TE TINI A TUNA

BIANNUAL REPORTING DOCUMENT
FEBRUARY - JULY 2024

A plan of action prepared by Te Maru o Kaituna

Project	Lead Agency	Overall Status	Overall Progress
Project 1 - Lowland Drains and Drainage Canal Improvement	BOPRC	**Green**	25%
Project 2 – Freshwater Quality and Quantity Limits	BOPRC	**Green**	45%
Project 3A, 3C – Consented Takes and Discharges	BOPRC	**Green**	100%
Project 3B – Consented Takes and Discharges	WBOPDC, RLC, TCC	**Green**	100%
Project 3D – Consented Takes and Discharges	TMoK	**Green**	10%
Project 4A – Focus Catchments	BOPRC	**Green**	45%
Project 4B – Focus Catchments	WBOPDC/TCC	**Amber**	10%
Project 5 – Farm Environmental Plans	BOPRC	**Amber**	10%
Project 6 – Post Kaituna River Rediversion Enhancement	BOPRC	**Green**	70%
Project 7 – Wetland Re-Creation	BOPRC	**Green**	70%
Project 8A – Kaituna Habitats Network	WBOPDC	**Green**	100%
Project 8A/8B – Kaituna Habitats Network	BOPRC	**Green**	100%
Project 8C – Kaituna Habitats Network	BOPRC	**Green**	10%
Project 8C – Kaituna Habitats Network	TMoK	**Green**	75%
Project 9 – Pataka Kai	TMoK	**Green**	65%
Project 10 – Kaituna Community Connection	TMoK	**Green**	70%
Project 11 – Kaituna River Access	WBOPDC	**Green**	55%
Project 12 – Kaituna Cycleway/Walkway	WBOPDC	**Amber**	10%
Project 13 – Kaituna Cultural and Historical Heritage	TMoK	**Amber**	0%
Project 14 – Upper Catchment 'Gateway'	RLC	**Green**	75%
Project 15 – Coastal Park Network	BOPRC	**Red**	0%
Project 16 – State of the Awa Integrated Monitoring and Reporting	BOPRC	**Amber**	10%
Project 17 – Kaituna Catchment Network Mapping	BOPRC, WBOPDC	**Green**	70%
Project 18 – River Restoration and Enhancement Fund	TMoK	**Red**	0%

Project 1 - Lowland Drains and Drainage Canal Improvement

Output - 1A Lowland Drains Rehabilitation Plan

Project Lead – Jackson Efford

Progress Update

- Best practice drains upgrade work completed on at least 11 properties since the inception of EPs in the lower Kaituna catchments from 2020.
- Approximately 14.9 km of drain upgrades in the lower Kaituna catchment has been completed with the intention for BOPRC and landowners to carry out more works into future.
- Monitoring continues on the TAML farm paired drain experiment, with all battering, fencing, and planting now complete (to be compared/monitored against similar drains with no enhancements applied to determine effectiveness of the treatment). Further improvements to be made to the restored drains and these will be monitored for at least five years. A total of 7.2km of fencing, 4km of drain restoration and 23,000 plants were undertaken to complete the project.
- Current costs to restore drains to best practice standard remain at around $20,000-$40,000/km (includes re-battering drain, new fencing, and native planting). Opportunities exist to help reduce costs.
- Subject to what the Essential Freshwater Policy Programme delivers through Regional Plan Change 19, development of a Lowland Drains Strategy would be useful to help prioritise works areas and leverage LTP funding for works in future.

Best Practice Drain Restoration: has been an ongoing mitigation included in many environmental programmes, particularly in the lower Kaituna. Photos below are pre intervention 2021 and post planting early 2024.

Project 1 - Lowland Drains and Drainage Canal Improvement

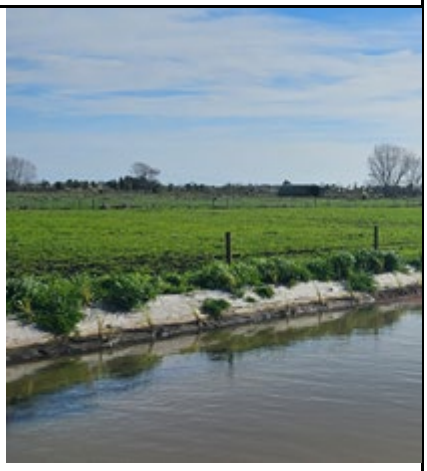
Output - 1B Ford Road Pump Stations Upgrade (relocation)

Project Lead – Kathy Thiel-Lardon (BOPRC)

Progress update

Ford Rd Pump Station Replacement

Work has commenced onsite for Stage 1 Drain widening works. The work includes the widening of approximately 1.6km of existing network drains (drains known as the Internal Drain and Cruickshank's Drain), the removal of two existing box culverts and one bridge, the installation of three new bridges and the associated realignment of one farm access track (to accommodate the drain widening). The material excavated from the drains is spread across the adjacent paddocks to the south of Internal Drain. The widening of the drains is undertaken in a manner to accommodate a two-stage channel design including riparian planting.

