

Upper Waikato Zone Plan

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Executive summary

The Upper Waikato Zone Plan guides the activities of Waikato Regional Council's Integrated Catchment Management Directorate from Taupō to Karapiro. It includes:

- goals for the zone
- strategies to achieve the goals
- implementation actions for each strategy
- processes for monitoring and reviewing the plan.

The zone plan is guided by *Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River)* and *Waikato Regional Council's Strategic Direction 2013-16*. It implements operational programmes identified in the council's key statutory documents including the *Proposed Waikato Regional Policy Statement* and the *Waikato Regional Plan*.

This plan must be seen as one part of a suite of activities council and its stakeholders are carrying out to improve catchment health. For council it signals a shift to a wider focus that will contribute to addressing:

- declining water quality
- erosion and changes in land use
- loss of indigenous biodiversity
- management of previous and future works.

How Waikato Regional Council intends to work in the zone can be summarised as:

- Working with iwi co-management partners.
- Collaborating with other willing partners to achieve enduring results.
- Moving toward applying an integrated catchment management approach.

As a result of implementing this plan:

- Waikato Regional Council and its stakeholders will know by June 2016 where the greatest pressures are in the zone and be able to use this information to identify priority areas and guide decisions on where to focus resources to obtain the greatest benefit.
- At least 60 per cent of new works funding will be spent in priority areas by 2018 and 80 per cent funding by 2020.
- By 2017, all properties with a Land Improvement Agreement or Memorandum of Encumbrance will be on a regular three yearly maintenance inspection cycle.
- By June 2015 all farmers in the zone will be aware that changes are being made to water and land use rules relating to the Waikato River.
- By 2024 council will be actively working with landowners in at least five priority catchments to take practical steps to improve catchment health.

It is hoped that the collective actions carried out in the zone by iwi and stakeholders, as well as Waikato Regional Council's Integrated Catchment Management and other directorates, will help with progress toward the Vision and Strategy for the Waikato River. It is also hoped that the upper Waikato zone will be a model of best practice for sustainable land management and the enhancement of water quality.

The strategies and actions described in this plan do not require additional funding beyond current levels.

The implementation of this plan and its effectiveness will be monitored and reported on an annual basis to the community. A major review of the plan will be conducted every six years and a brief review three years after each major review.

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1 Introduction

1.1 Purpose

The Upper Waikato Zone Plan provides broad directions to guide Waikato Regional Council's operational activities in the zone for the next 10 years, and to inform council and its key partners working in the catchment. It includes:

- goals for the zone
- strategies to achieve the goals
- actions for implementing the strategies.

While the work proposed builds on past achievements in soil conservation, preservation of natural heritage and industry engagement, this plan signals a shift in the way this work will be carried out. In particular, council is seeking a more complete and integrated approach to the delivery of its services. Stakeholders can therefore expect higher levels of engagement and collaboration in the non-regulatory work council undertakes in the zone.

Ultimately, this plan is about improving the health of the upper Waikato catchment, including the protection and restoration of the health and wellbeing of the Waikato River and its tributaries in the zone. This will be achieved by working in partnership with river iwi, other agencies and key stakeholders such as Department of Conservation, the agricultural and forestry sectors, landowners and the wider community.

This plan is informed by *Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River)* and Waikato Regional Council's strategic direction. It implements operational programmes identified in the council's key statutory documents including the *Proposed Waikato Regional Policy Statement (RPS)* and the *Waikato Regional Plan (WRP)*.

1.2 Scope

The focus of council's Integrated Catchment Management Directorate is on delivering practical services and advice to landowners to improve catchment health. It includes:

- catchment and river management
- services that care for the natural environment and heritage
- support and advice for industry and landowners on sustainable land management practices.

This plan provides overarching strategies (see figure 1) for delivering these services in a way that they complement one another and make best use of limited resources. It does not cover all of the council's work in the upper Waikato – rather it must be seen as one component of a suite of activities being undertaken in the zone.

At the time of preparing this zone plan, council had initiated Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai. The purpose of this project is to work with stakeholders to develop changes to the WRP to help restore and protect the health of the Waikato and Waipa rivers. The council is required to develop a plan change to give effect to the *Vision and Strategy for the Waikato River* and the Government's *National Policy Statement for Freshwater Management 2014*.

Other work Waikato Regional Council is carrying out in the upper Waikato includes implementing and monitoring compliance with council's rules under the current WRP,

monitoring the state of the environment and developing new resource management policies and rules to address environmental issues. However, these activities are not covered in this zone plan.

Waikato Regional Council is one of number of organisations working to improve catchment health within the zone. Iwi, district councils, government departments, industry, community groups and individual landowners are all active in implementing initiatives to improve environmental health. Again, the intention of the zone plan is to complement and support the work of these other agencies and individuals, and align programmes where opportunities arise.

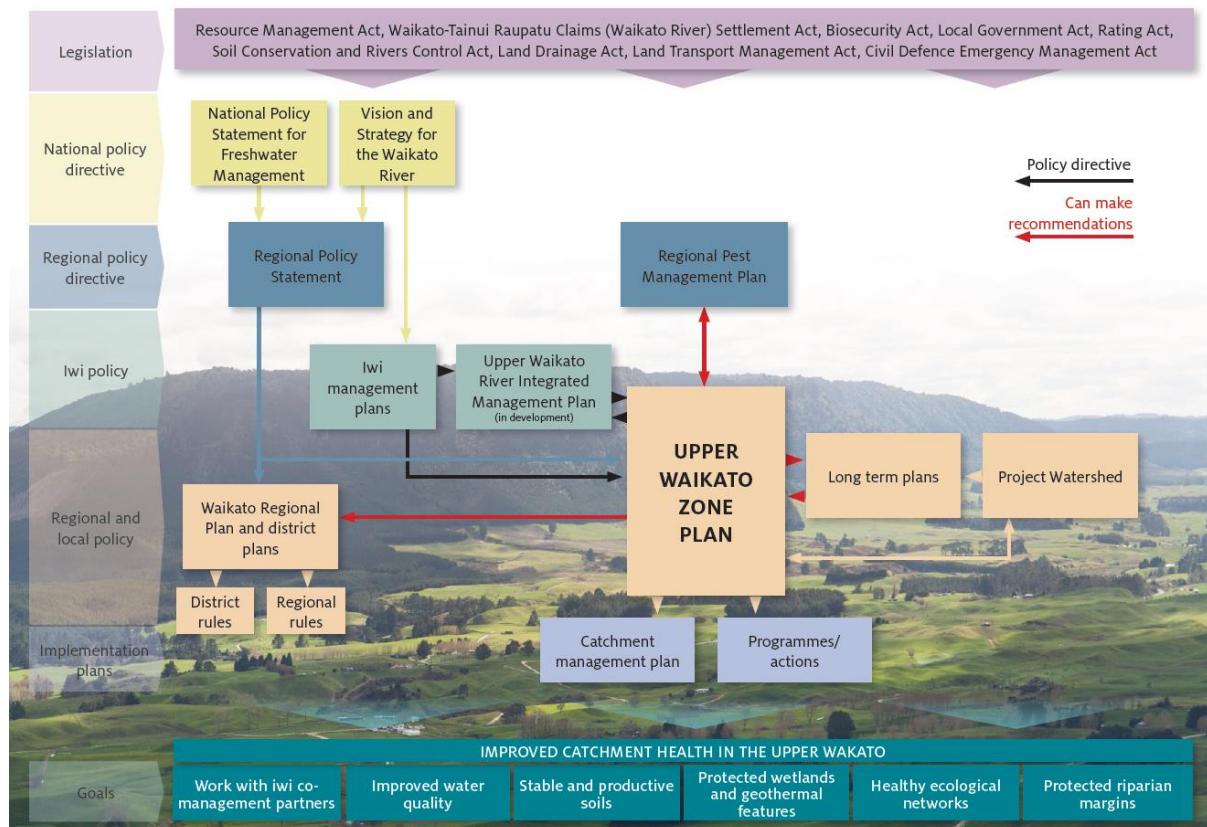


Figure 1 Context of the upper Waikato zone plan

1.3 Catchment description

Stretching from the Kaingaroa Plateau in the east to the Pureora and Rangitoto ranges in the west, the upper Waikato zone covers 436,000 hectares and includes the hydro lakes of Aratiatia, Ohakuri, Atiamuri, Whakamaru, Maraetai, Waipapa, Arapuni and Karapiro. It also includes a number of natural lakes, the steep land of the Paeroa Range, Horohoro Bluffs and northern Hauhungaroa Range (see figure 2).

