# Riparian Management

# Riparian Management

**Key Issues**

Riparian margins are strips of land alongside waterways where the water and land meet. They contribute to the natural functioning, quality and character of the waterway. Riparian management is a land use practice which is recognised as an effective tool in the promotion of sustainable resource management of the river/stream network. The amenity values of the District's waterways can be affected by development which restricts public access to those waterways. Subdivision and consequential development can, if not managed effectively, threaten or degrade significant indigenous vegetation and habitats. Are the objectives, polices and rules of the District Plan achieving the Anticipated Environmental Results for riparian management?

**Indicators**

Pressures:
- Length of un-vegetated, unfenced riparian margins; and
- Number of dairy farms and stock numbers adjacent to waterways

State:
- Percentage of riparian strips in vegetation;
- Quality of the District's waterways i.e. parameters identified by Waikato Regional Council (temperature, pH, Dissolved Oxygen, Biological Oxygen Demand, total Nitrogen, turbidity, faecal coliforms, heavy metals);
- Percentage of District's waterways which comply with bathing standard guidelines;
- Percentage of riparian areas accessible to the public; and
- Number of complaints received per annum regarding poor water quality.

Response:
- Percentage of riparian margins owned/managed by Council;
- Number of resource consents granted requiring the creation of or protection of existing riparian margins;
- Number and value of incentives offered e.g. rates relief;
- Number of landcare groups in operation;
- Percentage of the community which received educational material regarding riparian management; and
- Length of access and walkway development.

**Results**

In 1996 there were 521 dairy farms with 105,001 cattle adjacent to the three main rivers within our District, as well as 114 beef farms totalling 7,849 cattle (Agri-data 1996).

The Waikato Regional Council is responsible for taking samples and measuring the health and bathing quality of our rivers and streams. It is important that we live in a healthy environment. Clean waterways and waterway margins are important to flora and fauna. Unsatisfactory water quality has various negative effects, including making it difficult for aquatic animals to breathe and restricting plant growth. Water pollution can also have a negative impact on human health.

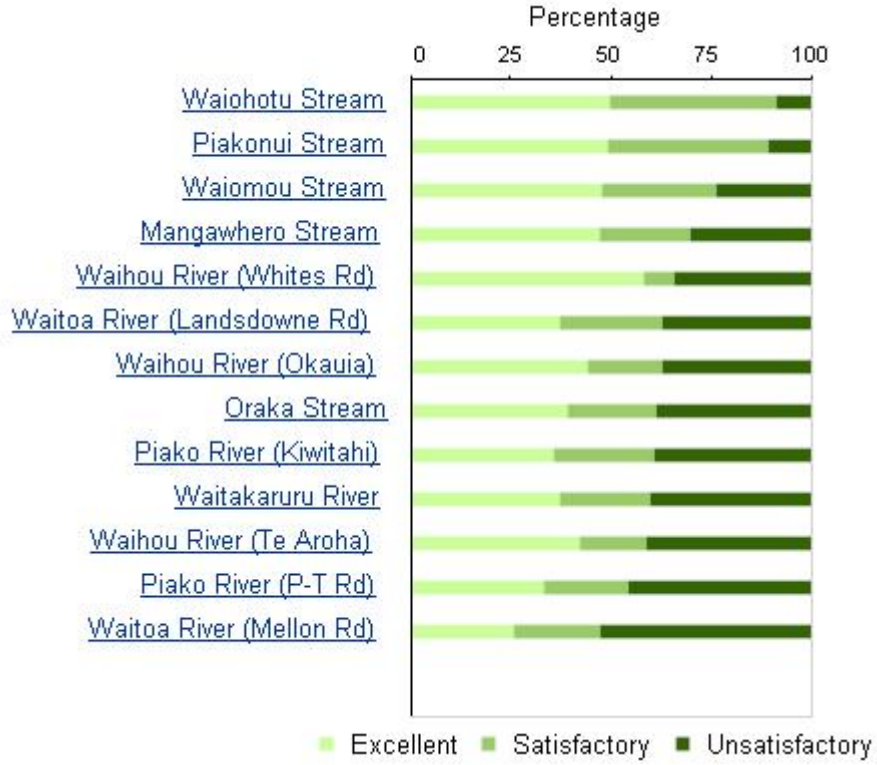
The Waikato Regional Council monitors streams in seven locations within the Matamata-Piako District. Measurements are taken for ecology; dissolved oxygen, PH, turbidity, ammonia, temperature, total phosphorus, total nitrogen, bathing quality; base-flow clarity, and E-coli.

