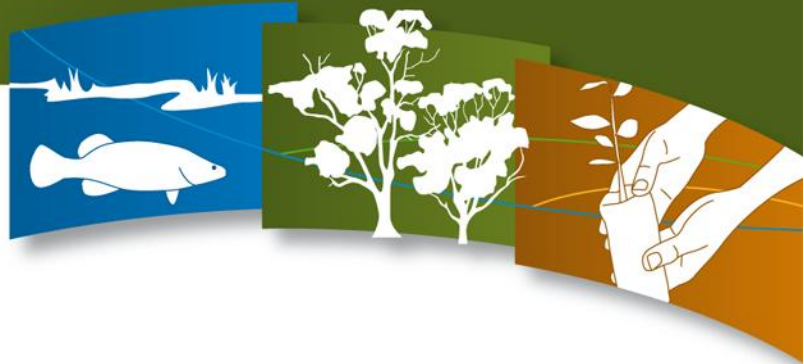


Riparian fencing & flooding

Fact Sheet



NORTH CENTRAL
Catchment Management Authority
Connecting Rivers, Landscapes, People



Connecting Rivers, Landscapes, People

Riparian (or riverside) fencing is the simplest way of regulating animal access to waterways to protect water quality and river health values.

The type and location of fencing that best suits your needs will need to consider flooding, including flood frequency and size of the flood peak. Riparian fencing needs careful planning as flooding can impact on conventional fence lines.

This fact sheet aims to provide landholders with an understanding of the importance of fence placement and construction in response to floods.

Fencing waterways

Fencing along a waterway has many benefits to ensuring the integrity of stream bank and channel stability.

Erecting and maintaining suitable riparian fences

- Protects fragile riparian vegetation
- Controls stock access to waterways
- Reduces bank erosion and channel instability
- Creates habitat for native flora and fauna

Fences & floods – risks & perceived risks of flood damage to fences

High velocity water flows during floods can destroy fencing. Fences should be placed well out of the floodway to avoid loss and damage during high flows. Damage is often caused by debris that may be carried by floodwaters. Placing fences as close as possible to the low flow channel may seem to be a good way of maximising paddock area, but this has proven to be a false economy in the long term.

Here are some principles to consider when designing your fences to improve their resistance to floods:

- Consider using drop down or lay down fences in high risk areas
- Adequately plan placement of fences in riparian zones
- Reduce the surface area available for debris build up on fences e.g gates and wire netting fences.
- Fencing can also be partially protected by vegetation on the upstream side, to intercept any debris that may be carried in floodwaters

Fencing Options

Drop down fences

Drop down fences fold down automatically as pressure from water and debris builds up behind them. Drop-down fences can be simple to construct. A star picket or post should be dug in deeply so that they will hold during most floods. A wooden dropper is then attached to the top of the star picket/post with low tensile wire, designed to snap in the case of flooding. The fence is secured with high tensile wire at the base of the star picket/post making the whole design strong enough to withstand usual stock pressures and requiring little maintenance.

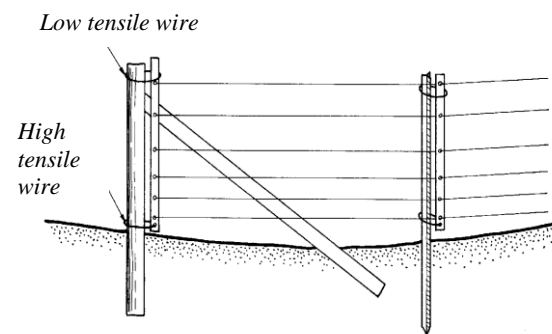


Figure 1: Drop-down fences showing star dropper and wood dropper attachment.

Source: Water and Rivers Commission.