Geologically the zone is volcanic in nature with 68 per cent being comprised of Taupō pumice. The remainder is made up of other volcanic materials, including tephra and muds from the Rotorua Volcanic Centre. Much of the zone is characterised by young, soft and loose materials prone to erosion.

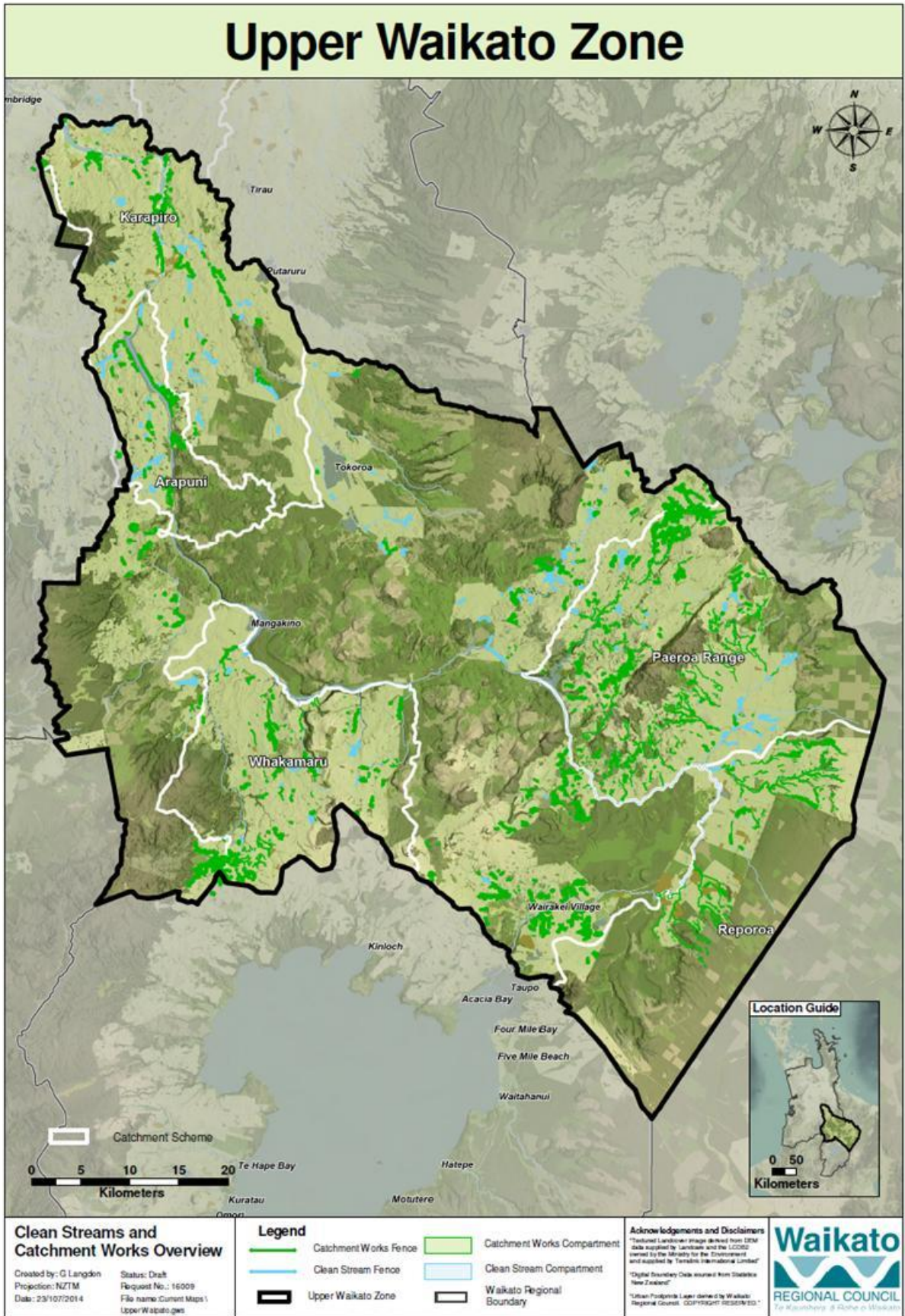


Figure 2 The upper Waikato zone

Economic drivers for the zone are forestry, agriculture, energy production (hydroelectricity and geothermal) and the visitor industry. Forestry and pastoral farming are the predominant land uses but in recent years there has been a marked increase in dairy conversions and intensification. The zone is developing as an outdoor adventure destination in its own right, with features such as Pureora Forest Park, Maungatautari Ecological Island and the Waikato River Trails.

The zone is within the rohe of Waikato-Tainui (Ngati Koroki-Kahukura), Raukawa, the Te Arawa River Iwi Affiliates¹, and Tūwharetoa. For these iwi, the restoration of the health and wellbeing of the Waikato River is paramount. The expectation is that work undertaken cannot be done in isolation and that a collaborative approach is essential if the goal of the *Vision and Strategy for the Waikato River* is to be achieved.

¹ Ngati Tahu-Ngai Whaoa, Ngati Kearoa-Ngati Tuara and Tuhourangi-Ngati Wahiao

2 Legislative and policy framework

This section briefly outlines the legislative and policy framework that informs the goals, strategies and actions for the upper Waikato zone.

2.1 Legislation and plans

This plan implements a number of Waikato Regional Council's non-regulatory responsibilities under the Resource Management Act 1991, Soil Conservation and River Controls Act 1941, Local Government Act 2002 and other Acts. In addition, the zone plan assists council in giving effect to the *Vision and Strategy for the Waikato River* (refer 2.2), and implementing provisions of the proposed RPS and WRP.

The proposed RPS has new objectives for managing fresh water (3.13), ecological integrity and indigenous biodiversity (3.18), natural hazards (3.23), and values of soils (3.24). It also has new policies regarding managing fresh water bodies (Chapter 8), indigenous biodiversity (Chapter 11), natural hazards (Chapter 13) and soils (Chapter 14). The provisions of the proposed RPS are under appeal to the Environment Court and are expected to be operative in early 2015.

As outlined in section 1.2, the council has launched Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai – a project to develop changes to the WRP. The plan change will help achieve a reduction in sediment, bacteria and nutrients (nitrogen and phosphorus) entering water bodies (including groundwater) in the Waikato River catchments. Any limits and rules in this plan change will take effect from the date it is publicly notified.² This zone plan will encourage and promote sustainable land uses and help landowners prepare for changes that may result from Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai.

A full review of the WRP is due to start in late 2015. This will provide an opportunity to address any shortcomings in its policies and rules that may be identified during the implementation of this plan.