	Prior to construction	During Earthworks	During Planting
Internal Drain			
Cruickshank's Drain			

The preliminary design of the pump station has been completed including updated Capital Works and Net Present Value costing.

The detailed design of the pump station is to commence shortly.

Project 2 – Freshwater Quality and Quantity Limits

Outputs - 2A Identified freshwater objectives and limits/Project 2B Draft Regional Plan Change / Project 2C Formal Regional Plan change process

Project Lead – BOPRC Essential Freshwater Policy Programme – Jo Watts, Freshwater policy Kaituna Action Plan update

Progress Update

These three projects form part of Toi Moana Bay of Plenty Regional Council's Freshwater Policy Programme (FPP). We are continuing work on changes to the Bay of Plenty Regional Policy Statement (RPS) and Regional Natural Resources Plan (RNRP) to implement the National Policy Statement for Freshwater Management 2020 (NPSFM) and also reviewing the freshwater related chapters.

In December 2023, Government amended the deadline for notifying freshwater changes from Dec 2024 to Dec 2027. It also announced freshwater reform including their intention to progress changes to how the hierarchy of obligations contained in Te Mana o te Wai parts of the NPSFM apply to consent applications and consent decisions this year and replacing the NPSFM2020 and amending freshwater regulations within 18 – 24 months. As a result, on 20 February 2024, Toi Moana Councillors decided to extend the timeframe for notifying proposed freshwater changes to from December 2024 to September 2025. Toi Moana are keeping an eye on how the governments freshwater reform progresses and how draft freshwater changes and timeframes may need to respond.

Ngā mea e whai ake nei **Next steps**

- Toi Moana continues to maintain an open invite for iwi, hapū and tangata whenua to engage with us when they are ready to do so. Please contact Margaret Courtney if you have any queries – Margaret.courtney@boprc.govt.nz
- Continue to support various iwi led projects to advance their input and advice into this work programme.
- Continue progressing draft policy options and refining draft plan changes working towards the targeted release of draft RPS & RNRP freshwater changes for feedback once Toi Moana has made a decision to do so.

Ko etahi atu kōrero **Further information**

- Keep informed - subscribe to the 'Freshwater Flash' eNewsletter here. (press 'Ctrl' button and click on underlined text to go to website links).
- Further information about the freshwater changes is available here.
- Information about how Toi Moana is involving tangata whenua in this freshwater mahi.
- Here is the Region wide overview, the Kaituna FMU Story, view the recording of the 4 Aug Kaituna online engagement webinar.
- Toi Moana continues to maintain an open invite for iwi, hapū and tangata whenua to engage with us when they are ready to do so. Please contact Margaret Courtney if you have any queries – Margaret.courtney@boprc.govt.nz
- Check out Te Maru o Kaituna's website here
- Find Regional Council's Strategy and Policy Committee and Te Maru o Kaituna Committee agenda reports here

6 July 2023

Kaituna FMU drop-in session at Whakaue Marae, Maketu

Kaituna FMU online webinar 4 August 2023 – [view recording]

Project 3 – Consented Takes and Discharges

Outputs - 3A - Annual Compliance Report about consented water takes and discharges/3C annual reporting by Regional Council about stormwater discharges to Kaituna River and Drainage Schemes

Project Lead: Stuart Standen

Progress Update

The Regulatory Compliance team completed 733 Compliance Monitoring Actions related to water takes, discharges, and stormwater discharges within the Te Maru o Kaituna Rohe during March 2024 to July 2024 monitoring period. Compliance Monitoring Actions are made up of both visits to the consent holders site and processing data at the office; and are assessed as either: complying, low risk non-compliance, moderate non-compliance and significant non-compliance against the conditions of consent which have been assessed. Of the total number of Compliance Monitoring Actions 75% were assessed to be complying, which is an increase from 92% from the previous reporting periods. The majority of the 25 significant non-compliance detected are associated with exceedances of water take volume consent limits.

Compliance Monitoring Actions – Water takes and discharges within TMoK rohe = 1,039

Compliance Rating	Count	%
Complying	781	75
Low risk	156	15
Moderate non-compliance	77	8
Significant non-compliance	25	2

Site Visits and follow-up site visit = 116

Compliance Rating	Count	%
Complying	69	60
Low risk	26	22
Moderate non-compliance	15	13
Significant non-compliance	6	5

Monitoring data = 923

Compliance Rating	Count	%
Complying	712	77
Low risk	130	14
Moderate non-compliance	62	7
Significant non-compliance	19	2

Per Activity

Activity	Inspection & monitoring data	Complying	%	Low Risk	%	Moderate	%	Significant	%
Dairy discharge	4	4	100	0	0	0	0	0	0
Discharge to land	45	36	80	8	18	0	0	1	2
Discharge to water	52	47	90	4	8	1	2	0	0
Groundwater take	567	456	80	69	12	23	4	19	3
Install a bore	12	12	100	0	0	0	0	0	0
OSET discharge	91	51	56	21	23	19	21	0	0
Surface water take	234	151	65	47	20	34	15	2	1
Geothermal water take	32	25	78	5	16	0	0	2	6
Geothermal discharge	2	0	0	1	50	0	0	1	50
Total	1,039	782		155		77		25	

