Tukituki catchment

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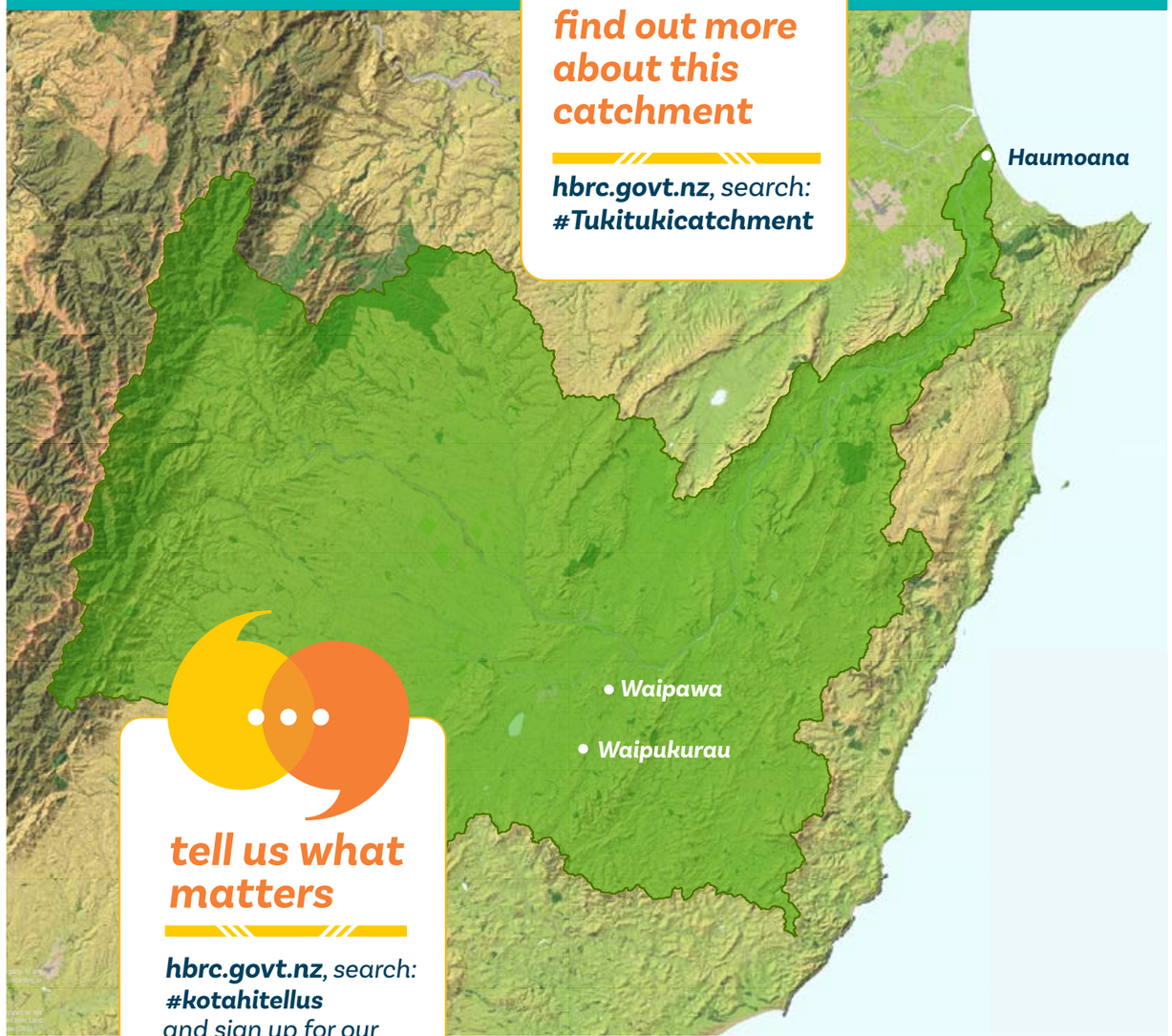

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OUR PEOPLE, OUR FUTURE

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What do we know?

The Tukituki catchment generally covers the land surrounding the Tukituki and Waipawa Rivers. The footprint extends west to the Ruahine Ranges and east to the southern coastal hills of Hawke's Bay. This area is dominated by the Ruataniwha Plains, the Ruataniwha Aquifer beneath, and the Papanui Aquifer near Ōtāne.

Soils on the plains range from free-draining gravels to water-logged clays. A series of fault lines align with the ranges, namely the Mohaka and Ruahine faults.

The climate is variable with higher rainfall in the mountains and a rain shadow across the plains. Temperatures are moderate-to-hot in summer with frosts in winter. The area is also prone to droughts and flooding. The 2019-20 drought was one of the most severe in recent times.

Much of the original native cover was cleared to make way for grassland. The Ruahine Forest Park provides the main area of native bush. There are small pockets of remnant bush on farmland and in scenic reserves. The most significant area of 300 hectares of remaining natural wetlands is Lake Whatumā. The braided Tukituki and Waipawa Rivers provide habitat for endangered bird species.