2.2 The vision for the Waikato River

The primary direction-setting document for the protection of the Waikato River and its catchments is *Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River)*.

Developed by the Guardian Establishment Committee (predecessor to the Waikato River Authority) in consultation with the Waikato community, as part of the wider Waikato River treaty settlement co-management negotiations, the *Vision and Strategy for the Waikato River* is administered by the Waikato River Authority. It was initially given statutory recognition via the Waikato River Acts in 2010 and 2012.³

The *Vision and Strategy for the Waikato River* is deemed in its entirety into the proposed RPS, and regional and district plans must give effect to it. Essentially it is now the community's vision for the Waikato River. If there are any inconsistencies between the *Vision and Strategy* and any Resource Management Act planning document, including any national policy statement, the Vision and Strategy prevails.

² Refer to Resource Management Act section 86B(3)

³ Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010; Ngāti Tūwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act 2010 and Ngā Wai o Maniapoto (Waipa River) Act 2012

Vision for the Waikato River

*Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri
“The river of life, each curve more beautiful than the last”*

Our vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come.

Fundamental to the vision are the following key principles.⁴

- Commitment to the restoration and protection of the river in its widest sense (including iwi and community relationships).
- Adoption of a precautionary approach.
- Increased recognition given to cumulative effects.
- Application of a holistic, integrated approach to the management of resources.
- Recognition and application of two worlds of knowledge – Mātauranga Māori and western science.

2.3 Waikato Regional Council’s strategic direction

In February 2014, Waikato Regional Council adopted its strategic direction to guide work over the current council’s term. The new direction took into account the recent Local Government Act amendments and other factors that will drive change into the future.

The strategic direction⁵ sets priorities for the council’s work up to 2016. It also reflects community desires and needs, and identifies key factors that will determine whether the council is successful in achieving its strategic direction.

Ahead of the *2015-2025 Long Term Plan*, council set eight interim outcomes, stating what it aims to achieve in the long term. The ones that are relevant to this plan are set out below.

- Manage the region’s water resource to meet the communities’ needs for today and the future.
- Protect and improve the quality of Waikato’s natural environment.
- Encourage our communities to appreciate and take pride in the region’s heritage, landforms, freshwater and marine environment.
- Protect our people, property and economy from hazards and pests.
- Encourage community partnerships for greater participation and investment in the region.
- Collaborate with others to achieve integrated land use and infrastructure planning.

All of the interim outcomes, which are detailed in the strategic direction, will be further reviewed and refined during the long term plan process.

⁴ Refer Appendix 1 for objectives and strategies for the Waikato River as identified in Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River)

⁵ Docs #2988118 or download at www.waikatoregion.govt.nz/strategy

2.4 Mana whakahaere

Like Waikato Regional Council, each of the river iwi has a framework that informs and directs their approach to co-management of the Waikato River. Elements of these frameworks include:

- objectives for the river based on tribal visions and values
- accords with Crown Ministers
- joint management agreements with councils
- environmental plans
- other planning documents.

Collectively this framework provides the mandate for the direction, and recognition of the rights and responsibilities (mana whakahaere), of respective iwi in matters relating to the river. Waikato Regional Council needs to have regard to the mana whakahaere of the different river iwi when carrying out its work in the upper Waikato.

3 Key matters for the zone

The key matters the zone plan needs to consider are:

- declining water quality
- erosion and changes in land use
- loss of indigenous biodiversity
- co-management
- scheme management.

Each of these is described in more detail below.

3.1 Declining water quality

Declining water quality is a gradual change that is not obvious from year to year. Its effects include loss of recreational enjoyment, erosion of cultural values and increased costs for downstream users of the river.

The *Waikato River Independent Scoping Study* found that water quality was declining in the upper Waikato, although it is still generally good in the main stem of the river compared to the lower reaches. It identified an ongoing trend of deterioration that is confirmed by monitoring by Waikato Regional Council (see table 1).

As with Taupō, there is an opportunity in the upper Waikato to stem the tide in terms of declining water quality before emerging issues become more difficult to deal with.

Table 1 Water quality trends in the Waikato River between 1994 and 2013 (based on methods from Waikato Regional Council's Technical Report 2013/20.)

	Taupo	Ohaaki	Ohakuri	Whakamaru	Waipapa
Temperature			—	—	—
Dissolved oxygen	—	—	—	—	
Biochemical oxygen demand				ND	—
Turbidity					
Arsenic			—		—
Ammonia				—	—
Total nitrogen	—				
Total phosphorus			—	—	—
Chlorophyll <i>a</i>	—	—	—	ND	—
<i>E. coli</i>	—	—	—		—

Turbidity is for the period from 1995. E.coli is for the period since 1998.

Diffuse sources now comprise the majority of nutrient and sediment inputs into the river. Council data identifies an important deterioration in turbidity which is indicative of higher levels of sedimentation. The continuing increase in nitrogen also contributes to turbidity by promoting the growth of algae. Some sites along the river are also showing deterioration in biological oxygen demand.

Changes in land use in the upper Waikato have contributed to the downward trend in water quality indicators for this area. The geothermal nature of this zone (for example Waiotapu Stream) is also a natural contributor to the reduction in quality as the river travels from its relatively pristine upper reaches to the lower receiving waters.

Achieving *National Policy Statement Freshwater Management* and Waikato River Authority outcomes are a high priority and require significant investment and land management changes in the zone.

Key matters for the zone relating to water quality are:

- loss of sensitive and rare fish species which live in cool, forested, headwater habitats
- proliferation of stream plants and algae in open, low-gradient channels
- loss of condition of ecologically significant springs and seepages
- loss of submerged plant communities which help maintain a clear-water state in lakes

- increased prevalence of algal blooms in lakes (this can happen very rapidly and is difficult to reverse)
- reduced recreational enjoyment and eco-tourism opportunities
- reduced opportunities for river iwi to enjoy customary and traditional relationships with the waters of the catchment.

3.2 Erosion and changes in land use

The zone contains many short steep catchments which are prone to heavy rainfall events. Coupled with its young volcanic geology it is particularly vulnerable to erosion and soil loss. As a result, widespread sedimentation is occurring in waterways and aggradation occurs in the upper reaches of the hydro lakes. Climate change is expected to result in more frequent extreme rainfall events, further exacerbating this problem.

Use of the land is a major contributor to catchment health and needs to take into account the zone's unique geology and climate. It must also be adapted for future conditions.

Currently there are about 700 dairy farms and 350 drystock farms in the zone, and while 41 per cent of the land is in pine a third is expected to be converted to pasture pending the future of the emissions trading scheme. The economics of dairying are expected to drive further intensification on existing pastoral land.

Changes from a forest to pasture land cover have significant impacts on hydrology by reducing evaporative loss from vegetation, soil infiltration rates, and uptake of water from the soil. These effects are significant within small catchments (10 to 100km²) that are converted to pasture. Small to medium rainfall events (5 to 20 year return period) cause 5 to 50 per cent more flooding, depending on the extent of conversion. The impact is greater under larger events with 100 year events producing over 50 per cent more flooding and 500 year events producing more than double the amount of flooding.⁶

This is compounded by the re-contouring of the land that can occur during conversion. Smoothing the contour of the surface increases the rate at which surface runoff reaches ponding areas and channels, resulting in more localised flooding and higher peak flows.

Key matters for the zone with respect to sustainable land management practices are:

- stock access to waterways
- steep land management
- nutrient management
- cropping practices and specifically practices relating to stock fodder
- soil compaction
- conversion of pine to pasture, particularly on Land Use Capability 6-8 soils
- increased stocking densities versus the ability of soil to filter excess nutrients
- the loss of small scale seeps and wet areas adjacent to streams
- riparian management
- accumulation of cadmium and fluoride in soils from current fertilisers
- encroachment of lifestyle residential development into high-class pastoral land
- declining effectiveness of subsidised soil conservation works on private land.

