

Tukituki Land Care

Mangatarata

SUB-CATCHMENT PLAN: SUMMARY

DRAFT

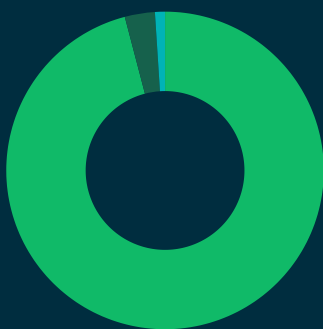
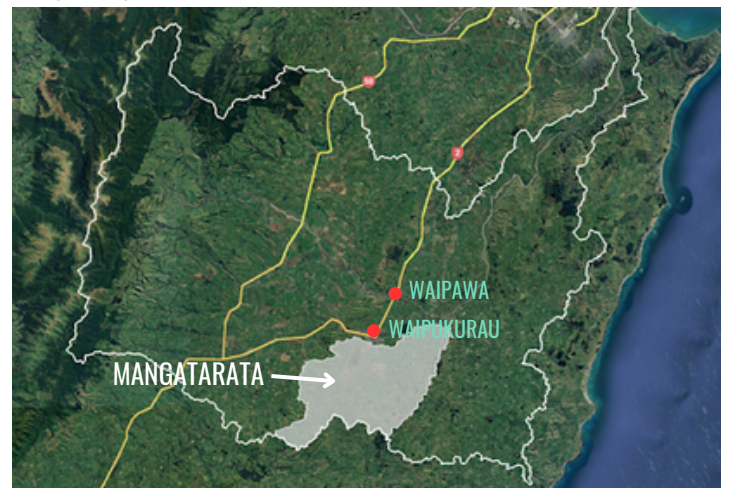
MANGATARATA AT A GLANCE

The Mangatarata catchment spans 19,112ha and has various land types and uses, including high-intensity farming on the flats, mudstone hill country prone to slips, and increasing lifestyle blocks. The catchment is characterised by fine soils that lose phosphorus.

Lake Whatumā, a focal point for biodiversity in the area, has the potential to become a significant hub for conservation efforts.

Existing challenges requiring ongoing attention include pest plants such as alligator weed, old man's beard, and convolvulus.

The recently established Mangatarata Catchment Group is eager to make progress. There is strong interest in improving biodiversity and water quality, controlling pest species, and incorporating historical knowledge into future land and water management efforts.



94 percent of the catchment in pasture, three percent in exotic forest and less than one percent in indigenous forest.

- Pasture
- Exotic Forest
- Indigenous Forest

"Tukituki Land Care (TLC) is tackling the big issues sub-catchment by sub-catchment, to piece together The Big Picture."

Richard Hilson

Chair, Tukituki Land Care



SCAN FOR FULL REPORT



MANGATARATA: CONTEXT AND

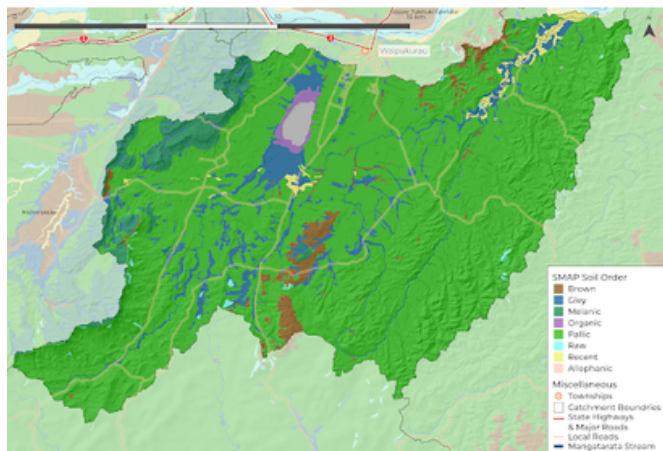
LANDSCAPE CONTEXT

The Mangatarata catchment features predominantly flat terrain in the central region, with rolling to steep country to the west and east. The central catchment was shaped by historical alluvial activity, where water movement deposited gravels and leveled the landscape. As a result, the soils here are largely pallic soils, formed through windblown erosion. Surrounding Lake Whatumā, historical wetlands have left behind fertile gley and organic soils.

These soils interact with nitrogen and phosphorus in distinct ways. The remnants of wetland soils typically have a low nitrogen loss profile and can denitrify nitrogen-rich water. However, they have limited ability to bind phosphorus, making it more prone to leaching when exposed to water. Pallic soils, on the other hand, are highly erosion-prone, with low phosphorus retention. Phosphorus is easily lost through surface runoff, and during droughts, soil cracking can lead to bypass flow, nutrient loss and erosion.