The individual measurements can be found on the Waikato Regional Council's website and are summarised in the graphs on the next page.

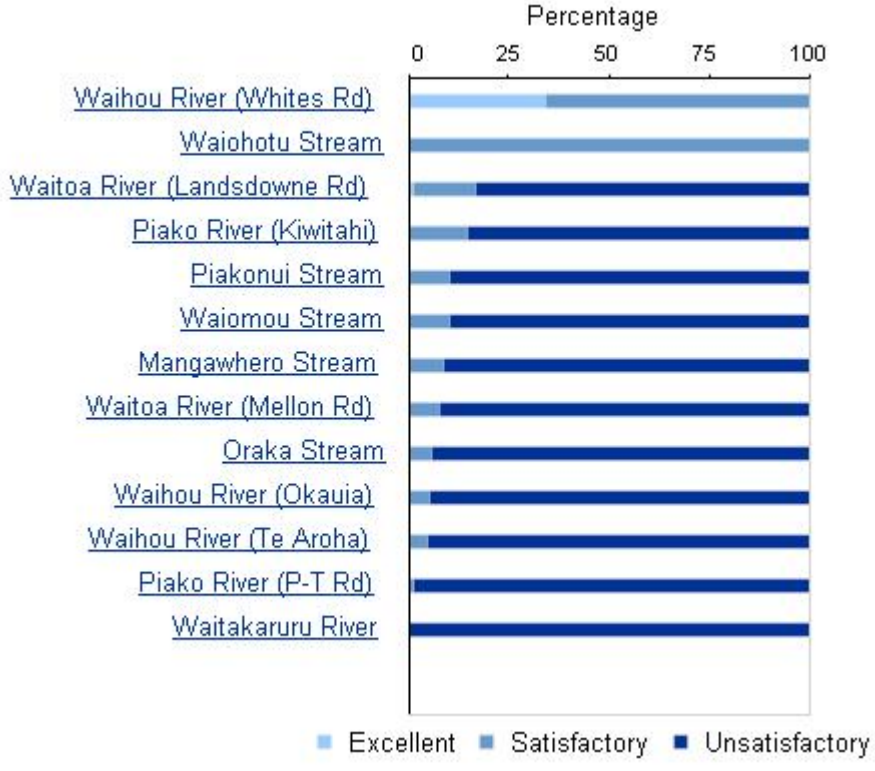
In general the graphs show that:
- Dissolved oxygen levels in most rivers is excellent or satisfactory;
- PH levels in most rivers is excellent;
- Turbidity in some rivers is satisfactory and others are unsatisfactory;
- Ammonia in most rivers is excellent;
- Temperature in most rivers is excellent or satisfactory;
- Total Phosphorus in most rivers is unsatisfactory;
- Total nitrogen in most rivers is unsatisfactory;
- Base-flow clarity in some rivers is satisfactory and other rivers are unsatisfactory; and
- E-coli in some rivers is satisfactory and other rivers are unsatisfactory.

The following are the average scores for both ecology and swimming compared with other sites in this zone (*Graph data based on samples collected during the period 2010-14. Baseflow clarity result is based on samples collected during the period 2008-12*):