In response to the current land use changes there are a number of projects underway in the upper Waikato aimed at assisting farmers and others to maintain and improve

⁶ Environment Waikato Technical Report 2009/21, "Summary of the effects of land use change between Taupo and Karapiro on the flood hydrology of the Waikato River Catchment", and Sinclair Knight Merz (2009), "Impact of Land Use Change on Floods in the Upper Waikato: Phase 2: Model Calibration and Flood Hydrograph Generation"

profitability while reducing the environmental footprint of doing business. Common themes are emerging from the work being undertaken in the zone, and there are opportunities to ensure individual efforts are coordinated for greater effect.

3.3 Loss of indigenous biodiversity

The upper Waikato zone is a highly modified productive environment. Large remnants of natural vegetation only exist on the edges of the zone: the Pureora Forest Park and Maungatautari Ecological Island.

Some of the issues associated with the modifications to the environment include:

- reduction, fragmentation and isolation of indigenous ecosystems and habitats
- loss of corridors or connections linking indigenous ecosystems and habitats
- loss or disruption to migratory pathways in water, land or air
- effects of changes to water flows, levels and quality on ecosystems
- an increased threat from animal and plant pests.

Areas of wetland have historically been undervalued. Their vital role in naturally controlling flood flows and sedimentation is now apparent, as are their high biodiversity and ecological values.

The conversions from forestry to pasture have increased the pressure on indigenous fauna. Many tributary streams have been converted from shaded channels receiving inputs of wood and leaves important for invertebrate life to open channels exposed to higher light levels, resulting in warmer water and increased growth in aquatic plants. Channel banks, often consisting of unconsolidated pumice, are easily eroded once the roots of riparian trees have decomposed.

Most of New Zealand's geothermal systems are located within the Taupō and upper Waikato zones, and have created unique ecological features. Many of these surface features of geothermal systems have been lost to track building, stock damage, draining of geothermal springs, wetlands and seeps, plantation forestry operations, and extraction of geothermal fluids. A number of the remaining features are still under threat.

3.4 Co-management

As set out in the co-management deeds, the agreements between the Crown and the river iwi reflect a commitment by the parties to enter “a new era of co-management over the Waikato River”. The overarching purpose is to restore and protect the river's health and wellbeing for future generations, which aligns with Waikato Regional Council's responsibilities to protect and sustainably manage the region's natural resources.

The agreements recognise that for Māori, the river has its own life force, spiritual authority, protective power and prestige. Raukawa, the Te Arawa River Iwi Affiliates, Tūwharetoa and Waikato-Tainui (Ngati Koroki-Kahukura) have the authority within their rohe to exercise control and management of the river in accordance with their values, ethics and norms (tikanga and kawa).

Co-management requires more than just consultation, and the co-management deeds signal a new approach. This includes:

- the highest level of good faith engagement
- consensus decision making as a general rule
- a range of management agencies, bodies and authorities working at a number of different levels

- processes for granting, transferring, varying and renewing consents, licences, permits and other authorisations for all activities that may impact on the health and wellbeing of the river
- development, amendment and implementation of strategies, policy, legislation and regulations that may impact on the health and wellbeing of the river.

The co-management arrangements set out in the deeds provide a foundation for relationships between the river iwi, Crown, local authorities and other agencies but do not prevent the parties from entering into agreements beyond this scope.

Waikato Regional Council is in a transitional phase to a new collaborative approach to working on the ground with its iwi partners. This has been recognised in the council's strategic direction and the goals of this plan.

3.5 Scheme management

Within the upper Waikato zone, Land Improvement Agreements (LIAs) or Memorandum of Encumbrance (MoE) with landowners are grouped into five schemes: Karapiro, Arapuni, Paeroa Range, Reporoa and Whakamaru (see figure 2). Table 2 provides an overview of total current investment in works across all five schemes.

Table 2 Upper Waikato scheme works

Works	
Soil conservation fencing	1562 kilometres
Conservation planting	59,713 plants over 3354 hectares
Retired land	6103 hectares
Structures	71
Water supply systems	16

The historic soil conservation scheme works have provided considerable benefits in terms of land and water protection, biodiversity protection and general environmental enhancement. There is demand for new works to capitalise on these and provide additional benefits.

The LIAs and MoEs are a contract between the landowner and council, typically for 99 years although it does vary. Generally it is expected that the existing scheme works will be owned, maintained and replaced by the landowner in accordance with the agreement. Some funding assistance will be provided for maintenance if it meets the funding criteria and the current purpose of the works. Council's role mainly involves providing advice and specifying management practices. Staff monitor compliance with the conditions set out in these agreements.

Protecting the integrity of the existing schemes is an important component of the overall catchment health and this is recognised in the council's long term plans. Strategies for the maintenance of these schemes and prioritisation of new works are included in this plan.

4 Implementation

4.1 Zone goals

Goal 1: Work with iwi co-management partners to give effect to the Waikato River co-management legislation, including *Vision and Strategy for the Waikato River*

Explanation: In time, working with iwi co-management partners will become normal practice for Waikato Regional Council, but during this transitional phase this is included as a goal for the plan.

Each of the river iwi has framework that informs and directs their approach to co-management to the Waikato River (refer 2.3). Waikato Regional Council needs have an understanding of this framework including the mana whakahaere (rights and responsibilities) of the different river iwi when carrying out its work in the upper Waikato if it is to effectively work with its iwi co-management partners and to give effect to the *Vision and Strategy for the Waikato River*.

Goal 2: Contribute to maintaining and improving the water quality of the upper Waikato zone

Explanation: Water quality in the upper Waikato is declining and there is an opportunity to help lessen this before emerging issues become more difficult to deal with.

Goal 3: Stability and long term productive capacity of the zone's soils is protected

Explanation: Land clearance and development has resulted in significant changes in runoff patterns and major soil erosion problems are beginning to re-emerge. These erosion problems threaten the long term productive capacity of the soil. Management of land within the catchment needs to match its use to its Land Use Capability (recorded in the Land Resource Inventory). The current condition of soil conservation schemes is generally satisfactory. Protecting the integrity of the existing schemes is an important component of the overall catchment health.

Goal 4: Wetlands and geothermal biodiversity protected

Explanation: There are a reducing number of wetlands and seeps in the sub-catchments of the zone, including hill country wetlands that are unique in the region. Wetlands make an important contribution to maintaining water quality, regulating flows and preventing stream bank erosion. They also provide for biodiversity. In addition to protection, opportunities for wetland enhancement, restoration and reinstatement are also important for this zone.

Many geothermal features such as geysers, hot springs and associated ecosystems have been lost and those remaining are under threat. Contributors to this include extraction of geothermal water, building tracks over geothermal features, allowing stock access, planting and harvesting plantation forests, pesticide spraying and draining hot springs and the surrounding land.

Goal 5: Comprehensive ecological networks allow indigenous biodiversity to thrive and improve ecological health

Explanation: While the landscape is highly modified and changing, there are opportunities to retain or reinstate areas that make a difference to ecological health. Controlling plant and animal pests and improving habitat connectivity will enhance the surviving areas of significant indigenous vegetation and habitat.