Discharges from Kaituna River and drainage schemes, discharge stormwater to Kaituna or tributaries

38 compliance monitoring actions

Site inspections, follow up inspections and receiving information post visit = 11

Compliance Rating	Count	%
Complying	8	73
Low risk	2	18
Moderate non-compliance	1	9
Significant non-compliance	0	0

Performance monitoring actions = 27

Compliance Rating	Count	%
Complying	25	93
Low risk	2	7
Moderate non-compliance	0	0
Significant non-compliance	0	0

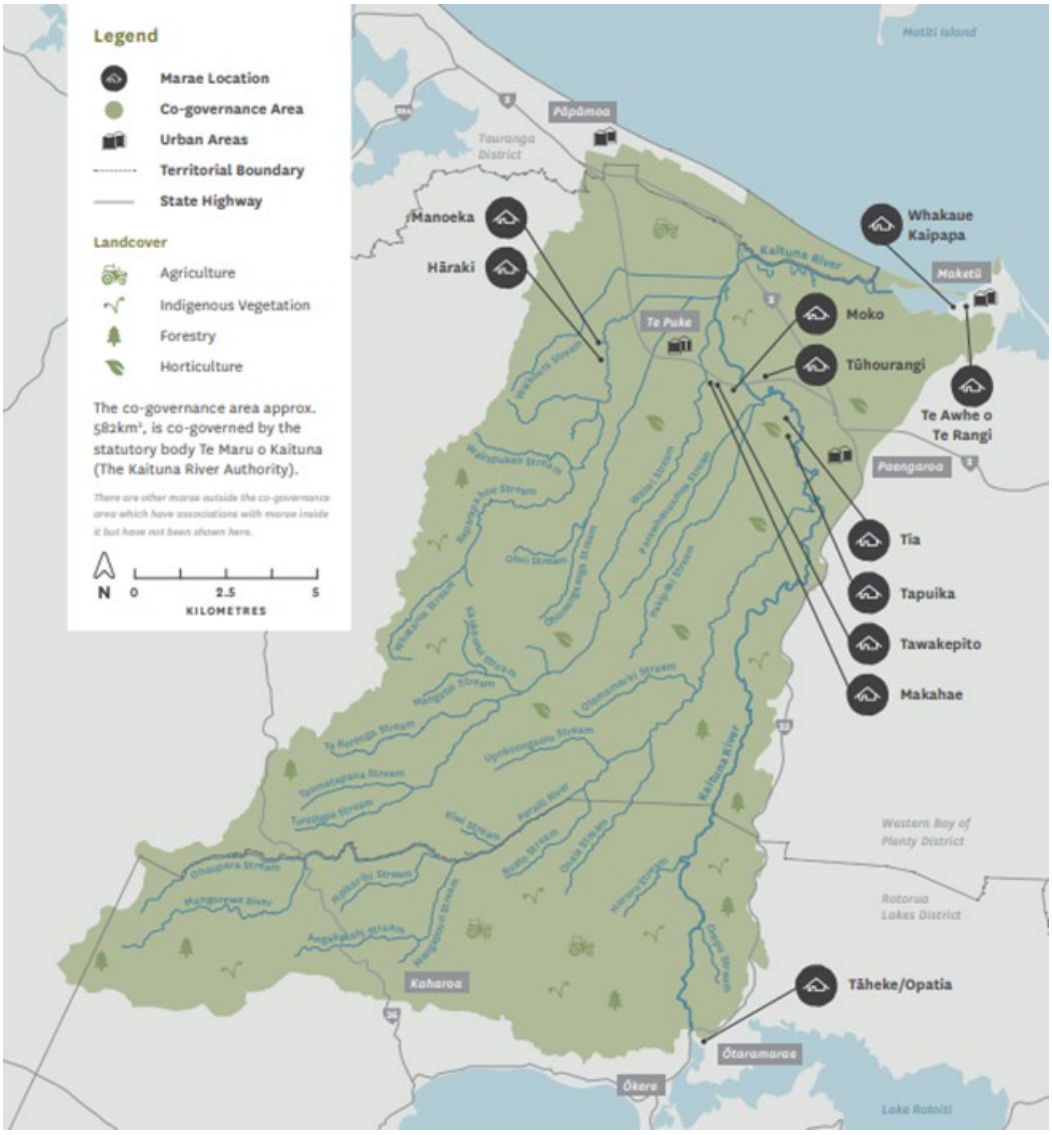
Planned Completion Date: Completed for this reporting period

Project Leads – Jackie Redward (WBOPDC), Jim Summers (TCC)

Progress Update

- **TCC** – During the six months to the end of this reporting period, the stormwater overflow to the Kaituna was not triggered.
- **RLC** – There are no urban wastewater or stormwater management systems within the Rotorua part of the Kaituna co-governance area, as can be seen on this map showing territorial boundaries. An update from RLC is not applicable for this project.