The main land use is pastoral which includes dairying, sheep and beef farming. There are also orchards, vineyards and arable farming.

The main towns servicing the rural areas are Waipukurau and Waipawa, with smaller settlements at Ongaonga, Ōtāne, Takapau and Tikokino. The two towns and Takapau have community water supply systems. Communities are otherwise reliant on their own household systems. Water shortages are common in summer months.

State Highways 2 and 50 bisect the area, connecting Hastings and Napier with Palmerston North, the Wairarapa and Wellington. A railway line connects Palmerston North and Napier Port, and a train station remains at Waipukurau.

Known issues

Restoring the mauri of the water, giving effect to Te Mana o Te Wai.

Water supply and drought – better managing community supply, irrigation, water storage, improving water resilience and water habitats, allocation and access to finite supplies of water.

Degraded water quality – elevated nutrient levels (phosphate and nitrogen) and sediment loss lead to undesirable algal growth, degraded habitats, harm to aquatic life and less appeal for water-based recreation.

Flooding - river and gravel management, we need to improve rural and community safety and resilience to natural hazards.

Biodiversity – retain valued remnant native vegetation, improve riparian margins and wetlands, generate multiple benefits (ecological, water quality, pest reduction).

Legacy issues – Treaty issues and resolving access to and management of valued natural resources by tangata whenua; community divisions around water storage and access rights to water.

How we are doing?

The Tukituki Plan Change (2015) is an integrated approach to managing natural and physical resources. Farmers must now prepare farm environmental plans. Those farming in priority catchments – where nitrogen limits are exceeded – must get a resource consent to manage the adverse effects of their farming activities on the environment.

In early 2022 seven consents had been granted. Most applications are on hold while catchment modelling is carried out, using information from consent applications to better understand nutrient inputs,contaminant loads and possible mitigations. Modelling is used to inform consent decisions.

The Tukituki section of the Plan applies higher minimum flows to water permits from 2018. From 2023 the minimum flow for the Tukituki River at Red Bridge will increase again to improve habitat for trout. An additional groundwater allocation, known as Tranche 2, is part of a current resource consent application.

The Nitrogen limits at all monitoring sites on the Ruataniwha Plains are exceeded. Nitrogen concentrations reduce naturally in the river's main stem downstream, due to assimilation. Instream assimilation is driven by rapid and excessive algal (periphyton) growth in the river between Waipawa and the coast. A nutrient issue beginning in the Ruataniwha Plains becomes a periphyton problem in the Tukituki downstream of the Plains.

Phosphorus follows a similar pattern to nitrogen. There are high concentrations in the Plains – the main stem concentrations are highest around Central Hawke's Bay. DRP (Dissolved Reactive Phosphorus) concentrations are particularly high in the Mangatarata and Papanui tributaries of Tukituki River. These two rivers also score lowest for bug and insect counts (macroinvertebrates), which is a measure of stream health. Based on *E. coli* levels, these two rivers and Tukituki River at Red Bridge do not meet national bottom-lines for swimming.

Water clarity is neither especially good nor bad, and generally does meet guidelines for contact recreation. There is extremely elevated turbidity in the main stem during high flow events, reflecting the large distribution of sediment being carried down the Tukituki River during floods.

Some wells on the Ruataniwha Plains and around the Papanui catchment have not met the drinking water standards for *E. coli* at least once over the five year period 2013-2018. This is not unexpected where there are shallow bores.

A handful of deeper wells also reveal issues with manganese or arsenic, due to natural processes rather than from human activities.

There are 120 priority ecosystem sites in the catchment. Sixty registered QEII sites offer protection over 1,000 ha of native vegetation on private land.

Where to from here?

The Regional Plan, including the Tukituki section, is due for review and will need to give effect to the Government's directions set out in the National Policy Statement for Freshwater Management 2020. The Regional Council needs to describe Te Mana o Te Wai for the catchment and develop practical, catchment-based action plans. HBRC also needs to look at the impact of World Health Organisation air quality guidelines, especially for very fine particulate matter.

HBRC's Regional Water Security programme is underway and will inform more accurate understanding of the current regional pattern of water takes and use. This will look to future water demands in the context of a changing climate and identify future water management options. This information will help to set rules for water allocation, limits and targets through this Kotahi process.

Consent processes are quite separate to the work on Kotahi. The Tranche 2 groundwater consent application will proceed based on the provisions of the currently operative Regional Plan.

The Regional Council's experience with the use of farm environment plans in the Tukituki catchment is informing the development of nationally consistent requirements for freshwater farm plans.

The Regional Council will work with tangata whenua, local authorities, stakeholder and interest groups and the wider community to agree on a catchment vision, check the issues and then set up working groups to help tackle the issues in each catchment. Online channels will also be used with the community to discuss various matters and agree the best way forward.