Goal 6: Riparian margins protected to promote stream stability, and improve habitats and water quality

Explanation: Conversion from forestry to pasture places additional pressure on the stability of stream channels. Within this zone stream banks are often unconsolidated pumice and easily eroded. Many tributary streams are spring-fed, resulting in stable flows that are unable to flush sediment deposited on the streambed from land conversion practices or subsequent stock damage. Riparian planting will restore shade to the streams and control weed infestations with consequential biodiversity benefits.

4.2 Strategies and actions

This section describes how Waikato Regional Council intends to achieve its goals for the zone at an operational level.

The seven strategies listed in this section are broad tools to be applied in the upper Waikato. The accompanying actions are general and directional but provide a better level of detail for the implementation of the strategy. The strategies and actions are designed to work together to achieve multiple goals. For example, strategies designed to address erosion will also assist the council in achieving the objectives of maintaining and improving water quality and protecting biodiversity.

Strategy 1: Prioritise areas for action

Prioritise specific areas for focused attention based on the potential benefits for environmental health, the gains in building social capital and alignment with zone and organisational goals.

This strategy will underpin other strategies and actions by targeting limited resources on areas under the greatest pressure and where the greatest benefits can be achieved. The priorities will provide a basis for guiding discussions with key stakeholders on opportunities for working together in specific sub-catchments⁷ (see strategies 2, 4 and 7).

At the time of writing this plan work was underway in the Waipa catchment to develop a methodology for identifying priority catchments. That methodology will be applied to the upper Waikato in 2016. In the interim, based on council’s previous work and staff experience, four catchments have been selected for further investigation. These will be prioritised and used to assist staff in determining where to focus attention until the longer term prioritisation exercise can be undertaken

Actions	Who	When
<p>Interim prioritisation</p> <ul style="list-style-type: none"> • Complete an initial prioritisation by undertaking a desktop analysis of the following four catchments to identify opportunities and potential benefits of undertaking more intensive work in the area.ⁱ <ul style="list-style-type: none"> ○ Tahunaatara 	WRC	Completed by March 2015

⁷ See Appendix 2 for a map of the zone showing the sub-catchments

<ul style="list-style-type: none"> ○ Pokaiwhenua ○ Little Waipa ○ Whirinaki Arm 		
<p>Detailed prioritisation</p> <ul style="list-style-type: none"> ● Apply the methodology developed for the Waipa Catchment Plan and prioritise sub-catchments in the upper Waikato to determine where the greatest gains can be made to improve ecological health and achieve the zone goals.ⁱⁱ 	WRC, external funder	Completed by March 2016
<p>Ground truthing of priorities</p> <ul style="list-style-type: none"> ● Contact landowners in identified priority areas to verify the findings of the prioritisation exercise and encourage and support the collective efforts of landowners to address issues (see also strategies 2, 4 and 7). 	WRC	Ongoing

ⁱ See Appendix 3 for a map showing the four interim priority sub-catchments.

ⁱⁱ The detailed prioritisation is dependent on funding from the zone and internal and external sources.

Strategy 2: Collaborate with other stakeholders to achieve the greatest value

Liase with agencies, iwi, industry bodies and landowners to coordinate work programmes to ensure comprehensive coverage, avoid duplication and add value to their work where there is alignment with the goals of this zone plan.

Waikato Regional Council will develop and implement projects in partnership with other stakeholders that focus on specific locations or issues (see also strategy 7).

Actions	Who	When
<p>Forward planning</p> <ul style="list-style-type: none"> ● Co-host with Waikato Regional Council's river iwi partners (pending agreement) an annual meeting of zone stakeholders to consider priorities, identify common areas of interest and potential collaboration opportunities.ⁱ ● Where common interestsⁱⁱ are identified, seek to: <ul style="list-style-type: none"> ○ formally partner with other stakeholders to develop proposals and undertake joint projects; or ○ support applicationsⁱⁱⁱ for external funding by, for example, endorsing applications, providing part funding or in kind contributions, and providing advice on the preparation of applications. 	<p>WRC, UWLS river iwi, stakeholders</p> <p>WRC, river iwi, stakeholders</p>	<p>Annually</p> <p>Ongoing</p>
<p>Share information, knowledge and skills</p> <ul style="list-style-type: none"> ● Actively facilitate or participate in workshops, forums and other networking opportunities that: <ul style="list-style-type: none"> ○ share information, knowledge and skills to address common interests^{iv} ○ create opportunities to build capability and capacity. 	WRC, stakeholders	Ongoing

ⁱ The annual meeting should be held in March each year.

ⁱⁱ Common interests could be related to preparing for change (strategy 6), addressing issues relating to ecological health, enhancing biodiversity or managing animal and plant pest issues.

iii Due to the requirements of external funding sources, projects should be planned at least two years in advance (refer to Doc #2839093 for closing dates for some funds).

iv Examples of existing opportunities for sharing information, knowledge and skills within the zone include:

- A Waikato Regional Council facilitated forum of agencies involved in issues relating to geothermal biodiversity.
- A Waikato Regional Council facilitated primary sector partnership bringing together businesses and agencies involved in primary production across the wider Waikato/Waipā catchment.
- Providing advice and assistance with distributing funding from the South Waikato Environmental Initiatives Trust administered by South Waikato District Council.
- Participating in the steering group for Dairy New Zealand's Sustainable Milk Project.
- Supporting the activities of the Waikato Biodiversity Forum.

Strategy 3: Provide an information and facilitation service for landowners

Link landowners to the full range of services provided by Waikato Regional Council, and with other organisations providing assistance.

Actions	Who	When
<p>Landowners and land managers</p> <ul style="list-style-type: none"> • Provide one on one advice and information in priority areas on sustainable land management practices/biodiversity protection etc, including: <ul style="list-style-type: none"> ○ the development of land use plans (in priority areas) ○ appropriate land use that does not exceed the property's Land Use Capability ○ setback distances between land use activities (agriculture and forestry) and waterways ○ stock exclusion from all water bodies ○ the management of plant and animal pests. 	WRC	Ongoing
<p>Industry</p> <ul style="list-style-type: none"> • Extend Waikato Regional Council's ability to support landowners and facilitate change to meet RPS objectives by building capability within industries servicing the rural sector¹ in the upper Waikato. This will be done by: <ul style="list-style-type: none"> ○ facilitating the delivery of appropriate training programmes for rural professionals ○ developing extension programmes in collaboration with stakeholder organisations ○ undertaking joint research and extension projects where appropriate ○ developing and maintaining open, constructive relationships with staff working for key rural sector organisations. 	WRC, industry stakeholders	Ongoing
<p>Information gaps</p> <ul style="list-style-type: none"> • Identify any gaps in current knowledge and advise appropriate providers (internally and externally). 	WRC	Ongoing
<p>Communication and education</p> <ul style="list-style-type: none"> • Develop and implement strategies to inform and educate landowners and relevant industries about the characteristics of the zone and associated risks. In particular, there should be a focus on: <ul style="list-style-type: none"> ○ communicating the risks associated with the disturbance of soil and the intensity of localised weather events ○ making practical, targeted information easily accessible (for example, the <i>Menus of practices to improve water quality</i> and 	WRC	Ongoing

advice on the control of plant and animal pests relevant to the zone) <ul style="list-style-type: none"> ○ preparing for changes in regulations. 		
<ul style="list-style-type: none"> • Attend local events and other forums and utilise these opportunities to network with landowners, land managers and industry representatives. 	WRC	Ongoing
<ul style="list-style-type: none"> • Prepare case studies that illustrate the types of issues experienced in the zone to document and provide reference material for education purposes and future policy development – both district and regional. 	WRC	Ongoing
<ul style="list-style-type: none"> • Create opportunities for landowners to become educators, learning from each other's experiences – good and bad. 	WRC	Ongoing
<ul style="list-style-type: none"> • Identify champion farmers (modelling best practice) and facilitate mentoring. 	WRC	Ongoing

ⁱ Council is likely to be more effective in providing information if it uses the channels that landowners and land managers use for advice and support. This means that Waikato Regional Council needs to focus on building the capability of consultants and contractors to be able to provide robust advice.