Planned Completion Date: Annual reporting requirement



WBOPDC Reporting

Quarterly Effluent Monitoring for: Te Puke 24891/RM16 0204

9.3 – The consent holder shall take samples of the treated wastewater (immediately after UV disinfection, prior to discharge to the wetland) once per week. Samples shall be measured using a 24-hour flow proportioned composite treated effluent sample and shall be analysed by a certified laboratory for the following parameters:

- Total nitrogen (g/m3)
- Total phosphorous (g/m3)
- Total suspended solids (g/m3)
- cBODS (g/m3)
- pH

9.4 – The consent holder shall take a grab sample of the treated wastewater (immediately after the UV treatment system, prior to discharge to the wetland) once per week and have the sample analysed by a certified laboratory, for E.coli (CFU/100 ml).

9.5 – The consent holder shall take grab samples in the Waiari Stream upstream and downstream of the discharge (after reasonable mixing) on a monthly basis and analyse the samples for the contaminants listed in Conditions 9.3 and 9.4.

Between February 2024 and June 2024, WBOPDC demonstrated compliance for all monitoring required by condition 9.3 and condition 9.4 of consent RM16 0204.

Table below contains sampling results required by condition 9.5.

Date	Site	pH	Suspended Solids - Total	BOD5 - Total	Total Phosphorus	Total Nitrogen	E. coli
12/02/2024	Upstream of Discharge	7.1	4	2	0.032	1.19	72
	Downstream of Discharge	7.1	3	2	0.092	1.24	96
11/03/2024	Upstream of Discharge	7	6	2	0.031	1.08	170
	Downstream of Discharge	7.1	6	2	0.081	1.22	160

16/04/2024	Upstream of Discharge	7.1	7	2	0.037	1.17	140
	Downstream of Discharge	7.1	7	2	0.092	1.3	120
13/05/2024	Upstream of Discharge	6.8	4	<2	0.034	1.12	64
	Downstream of Discharge	7.2	5	<2	0.131	1.44	28
17/06/2024	Upstream of Discharge	6.9	36	<2	0.061	1.19	1000
	Downstream of Discharge	7	29	<2	0.093	1.3	990

WBOPDC was granted a comprehensive stormwater consent 67481 to discharge stormwater. A Monitoring Plan required by this consent has recently been certified by Regional Council, which means that stormwater monitoring can now begin. Scoping of the sites for sampling has begun.

Planned Completion Date: Annual reporting requirement

Annual report will be completed by 31 August 2024.

Project 3 – Consented Takes and Discharges

Output - 3D Annual Meeting with representatives of the Rotorua Te Arawa Lakes Strategy Group

Project Lead – Chairman Flavell/Raponi Wilson (TMoK)

Progress Update

A meeting between the representatives will be scheduled for 2024.

Planned Completion Date: Date to be confirmed

Project 4 – Focus Catchments

Output - 4A Action Plans for Kopuaroa and Waitepuia/Ford Road sub-catchments

Project Leads – Tegan Arnold (BOPRC)/Anna Dawson (BOPRC)

Planned and completed land management works in the Kopuaroa and Waitepuia/Ford Road sub-catchments have been reported in previous reports to the group. In addition to those on-going works, Focus Catchment support is now also being offered to the wider Kaituna River catchment (outside of Focus Catchment areas), based on high-risk and larger land uses as the highest priority for funding.

This shift is due to the conclusion of several years of concerted engagement efforts in the Focus Catchments, whereby all landowners have been contacted and offered support, with some choosing to adopt new sustainable management practices and complete land management works etc, but being a voluntary programme, the amount of new works possible was declining, therefore we are now providing an opportunity for others in the wider catchment to receive support from BOPRC. Support will also continue to be available for those within the Focus Catchment.

Some progress has been made during the 2024 year within the wider Kaituna Catchments, particularly in the Upper Kaituna where landowners are approaching council to enter environmental programmes in support of the Kōkako Ecosystem Expansion Programme. This project aims to create a network of native forest corridors that will link discrete kokako population. This work contributes to biodiversity and water quality improvements within the catchment.

Te Arawa Lakes Treatment Wetland: Weather has restricted earthworks significantly this past year. However, works will resume to complete the remaining 25% of earthworks in February 2024. The final large-scale planting will be in February 2025 when plants become available. Currently open water habitat has been seen hosting bittern and dab chicks.

Kaituna Corridor: BOPRC, private Landowners and Tapuika have been working to restore 3 contiguous properties that border significant sites of the Kaituna River. Environmental programme activities include: 3.5ha of new wetland construction, 3.5ha of existing wetland protection and enhancement through pest plant control and native planting and restoration of an old ox-bow of the Kaituna river at the Paraiti and Kaituna River confluence.

Figure 1: Looking southeast to the Kaituna oxbow from the new wetland project. Kaituna and Paraiti river confluence pictured to the right .

