



Riparian cross section



A degraded riparian margin

BACKGROUND

Waterways are important to the community; historically, culturally, recreationally, and economically. The sustainability of waterways is directly related to how they are managed now, with a view to their future use. It is important that these uses are recognised and the resource carefully managed, to maintain adequate water quality and quantity to fulfil Taranaki's future requirements.

Taranaki has three distinctive patterns of waterway. In the west, short steep-gradient rivers radiate from the mountain across its ringplain to the coast. In the east, long low-gradient rivers wind through deeply-incised, narrow-bottomed valleys in the hill country. Dotted across the ringplain and through the valley bottoms, lakes and swamps occupy small, discontinuous wetlands.

Riparian margins are strips of land adjacent to waterways. They extend from the edge of the floodplain to the waterway itself. The width of a riparian margin depends on the channel's shape, and how it relates to groundwater movement through underlying rock or alluvium. An important component of the riparian margin is its vegetation. The composition of this vegetation greatly influences the functions of the riparian margin.

ISSUES

Streambank erosion releases sediment and nutrients to waterways. Soil nutrients and fertiliser are carried in on the sediment particles. Valuable assets such as land and buildings are threatened by bank erosion.

Livestock, by grazing on streambanks and entering streams to drink, directly input animal wastes to waterways. The resulting pollution degrades suitability of the water for farm, factory and urban intakes downstream.

The wrong kind of riparian vegetation in the wrong place, for instance tree willows growing in a channel, retards floodwater, inundating farm paddocks and cutting road access. Short-growing vegetation in floodways filters sediment from surface runoff but also keeps it in temporary storage, reducing flood capacity. Drainage of wetlands leads to clearance of swamp vegetation, important for flood storage and also for removal of nutrients like nitrogen from emerging groundwater.

Removal of native riparian vegetation destroys habitats for wildlife, depletes food and shelter for freshwater fisheries, produces fluctuating water temperatures (causing problems for industries which abstract water for cooling purposes), and reduces the aesthetic and amenity values of waterways widely used for recreation by both locals and visitors to the region.

Inadequate fencing of waterways hinders farm management, impedes stock movement, increases stock losses, and necessitates flood-gates.

These issues don't arise everywhere on Taranaki's waterways, but they are sufficiently widespread, that there's a need for better riparian management to reduce their impact on the region's economy and environment.

For further advice or information about sustainable land management contact:

TARANAKI REGIONAL COUNCIL

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WHAT IS RIPARIAN MANAGEMENT?

Riparian management is the term that describes how land users look after the margin of a river or a stream, a lakeshore or a swamp. It doesn't entail surveying off a fixed width of land next to a waterway, to create an esplanade reserve for public access. Riparian management is simply something land users undertake themselves, on land which remains under their private ownership.

There are five basic principles involved in riparian management:

- Fencing the riparian margin
- Establishing appropriate vegetation
- Maintaining the vegetation
- Minimising any adverse effect on waterways from land use in or near the margin
- Installing protective river control works, if needed.

WHAT IS TARANAKI REGIONAL COUNCIL'S RIPARIAN MANAGEMENT POLICY?

The Taranaki Regional Council considers riparian management to be an effective tool for the promotion of sustainable management of the region's natural and physical resources, which is a statutory responsibility of the Council under the Resource Management Act. The Council offers free advice to landowners with respect to the retirement and planting of riparian margins.

The Council's policy is to encourage good management of riparian margins by landholders, who are in the best position to improve the condition of streams flowing through their farms. Landholders can't achieve pristine water quality, because they're constrained by what enters waterways upstream. However, anything they do helps to improve water quality, enhances wildlife habitat, creates recreational opportunities, and also helps farm production. The Council's information sheet ***Benefits of riparian management*** outlines what can be achieved.



WHAT IS A RIPARIAN PLAN?

To help the management of riparian zones, the Council's Land Management Officers (LMOs) can prepare a plan for fencing, planting, and maintaining them. This is one of the four types of property plan on offer as part of the Council's Sustainable Land Management Programme.

Preparing the plan doesn't cost anything; it's a free service. One of the Council's LMOs walks over the farm, looking at the streambanks and wetlands, talking about what options could be used to manage them. Next, the LMO produces a draft plan which outlines how the preferred option could be implemented, and what it will cost. At this stage, the plan is fine-tuned, so that it fits grazing management and farm budget.

To implement the plan, the Council will supply seedling plants at cost each winter (their cost is less than \$3 each depending on type and size). It's up to landholders to plant them, to install protective fencing, and to undertake any release weeding or pest control. Alternatively a contractor can be arranged to do all of this at an additional cost.

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