Strategy 4: Fund new works with a focus on priority areas

Continue to fund new works (at current levels) that incentivise landowners to invest in soil conservation activities that provide protection beyond statutory or minimum requirements, and enhance the special values that characterise the upper Waikato such as wetlands, seeps and geothermal surface features. Over time the funding of new works will be focused on the priority areas identified under strategy 1.

Actions	Who	When
Funding criteria <ul style="list-style-type: none"> • Develop criteriaⁱ to guide decision making for new works funding, making specific provision for matters identified in the RPS (for example, geothermal surface features). • Review the criteria to reflect specific catchment needs arising from the long term prioritisation exercise (see strategy 1) and notification of the plan change being developed through the Healthy Rivers: Plan Change/Wai Ora: He Rautaki Whakapaipai process. • Undertake regular reviews of the criteria and change as required to reflect new or emerging priorities. 	WRC UWLS WRC UWLS WRC UWLS	Feb 2015 Feb 2016 3 yearly intervals from Feb 2019
Encourage uptake of new works <ol style="list-style-type: none"> 1. As part of a specific project focusing on priority areas: <ul style="list-style-type: none"> • engage and inform landowners of the assistance available for new worksⁱⁱ • advise on the funding process and ongoing landowner responsibilities • provide advice and assist with preparing applications for funding from other sources to complement new works projects. 	WRC	Ongoing

<p>2. Outside of priority areas respond to landowner requests for:</p> <ul style="list-style-type: none"> • information and, if appropriate, funding for new works • assist with preparing applications for funding to complement new works projects. 	WRC	Ongoing
<p>3. Where landowners are willing, facilitate opportunities to bring people together to:</p> <ul style="list-style-type: none"> • build knowledge and capability • encourage neighbourliness and thinking beyond property boundaries. 	WRC, stakeholders	Programmes in 5 priority catchments by 2024
<p>4. Target funding of new works into priority areas identified under strategy 1 so that:</p> <ul style="list-style-type: none"> • by 2018 60 per cent of funding is spent in priority areas; and • by 2020 80 per cent of funding is spent in priority areas. 	WRC UWLC	Ongoing
<p>Interagency coordination</p> <ul style="list-style-type: none"> • Regularly liaise with agencies that fund activities that complement Waikato Regional Council's new works funding to: <ul style="list-style-type: none"> • share information and alert one another to changes in funding priorities, criteria or process • encourage strategic funding of projects to make the best use of limited resources. 	WRC	Ongoing

ⁱ The criteria used for the upper Waikato zone will be adapted from those currently being developed from the Waipa catchment

ⁱⁱ Funding for new works relates to works undertaken on private land. For joint projects relating to public land refer to strategies 2 and 7.

Strategy 5: Maintain the integrity of existing soil conservation schemes

Historically, soil conservation scheme works have provided considerable benefits in terms of land and water protection, biodiversity and general environmental enhancement. Existing schemes have made a significant difference to erosion, subsequent downstream sedimentation and protection of productive land. For this reason it is important that the existing works are retained in good working order and that they are regularly assessed to determine whether the intended benefits are being achieved.

Changes in land use and policy direction may mean that some existing works no longer achieve the current goals. Where circumstances have changed, council needs to assess whether their integrity has been affected. At renewal, works should be assessed to determine whether the agreements of the works themselves need to be altered.

Actions	Who	When
<p>Property information</p> <ul style="list-style-type: none"> • Maintain accurate, up to date property files.ⁱ • Liaise with new property owners to ensure they are aware of and meet their responsibilities under LIAs or MOEs. 	WRC	Ongoing
<p>Inspections and maintenance</p>	WRC	Three

<ul style="list-style-type: none"> • Regularly inspect scheme assets and: <ul style="list-style-type: none"> ○ follow-up any maintenance landowners are required to carry out ○ ensure landowners are aware of and meet their responsibilities under existing agreements ○ make landowners aware that Waikato Regional Council will take action if the obligations in agreements are not being met. 		yearly
<p>Renewals</p> <ul style="list-style-type: none"> • At renewal: <ul style="list-style-type: none"> ○ review agreements with landowners to ensure the assets are contributing to achieving the current purpose of the scheme ○ negotiate variations to agreements where required. 	WRC	Ongoing
<p>Policy</p> <ul style="list-style-type: none"> • Once the plan change being developed through the Healthy Rivers: Plan Change/Wai Ora: He Rautaki Whakapaipai process has been proposed, recommend a review of current council policy with respect to scheme maintenance in response to changes in land use and the minimum standards applied to specific land uses. 	WRC, UWLS	Feb 2016

ⁱ At the time of preparing this plan, all property files were being reviewed and updated. Maintenance programmes were also being reviewed to ensure that inspections and maintenance were placed on a three yearly cycle. It is expected that all properties will be on a regular cycle by June 2017.

Strategy 6: Preparing for change

Land management will be affected by a number of changes to the regulatory framework in the near future. For example, the *National Policy Statement for Freshwater Management* is being amended and the new RPS is expected to become operative in 2014-15. In addition, Waikato Regional Council is in the process of developing policies and rules to improve the health of the Waikato River. The Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai project will produce Plan Change 1 for the Waikato and Waipa rivers. The plan change is expected to be notified for submissions in 2015. While the outcomes of these processes are not yet known, provision needs to be made to address the challenge of change by providing agencies, stakeholders and landowners with the information they need to proactively implement the new policies.

It is anticipated that successful implementation of the on-farm solutions the policies will seek is likely to involve detailed farm system analysis and scenario testing at a property scale. This strategy aims to ensure that there is enough capacity available with the right skills when the change becomes operative. This will link closely with strategies 2 and 3 but is focused particularly on the challenges for farmers anticipated when Plan Change 1 is implemented.

Actions	Who	When
<ul style="list-style-type: none"> • Work with agriculture industry stakeholders to develop and implement support systems for farmers to ensure they are able to operate successfully once limits are in place (see also strategies 2 and 3). 	WRC, industry stakeholders	Ongoing
<ul style="list-style-type: none"> • Organise, facilitate and/or run training programmes for rural professionals as appropriate. 	WRC, industry	Ongoing

	stakeholders	
<ul style="list-style-type: none"> Prepare and release consistent information on the Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai process and any plan change(s) resulting from it. 	WRC	Ongoing
<ul style="list-style-type: none"> Prepare and distribute user guides to any modified policies and rules. 	WRC	
<ul style="list-style-type: none"> Work with agriculture industry stakeholder organisations to identify practical on-farm solutions to address non-point source contaminant discharges. 	WRC, industry stakeholders	Ongoing
<ul style="list-style-type: none"> Provide extension programmes in collaboration with stakeholder organisationsⁱ as appropriate to ensure farmers and rural professionals have good information available on effective, practical, on-farm solutions. 	WRC, industry stakeholders	Ongoing

ⁱ This action will focus on organisations that work with farmers such as industry bodies, farm consultants, vets, rural bankers, farm accountants, Crown research institutes, industry training organisations and universities.

Strategy 7: Focus on special places and projects

Partner with other stakeholder agencies to undertake projects where there are multiple stakeholders and public good opportunities aligned with zone and organisational goals.