Project 4 – Focus Catchments

Output - 4B Action Plans for mid-lower Waiari Sub catchment

Project Leads – EJ Wentzel (WBOPDC) and Jennifer Pearson (TCC)

Progress Update

Te Ohu Parawai o te Waiari agreed to progress the Mauri model proposed by Dr Kepa Morgan. There is an opportunity to develop a Mauri model that spans both consents. The proposal has been signed off by Te Ohu Parawai o te Waiari and will be presented at the next Waiari Kaitiaki meeting which is due to occur in June.

Planned Completion Date: Yet to be confirmed

Project 5 – Farm Environmental Plans

Outputs - 5A Farm Environmental Plan template developed or adapted/5B Farm Environmental Plans progressed within the lower Kaituna Catchment

Project Lead – Jackson Efford (BOPRC)

Progress Update

The Government intends to improve the freshwater farm plan system. While freshwater farm plans are seen as a key tool for managing freshwater risks moving forward, sector groups and farmers have told the coalition Government that the current system is too costly and complex.

We will be exploring if there are ways to make the system more cost-effective and practical for farmers while acknowledging the good work they are already doing.

The Government may look at whether current requirements to complete a freshwater farm plan could be paused while improvements are developed. Further detail will be provided later this year.

The Government is continuing to work with sector groups to develop a pathway for integrating existing farm plans and industry programmes with the freshwater farm plan system.

See the current freshwater farm plan regulations [New Zealand Legislation website]

Planned Completion Date: 30/06/2025

Project 6 – Post Kaituna River Rediversion Enhancement

Output - 6A Restoration Work Programme Completed

Project Lead – Pim de Monchy (BOPRC)

Progress Update

The Kaituna River Re-diversion and Te Awa o Ngatoroirangi/Maketu Estuary Enhancement Project was implemented:

- To return at least 20% of the Kaituna River flows to Maketū (achieved 2021).
- To create at least 20 ha of new wetlands (achieved 2019).
- To increase the size of the tidal estuary by 19% (45 hectares, completed 2020).
- To maximise the ecological and cultural benefits (in progress since 2017).
- Inspections, annual cross section surveys and other monitoring are ongoing.

Summary of latest results, 19 June 2024 – Water Quality and Shellfish
from Stephen Park, Senior Environmental Scientist

- Water and shellfish bacterial loads monitored in summer and winter.
- Nutrients concentrations monitored over whole tidal range in summer and low tide in winter.

As opposed to the previous two years of water quality sampling, conditions in 2024 were drier and more representative of normal conditions. The results of the previous two years being heavily influenced by rain.

Overall, there remains little apparent change in nutrient concentrations in the top of the estuary at the Fords Cut site at any tidal level. At this site, the water present is largely that which has come through the diversion structure from the river, so this has not really changed from the situation prior to the increased flows. Further down the estuary at Site 5, nitrate levels are showing a pattern of increase with the higher river flows which is expected and in line with the observed salinity changes. The nitrogen concentrations at Site 5 are now much closer to those recorded at Fords Cut. At Site 9 and the boat ramp site which are both closer to the entrance, there may be a very slight increase at low tide. Several years of drier conditions will be needed to reliably determine the degree of change that has taken place; hence no attempts have been made at his stage to quantify changes.

For the water column bacterial results there appears to be little change at the Fords Cut site in the upper estuary with slight increases possibly occurring at the other sites. The most apparent and consistent change occurring for the last round of sampling is that bacteria numbers have dropped from the previous two years that were influenced by rain. As with the nutrient results, several more years of drier conditions will be required before the magnitude of change can be quantified.

Bacterial monitoring of shellfish flesh showed very little change for the winter sampling of tuangi compared to the previous two years. Results for the last three years in which increased river flows have occurred are however not a lot higher than levels recorded prior to flow changes. The levels recorded in tuangi over the summer have declined slightly from the previous rain influenced years but appear to be higher than results prior to increased flows. Pipi bacterial levels showed an improvement for both the winter and summer sample results compared to the previous years influenced by wet weather. As with the tuangi, bacterial numbers in pipi are possibly slightly higher on average for the period since river flows have increased, but still within the range recorded prior to flow increases and further dry weather results will be required to accurately define the consistent level of change that has occurred.

The 2024 survey of the pipi bed along Transect 1 shows densities are very similar if not higher than those seen in 2018 prior to increased river flows and the 2021-23 surveys. The population size distribution had a nodal peak size class around 42mm which is similar to all other years. There were lower numbers of smaller recruiting pipi along this