The northern and western parts of the catchment are categorised as hill country and are particularly susceptible to erosion. In these areas, much of the phosphorus loss occurs when soil is mobilised during rainfall events, contributing to catchment-wide nutrient movement.

SMAP SOIL ORDER - MANGATARATA



WATER QUALITY

Water quality is a particular concern for landowners in this catchment who are hoping to gain a better understanding of the health of the lake and surrounding waterways. There is interest in accessing and interpreting HBRC's water quality testing data, including what each parameter means and why it is measured. Currently, uncertainty around the ownership of the lake is preventing regional council investment, leaving the community with questions about long-term management and restoration efforts. The table below shows Mangatarata catchment water quality indicators over a five-year rolling average.

Water Quality Parameter	Mangatarata	Standard
Nitrogen (DIN)	0.219mg/ L	0.8
Phosphorus (DRP)	0.263 mg/ L	0.015
Bacteria (E.coli)	140 (count)	260
Freshwater invertebrates (MCI)	58.36 (index)	100
Sediment (Turbidity)	3.75 mg/ L	5.6 FNU (light)

CHALLENGES

PHOSPHORUS

Phosphorus is the primary water quality concern in this catchment, with its loss varying across the landscape depending on soil type and slope. When erosion occurs, phosphorus moves with the displaced soil, impacting waterways. Pallic soils in the area have a low capacity to retain phosphorus and are particularly prone to erosion, increasing the risk of phosphorus loss. Managing erosion and soil movement is key to protecting water quality.



INVASIVE WEEDS

Invasive weeds are becoming more prevalent, with alligator weed spreading in the lake and old man's beard and convolvulus taking hold on land. At the same time, large areas are being converted into pine plantations, raising concerns about how pest species like pigs and deer will be managed as the landscape evolves. Proactive control measures are essential to protect biodiversity and maintain a healthy environment.

LIFESTYLE PROPERTIES

The growing number of lifestyle properties in the catchment is making it harder to coordinate environmental projects. Limited engagement from some landowners poses challenges for collective action, affecting efforts to improve water quality and land management. Strengthening community involvement will be key to successful catchment initiatives.

READ THE FULL CATCHMENT REPORT

WWW.TUKITUKILANDCARE.ORG/MANGATARATA



MANGATARATA CATCHMENT: SUMMARY AND ACTIONS

Tukituki Land Care



Objective area	Improve Water Quality	Enhance biodiversity and ensure appropriate planting	Increase community resilience
Challenge	High DRP levels, but little information about where it is coming from or how to manage it.	Planting is a key activity to increase biodiversity, reduce soil loss, build ETS revenue and increase flood resilience. However information is lacking to help farmers meet these goals.	People, land and infrastructure are at risk from extreme weather events floodplains with low flows. Erosion prone hill-country.
Impact	Waterway health reduced. Decline in aquatic biodiversity. Regulation risks.	Planting can support many positive outcomes. The impact of uninformed decision making is that objectives are not met and resources are wasted.	Damage to infrastructure. loss of productive land. Risk to life and livelihoods.
Priority action	1.Focus sediment management practices on highly eroded land. 2. Implement high priority good practice on farms.	Build and communicate a decision support tool for planting to meet multiple outcomes. Support farmers to make appropriate decisions through effective communication and training.	Reduce the impact flooding through soil conservation planting and slowing water in wetlands and bunds. Stabilise streambanks with planting.

WANT MORE DETAIL? HEAD TO WWW.TUKITUKILANDCARE/MANGATARATA

Check out the online
TLC Farmer Toolbox
www.tukitukilandcare.org/toolbox

MANGATARATA CATCHMENT: NEXT STEPS

- Get involved with the Mangatarata Catchment Group, with support from TLC, to review The TLC Catchment Plan, share knowledge and coordinate actions.
- Address water quality issues, in particular P. Use [TLC's On-Farm Action Planning Tool*](#). Options include managing Olsen P levels excluding animals from waterways and controlling erosion on steeper areas of the catchment.
- Develop erosion management strategy. Consider poplar planting, oversowing with legumes, strategic fencing to retire or manage grazing, and native or exotic afforestation. Use [TLC's Surface Erosion Tool*](#), [TLC's On-Farm Action Planning Tool*](#) and [TLC's Plant Selection Tool*](#).
- Seek planting advice to improve biodiversity and manage erosion. Use TLC's Plant Selection Tool* combined with local knowledge.
- Consider opportunities for income from timber, agroforestry, [ETS*](#) or biodiversity credits.
- Address plant and animal pests through information sharing of control methods and raising awareness of future threats.
- Connect with [local advisors*](#) for tailored advice and potential funding opportunities.
- Commit to TLC's THR3E: three practical steps you can implement on your farm over the next three years.

*** The TLC Toolbox and the full catchment report are now available on the TLC website www.tukitukilandcare.org**