Actions	Who	When
<p>Support public agencies</p> <ul style="list-style-type: none"> Actively support organisations responsible for the management of public land and facilities to undertake projects and programmes that align with the goals identified in this plan. Support could include: <ul style="list-style-type: none"> o fundingⁱ o advice and information o project coordination and facilitation. <p>Preference will be given to projects and programmesⁱⁱ where there are clear public benefits and that: <ul style="list-style-type: none"> o coincide with the priorities identified for the zone o demonstrate active collaboration. </p>	WRC	Ongoing
<p>Protection of geothermal features</p> <ul style="list-style-type: none"> Allocate up to \$20,000 per annum (total regional funding available) to incentivise the protection of significant geothermal features to: <ul style="list-style-type: none"> o supplement the cost of work undertaken by owners of private land o complement the work of organisations responsible for public land. 	WRC	Ongoing
<p>Animal and plant pest control</p> <ul style="list-style-type: none"> Continue to manage possums in priority possum control areas (PPCAs)ⁱⁱⁱ where control is needed to: <ul style="list-style-type: none"> o protect and enhance biodiversity (including improving the 	WRC	Ongoing

<ul style="list-style-type: none"> ○ stability of catchments) <ul style="list-style-type: none"> ○ enhance farm production ○ maintain the gains of previous or existing possum control. ● Undertake direct control projects for high threat plant pest species (for example yellow flag iris). 	WRC	Ongoing
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ⁱ Waikato Regional Council has some funding available through regional wide programmes such as its Environmental Initiatives Fund (EIF). The EIF provides one-off grants to projects, which directly enhance and/or benefit the environment or provide environmental education.

ⁱⁱ An example of the work that would be supported under this strategy is the development of a weed management plan for Lake Karapiro.

ⁱⁱⁱ In 2014 PPCAs in the upper Waikato zone included Waikite Valley/Te Kopia in the east of the zone and Arohena/Waotu in the west.

4.3 Funding

Waikato Regional Council collects rates (general and targeted) for river management and improvement, soil conservation works and catchment oversight, based on areas of benefit and activities that contribute to the matters being managed.⁸

The strategies and actions identified in this plan and funded by Waikato Regional Council will be implemented under the current levels of funding allocated to the upper Waikato zone. No additional funding has been sought from general or targeted rates in the *2014-15 Annual Plan* or the draft *2015-2025 Long Term Plan*.

Over a number of years a funding reserve has accumulated. In the short term this reserve will be used to provide additional new works.

Waikato Regional Council will also explore opportunities for co-funding of projects with partner agencies.

Environmental Initiatives Fund

Waikato Regional Council operates a fund that provides one-off grants of up to \$40,000 for projects that directly enhance and/or benefit the environment or provide environmental education.

Pest management funding

The zone includes two PPCAs (Waikite Valley/Te Kopia in the east of the zone and Arohena/Waotu in the west).

Other regional funding

Waikato Regional Council has allocated up to \$20,000 per year for work that protects or enhances geothermal features that are significant natural areas. As many of these features are within the upper Waikato zone it is expected that a significant proportion of this funding will be spent here.

Paeroa Range Catchment Control Scheme

For the Paeroa Range Catchment Control Scheme, a Deed of Agreement is in place between Waikato Regional Council and Rotorua District Council (RDC) for a term of 35

⁸ Refer to the Project Watershed Level of Service and Funding Policy, Docs #752002.

years from 1988.⁹ Under this agreement RDC will contribute one half of the landowner share for routine maintenance on earlier Paeroa Range Catchment Control Scheme works only, completed between 1986 and 1992. Therefore, the RDC and landowner share will each be 32.5 per cent of total costs (one half of 65 per cent each).

4.4 Monitoring and review

This plan will be subject to a full review every six years and a limited review three years after each full review.

Monitoring will be ongoing and address two aspects: environmental outcomes demonstrating the effectiveness or otherwise of this plan, and completion of actions to measure the degree of implementation of this plan. The information to be gathered is described in table 3.

The results of monitoring will be reported annually to the Upper Waikato Zone Subcommittee, the Integrated Catchment Management Committee and the annual meeting of zone stakeholders (see strategy 2). A three yearly summary report will be published prior to each review of the plan. The annual reports and three yearly summary will be used to inform the reviews of this plan.

Table 3 Monitoring

Goal/Strategy	Measure
Goal 1: Co-management	<ul style="list-style-type: none"> Number and type of co-management activities occurring during the last 12 months.
Goal 2: Water quality	<ul style="list-style-type: none"> Summary of data collected within the zone as part of Waikato Regional Council's regular monthly water quality monitoring.
Goal 3: Soil	<ul style="list-style-type: none"> Summary of suspended sediment data collected within the zone as part of Waikato Regional Council's regular monthly water quality monitoring. Results from the five yearly survey of soil stability.
Goal 4: Wetlands and geothermal features	<ul style="list-style-type: none"> Number of wetlands, seeps and geothermal features that have been actively protected.
Goal 5: Biodiversity	<ul style="list-style-type: none"> Report on the number and area of significant natural areas (SNAs) identified. Number of SNAs actively protected. Number and area of restoration projects initiated.
Goal 6: Riparian protection	<ul style="list-style-type: none"> Number and length of riparian margins actively protected.
Strategy 1: Prioritisation	<ul style="list-style-type: none"> Report on completion of interim prioritisation (by March 2015). Report on completion of detailed prioritisation (by March 2016). Number of properties in priority areas that have been ground truthed.
Strategy 2: Collaboration	<ul style="list-style-type: none"> Record (minutes) of the annual stakeholder meeting.

⁹ Refer to Deed of Agreement Docs # 724863.

	<ul style="list-style-type: none"> • Report on collaborative activities in the last 12 months. • Number of workshops, forums, events and other networking opportunities attended during the last 12 months (also applies to strategy 3).
Strategy 3: Information service	<ul style="list-style-type: none"> • Number of landowners advised. • Number of farm plans prepared. • Report on training provided to rural professionals. • Report on preparation of communication and/or education strategies. • Number of case studies prepared.
Strategy 4: – New works	<ul style="list-style-type: none"> • Report on completion of funding criteria (by Feb 2015). • Number of new works funded within and outside priority areas.
Strategy 5: Existing works	<ul style="list-style-type: none"> • Report on completion of property file update. • Report on progress towards a universal three year inspection and maintenance cycle. • Number of properties inspected. • Report on maintenance activities undertaken.
Strategy 6: Preparing for change	<ul style="list-style-type: none"> • Report on distribution of information on Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai.
Strategy 7: Special places	<ul style="list-style-type: none"> • Report on assistance provided to other organisations. • Number and extent of geothermal features actively protected. • Report on pest control operations in the zone.

5 References

Reports

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Internal papers

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Donald L, 2011. Upper Waikato Zone Management Overview. unpublished Waikato Regional Council report (EWdocs# 1717589).