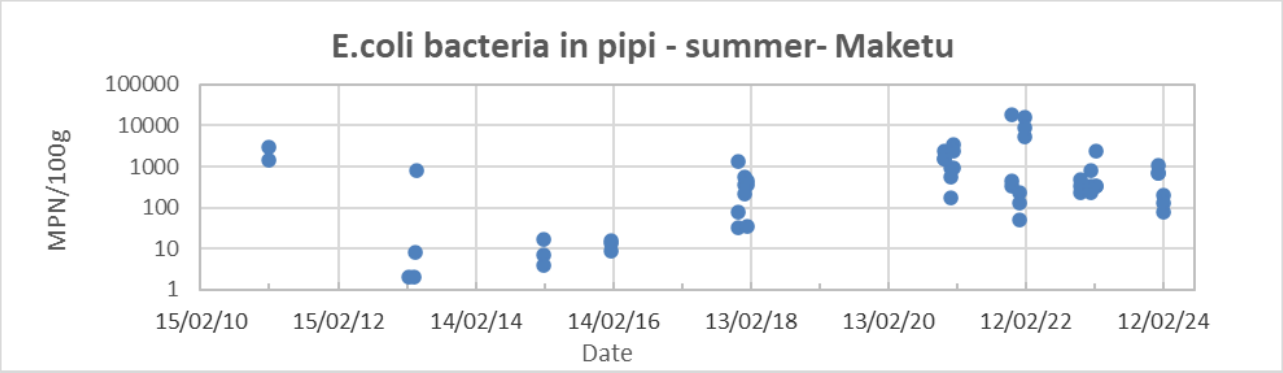
transect, but with high spatial variability it does not reliably imply the same for other parts of the bed. Results for the densities of the larger pipi size classes (>40 mm) preferentially gathered for eating, are at least the same as all previous years, if not slightly higher overall due to the width of the channel having good densities.

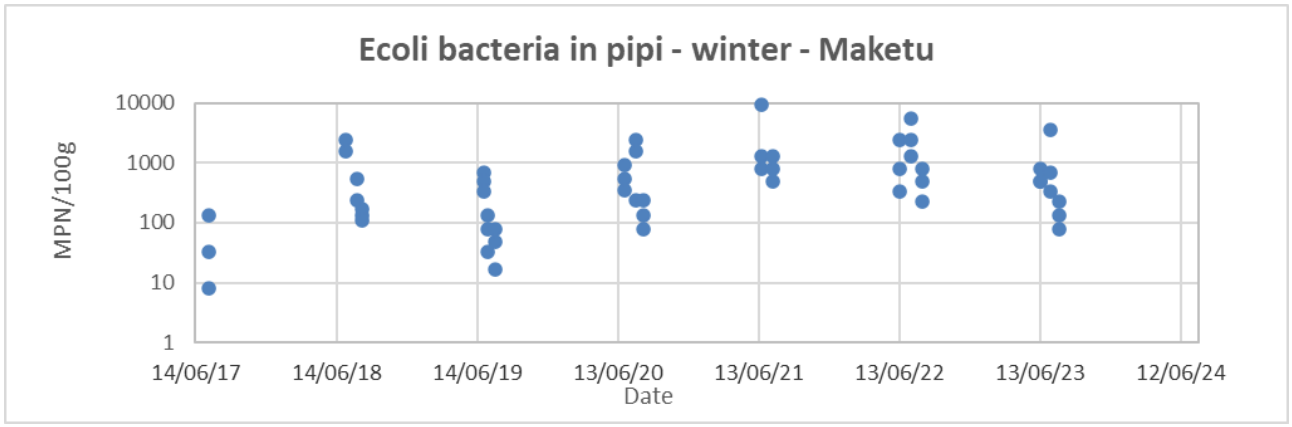
Monitoring of shellfish in the mid-estuary and other upper estuary areas shows results are very similar to previous years. The most notable change being that tuangi numbers which were low at the uppermost estuary sites including Papahikahawai Creek, appear to have declined. In Papahikahawai Creek hanikura were not recorded in the 2024 survey. Hanikura are more sensitive to low salinity than the tuangi, so it is possible that they have been excluded from these sites by the lower salinity that would have occurred over the 2023 year which had record levels of rainfall.

Broad scale macroalgae mapping was completed for the 2023 year and results show that extents were even slightly lower than 2022 and hence remain lower than those levels seen prior to increased river flows. The data collected from a number of algal transects and plots matches very well to the broadscale mapping results and in 2024 macroalgal extents for that set of data have decreased to even lower levels. The low levels of macroalgal cover recorded since 2021 are similar to those occurring prior to the 1970's. A longer period of monitoring will be required to cover climate and other dynamic environmental variables before there is any confidence that the current low levels will persist.

The data sets (BOPRC files) for the environmental monitoring and compliance data for those conditions covered by this memo, contain additional data summaries and graphs to those included in this memo. Those data sets can be found in the BOPRC filing systems and include ecological data, water quality data and sedimentation rates.

Overall monitoring results show changes in line with expected ecological benefits from the restoration of estuarine areas and increased river flow back into the estuary. Parts of the upper estuary have shown significant ecological improvements in terms of biodiversity and productivity which contributes significantly to the overall ecological health and integrity of the estuary. Water quality data also shows results consistent with predicted changes which may in the case of bacterial numbers, result in slightly higher numbers. Water quality results for 2024 show that the very wet conditions of 2022/23 had influenced results with increases in nutrient and bacterial numbers. Overall, no changes point to any unexpected adverse effects occurring as a result of the increased river flow and hence for ecological and water quality changes there are no concerns for maintaining the consented full river flow of 600,000 m3 per tidal cycle. Many of the potential ecological benefits of higher river flows into the estuary such as saltmarsh health, sediment and net nutrient transports out of the estuary will occur more gradually over time.