Lay down fences

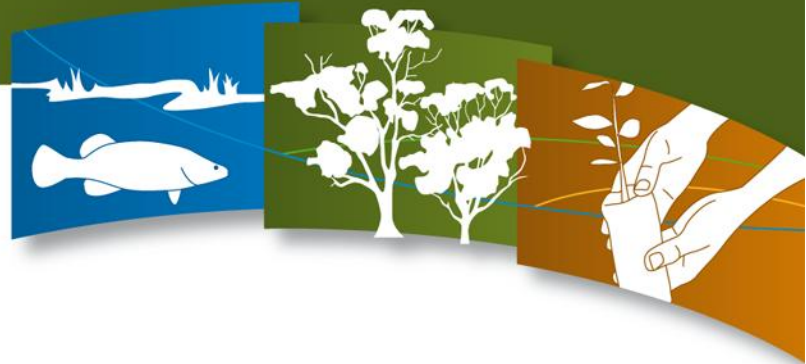
Lay down fences can be constructed in the same way as drop down fences however they are designed to be folded down manually before a flood and depend on good forecasting of flooding to be most effective.

Flexible electric fences

Flexible electric fences are made of plain wire strands, hung separately along posts. Each section is attached to the star pickets (not threaded through the picket) on the downstream side of the fence. When floodwaters push against the wires, they release from the star pickets rather than pulling the entire fence down with it.

Riparian fencing & flooding

Fact Sheet



Connecting Rivers, Landscapes, People

In addition, droppers can be used in flexible fences to allow floodwater and debris to flow through the fence with less chance of snagging wires.

Suspended cable fences

Another successful design for fencing across valley shaped waterways is the suspended cable fence. A steel cable or chain can be suspended across the waterway between two secured posts. From the cable a curtain made of galvanised chain, chain mesh, galvanised mesh or prefabricated fencing or netting is attached and is designed to remain flexible and rise with the flow.

Fence placement

In areas where high floods are common and fences are regularly lost or damaged, traditional fencing placements may not be appropriate. Here are some principles to consider when erecting a floodplain fence:

- Build your fences parallel to the likely direction of the flood flow
- Build as few fences as possible across the waterway
- Build your fences as far above the high flood level as possible
- Fences that are at a high risk of being damaged from floodwaters should be isolated from other fences on the property.



*The importance of riparian fencing placement can become obvious after flooding.
(Photo Glenn Merrick, North Central CMA)*

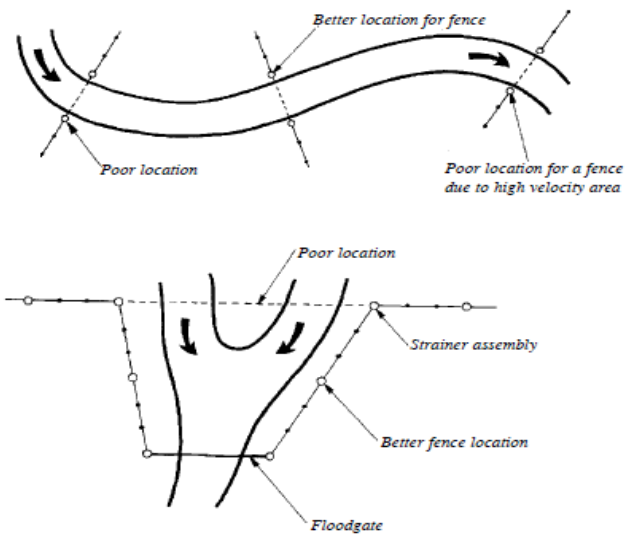


Figure 2: Location of a fence that crosses a waterway
Source: Water and Rivers Commission.

Information for this fact sheet was sourced from:

- Price, P. and Lovett, S. (2006). Stock and waterways- a managers guide. Land & Water Australia. Canberra
- Land and Water Australia. (2006). Stock and waterways; A managers guide
- Water and Rivers Commission. WA. Water Notes 18 & 19.

To find out more about riparian fencing and flooding contact:

North Central Catchment Management Authority
P.O Box 18(628-634 Midland Highway) HUNTLY VIC 3551 T: (03) 5448 7124