Ecology




Swimming



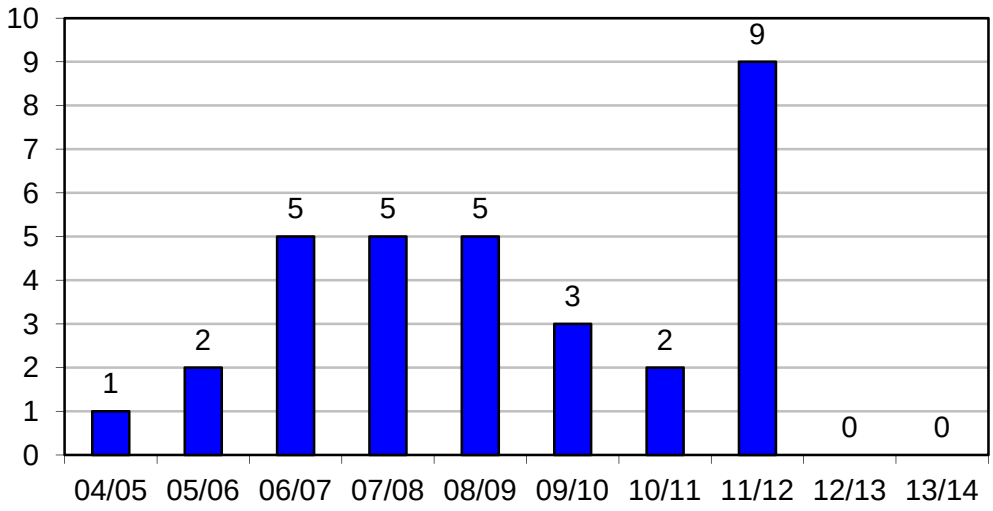
Earlier measurements show the water quality in the District's main rivers ranged from excellent/satisfactory to unsatisfactory. From 1997-2001 nearly 43% of the samples taken from rivers within the Hauraki catchment were excellent for the indicators measured, while 33% of samples were unsatisfactory. From 2000-2004 nearly 38% of the samples taken from the same rivers were excellent, while 41.3% were unsatisfactory. This indicates a decline in water quality.

Council owns or has control of approximately 73 hectares of esplanade reserve. This is the land that generally extends 20 metres out from a river/stream, and contains riparian margins. These esplanade reserves make up approximately 20% of all Council owned reserves.

The RMA and the District Plan (through subdivision consent) provide for the creation and protection of riparian margins and esplanade reserves.

From 2000/01 – 2007/08 there have been 44 consents granted with conditions requiring the creation of esplanade reserves or protection of existing riparian margins. During the subsequent period (2008/09 – 2013/14) a total of 19 consents were granted with conditions requiring the creation of esplanade reserves or protection of existing riparian margins.

**Number of resource consents granted requiring the creation or protection of riparian margins**




At present, Council does not offer any value incentive for the creation or protection of riparian margins. Council is aware of three currently active landcare groups operating in Matamata-Piako that are taking measures to benefit waterways and their margins. There groups are: Mangawara Rivercare Group, Morrinsville Landcare Group, and The Kaimai Mamaku Catchments Forum.

Landcare groups take an active role in improving the environment. They take practical steps that benefit the whole community. Council wants to ensure there is sustainable farm production, protection and rehabilitation of sensitive environmental areas, pest and weed control, native bush monitoring, river monitoring and rehabilitation, as well as biodiversity enhancement (protection of native flora and fauna).

Landcare groups help the community to achieve these aims.

**District Plan Provisions**

**Section 3.4.2 Subdivision**

**Objective:**
- To maintain and enhance, where appropriate, public access to and along the District's principal waterways.

**Policy:**
- To improve through subdivision, use and development of the public's access to, and enjoyment of, the District's waterways and the environmental quality of riparian margins and waterways.

**Anticipated Environmental Results**
- Improved environmental quality and public access along the District's principal waterways.

**Section 3.6.2 Surface of water**

**Objective:**
- To ensure that activities carried out on the surface of water and structures occupying the water surface do not adversely affect the quality and amenity values of the water environment or that of adjacent land.

**Policies:**
- To ensure that nuisance effects of surface water activities, particularly noise and wash do not adversely affect the amenity enjoyed by people using the river and on the amenities of adjoining land;
- To ensure that activities and structures on the surface water do not adversely affect the integrity, functioning and resilience of ecosystems within and adjacent to the water environment; and
- To maintain safe and navigable waterways by avoiding conflicts between incompatible surface water activities.

**Anticipated Environmental Results**
- Maintenance and enhancement of environmental quality along waterways and margins (typical performance measure: improved water quality, habitat quality and diversity);
- Improved public perception of general amenity on and in the vicinity of waterways (typical performance measure: reduction in number of complaints to Council regarding surface water activities); and
- Maintenance and enhancement of the recreational and conservation values of waterways and access along them.

**Efficiency and Effectiveness**

*Are the District Plan's objectives and policies the most effective and efficient way to achieve the following anticipated environmental results?*

- *Improved environmental quality and public access along the District's principal waterways.*
- *Maintenance and enhancement of environmental quality along waterways and margins (typical performance measure: improved water quality, habitat quality and diversity).*
- *Improved public perception of general amenity on and in the vicinity of waterways (typical performance measure: reduction in number of complaints to Council regarding surface water activities).*
- *Maintenance and enhancement of the recreational and conservation values of waterways and access along them.*

Riparian margins are strips of land alongside waterways where land and water meet. Their importance not only relates to their own intrinsic ecological functions and values, but also relates to the ability of the margins to mitigate the adverse effects of land based activities on the waterways of our District.