Ecoli bacteria in pipi - winter - Maketu
MPN/100g
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100
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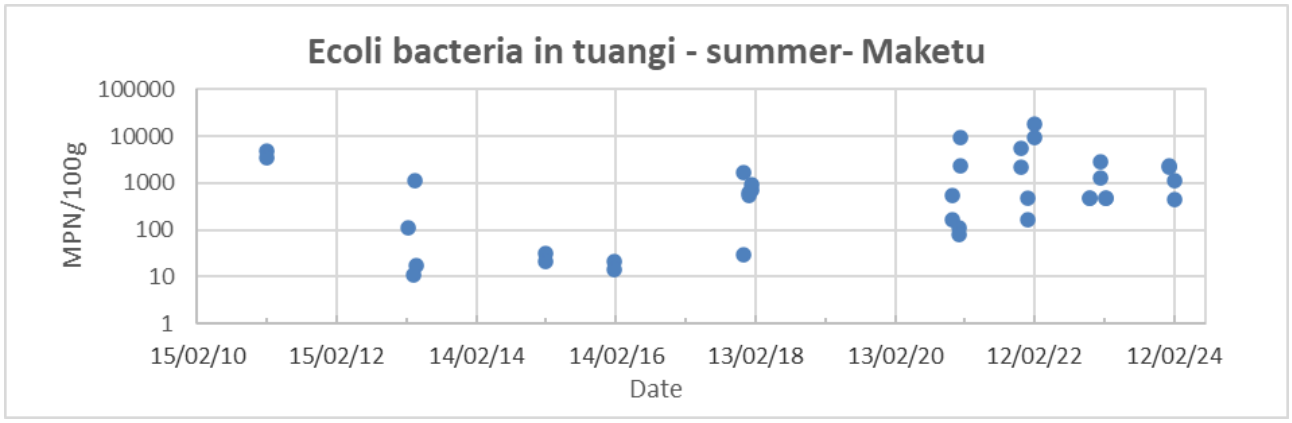
12/06/24
Date