Glossary of terms

LIA	Land Improvement Agreement
MoE	Memorandum of Encumbrance
PPCAs	Priority Possum Control Areas
RDC	Rotorua District Council
RPS	Regional Policy Statement
WRC	Waikato Regional Council
WRP	Waikato Regional Plan
UWLS	Upper Waikato Liaison Subcommittee

Appendices

Appendix 1 Extract from Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River)

Objectives for the Waikato River

In order to realise the Vision, the following Objectives will be pursued:

- A. The restoration and protection of the health and wellbeing of the Waikato River.
- B. The restoration and protection of the relationship of Waikato-Tainui with the Waikato River, including their economic, social, cultural, and spiritual relationships.
- C. The restoration and protection of the relationship of Waikato River Iwi according to their tikanga and kawa, with the Waikato River, including their economic, social, cultural and spiritual relationships.
- D. The restoration and protection of the relationship of the Waikato Region's communities with the Waikato River including their economic, social, cultural and spiritual relationships.
- E. The integrated, holistic and coordinated approach to management of the natural, physical, cultural and historic resources of the Waikato River.
- F. Adoption of a precautionary approach towards decisions that may result in significant adverse effects on the Waikato River, and in particular those effects that threaten serious or irreversible damage to the Waikato River.*
- G. Recognition and avoidance of adverse cumulative effects, and potential cumulative effects, of activities undertaken both on the Waikato River and within its catchments on the health and wellbeing of the Waikato River.
- H. The recognition that the Waikato River is degraded and should not be required to absorb further degradation as a result of human activities.
- I. The protection and enhancement of significant sites, fisheries, flora and fauna.
- J. The recognition that the strategic importance of the Waikato River to New Zealand's social, cultural, environmental and economic wellbeing is subject to the restoration and protection of the health and wellbeing of the Waikato River.
- K. The restoration of water quality within the Waikato River so that it is safe for people to swim in and take food from over its entire length.
- L. The promotion of improved access to the Waikato River to better enable sporting, recreational, and cultural opportunities.
- M. The application to the above of both maatauranga Maaori and latest available scientific methods.

Strategies for the Waikato River

To achieve the Objectives, the following Strategies will be implemented:

1. Ensure that the highest level of recognition is given to the restoration and protection of the Waikato River.
2. Establish what the current health status of the Waikato River is by utilising maatauranga Maaori and latest available scientific methods.
3. Develop targets for improving the health and wellbeing of the Waikato River by utilising maatauranga Maaori and latest available scientific methods.
4. Develop and implement a programme of action to achieve the targets for improving the health and wellbeing of the Waikato River.
5. Develop and share local, national and international expertise, including indigenous expertise, on rivers and activities within their catchments that may be applied to the restoration and protection of the health and wellbeing of the Waikato River.
6. Recognise and protect waahi tapu and sites of significance to Waikato-Tainui and other Waikato River Iwi (where they so decide) to promote their cultural, spiritual and historic relationship with the Waikato River.
7. Recognise and protect appropriate sites associated with the Waikato River that are of significance to the Waikato regional community.
8. Actively promote and foster public knowledge and understanding of the health and wellbeing of the Waikato River among all sectors of the Waikato regional community.
9. Encourage and foster a 'whole of river' approach to the restoration and protection of the Waikato River, including the development, recognition and promotion of best practice methods for restoring and protecting the health and wellbeing of the Waikato River.
10. Establish new, and enhance existing, relationships between Waikato-Tainui, other Waikato River Iwi (where they so decide), and stakeholders with an interest in advancing, restoring and protecting the health and wellbeing of the Waikato River.
11. Ensure that cumulative adverse effects on the Waikato River of activities are appropriately managed in statutory planning documents at the time of their review.
12. Ensure appropriate public access to the Waikato River while protecting and enhancing the health and wellbeing of the Waikato River.

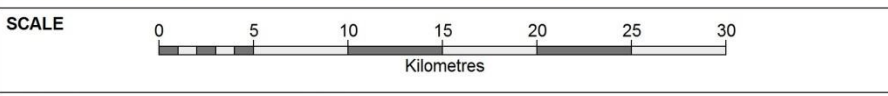
Appendix 2 Map of the upper Waikato zone showing the sub-catchments



Upper Waikato River Catchment and Sub-Catchments

Created by: A Jeffries
 Projection: NZTM
 Date: 28 Jul. 2014

Status: version 1
 Request No.: 28248
 File name: Upper_Waikato_Zone_Maps



ACKNOWLEDGEMENTS AND DISCLAIMERS

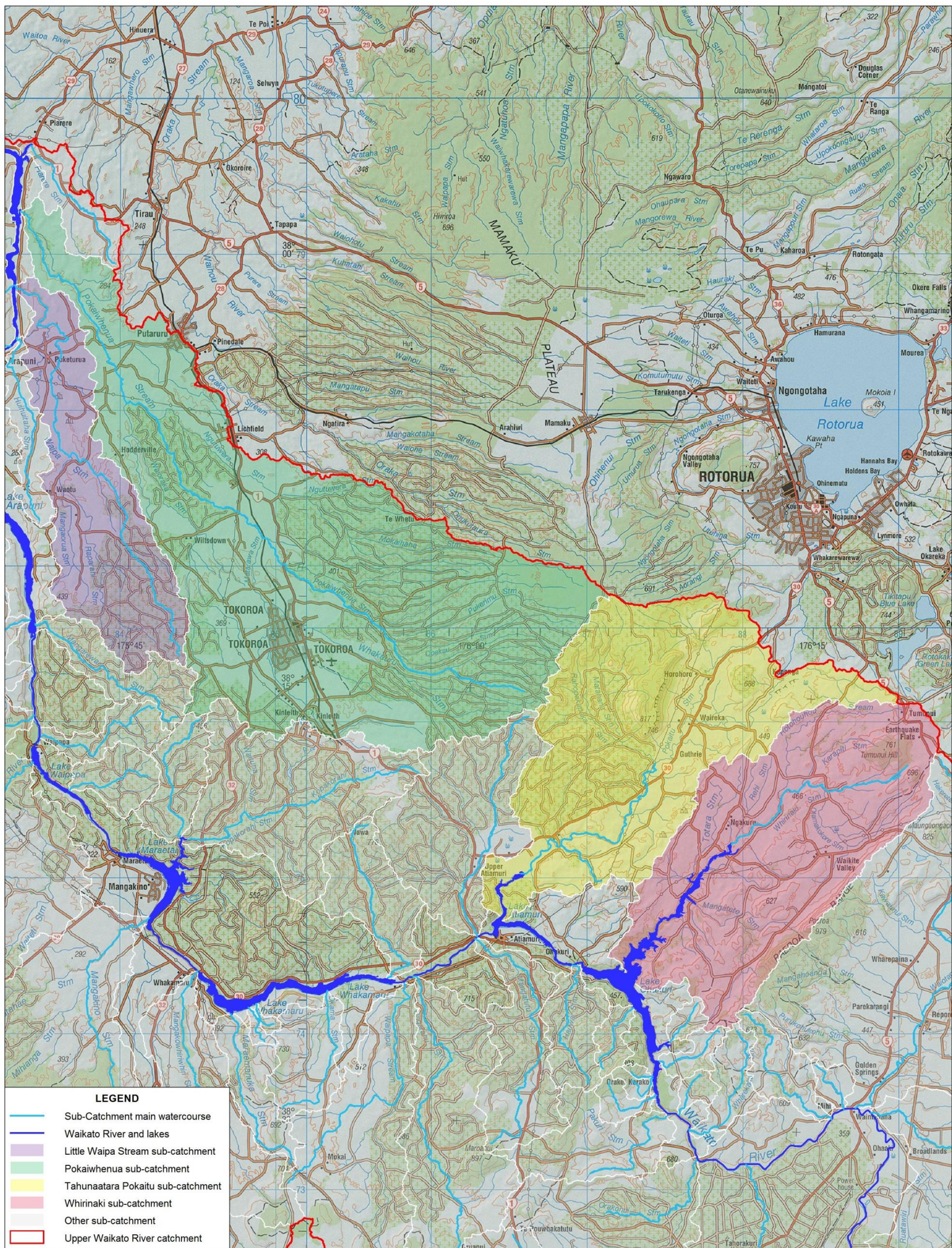
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Appendix 3 Map of the four interim priority sub-catchments



Selected Sub-Catchments of the Upper Waikato River Catchment

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