The Operative Matamata-Piako District Plan ("Plan") contains two objectives, *'to maintain and enhance, where appropriate, public access to and along the District's principal waterways'* and *'to ensure that activities carried out on the surface of water and structures occupying the water surface do not adversely affect the quality and amenity values of the water environment or that of adjacent land'*. Each objective has a number of policies associated with it.

Objective 2 is given effect to by resource consent conditions requiring subdivisions along specified rivers to vest riparian margins in Council as esplanade reserve. For subdivisions creating lots of less than four hectares an esplanade reserve must be vested in Council as required by the RMA. For subdivisions creating lots four hectares or greater Council has the option to purchase an esplanade reserve within a specified time period. This is generally five years.

In addition to this, Council has designated the banks of the Piako River where it adjoins the Morrinsville urban area, for a reserve. This is to enable a walking linkage along the banks of the Piako River but this will also have positive effects on the ecology of the river.

Between 1 July 2000 and 30 June 2008, 44 resource consents have been granted with conditions pertaining to the creation of esplanade reserves. Between 1 July 2008 – 30 June 2014, a further 19 resource consents have been granted with conditions pertaining to the creation of esplanade reserves.

The RMA, the District Plan and the policies and AER's within the plan allow for the creation of esplanade reserves when land is subdivided. The policies are effective and efficient in achieving the objective because esplanade reserves allow for public access and its efficiency is increased by utilising the existing resource consent process.

Although the policies are effective in achieving the objective, they do not achieve all aspects of the anticipated environmental results. They are effective at improving public access along the District's principal waterways through the creation of esplanade reserves. However, they are not as effective at improving their environmental quality. The water quality data provided by the Waikato Regional Council shows a general decrease in water quality. This decrease in water quality is likely to be caused by changing land use practices rather than a decrease in the area covered by, or the quality of, riparian strips.

Securing esplanade reserves potentially allows Council to significantly improve the environmental quality of riparian strips in the future.

The policies pertaining to the water surface are effective and efficient. The Plan permits navigation and passage of non-commercial recreational vessels on our waterways. On the Waihou River and its tributaries there is a five knot speed limit within five metres of the river bank. It is anticipated this will minimise the effects of wash, promote safety and avoid adverse effects on adjacent ecosystems.

Commercial vessels or the erection, replacement or alteration to an existing structure over water, requires resource consent. Any resource consent granted will consider and give effect to the objectives and policies.

Currently there are no consented commercial vessels operating within the Matamata-Piako District and there are no recorded water surface complaints. It is considered that the AERs have been effectively achieved.

It is recognised that there are other external factors which may also have an effect on these AERs such as Regional Council initiatives, community group/landcare group and landowner initiatives, changing perceptions of the importance of water bodies, and changing practices in farming.

In conclusion the policies are effective in achieving the objectives and most of the anticipated environmental outcomes. However the indicators are not showing an increase in the quality of the environment. Part of the reason for this is the data available to us focuses on water quality which is only one aspect of the riparian environment's quality. Gathering data on vegetation cover will provide a fuller indication of environmental quality. There is the potential to increase the environmental quality through Council's esplanade management plan (completed in 2010).

The management plan may provide the opportunity to increase vegetation cover to create habitat as well as to capture nutrients before they enter the waterways. It is also noted that water quality is strongly affected by the catchment areas above our District. In this regard, the upstream activities will continue to affect water quality regardless of what enhancement or protection activities are undertaken within the Matamata-Piako District.

**Summary**

| **Anticipated Environmental Results**<br>**Riparian Management** | **Achieved?**<br><br>☺ - Achieving<br>→ - Progress towards achievement<br>☹ - Not achieving<br>? - Not monitored |
|---|---|
| Improved environmental quality and public access along the district's principal waterways | ☺ |
| Maintenance and enhancement of environmental quality along waterways and margins (typical performance measure: improved water quality, habitat quality and diversity) | ☹ – Water quality<br>→ - habitat quality<br>? - diversity |
| Improved public perception of general amenity on and in the vicinity of waterways (typical performance measure: reduction in number of complaints to Council regarding surface water activities) | ? |
| Maintenance and enhancement of the recreational and conservation values of waterways and access along them | ☺ |