Ecoli bacteria in tuangi - summer- Maketu
MPN/100g
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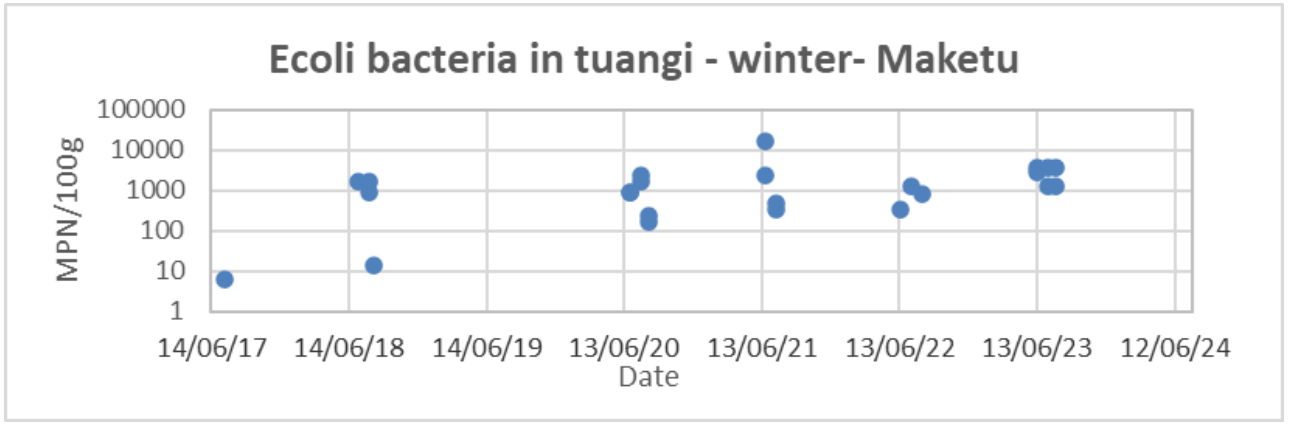
Ecoli bacteria in tuangi - winter- Maketu
MPN/100g
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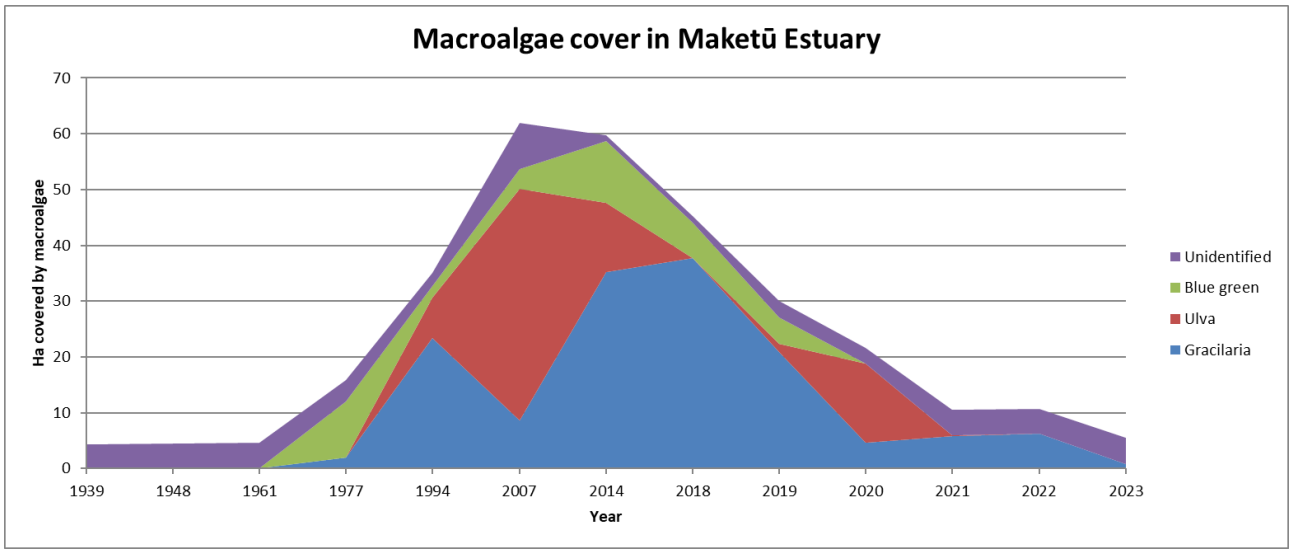
Macroalgae cover in Maketū Estuary
Ha covered by macroalgae
70
60
50
40
30
20
10
0
1939
1948
1961
1977
1994
2007
2014
2018
2019
2020
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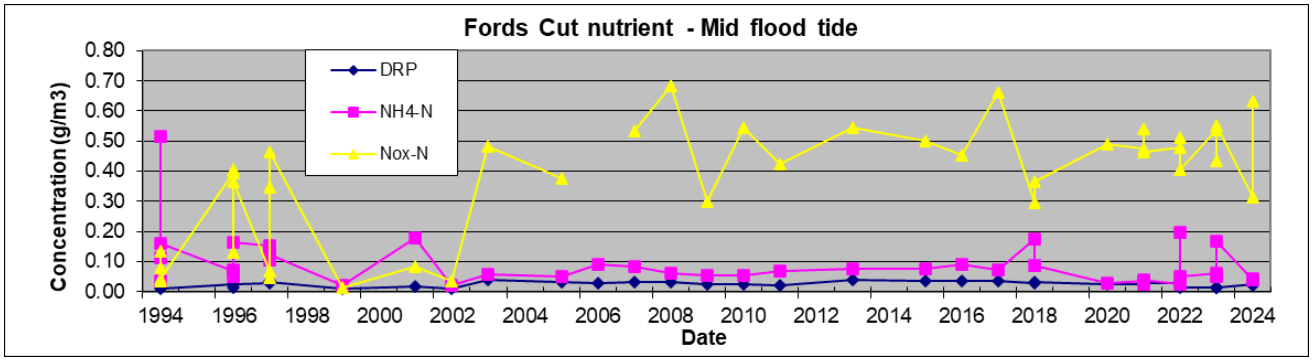
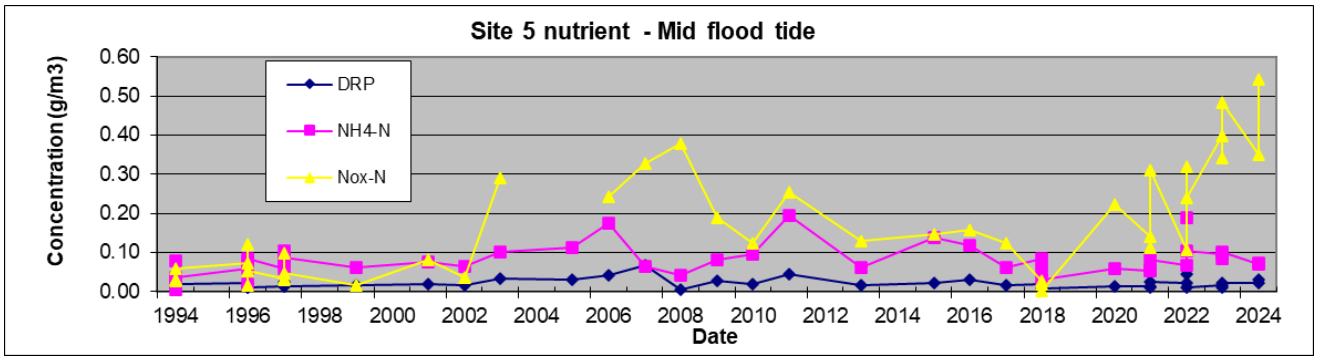
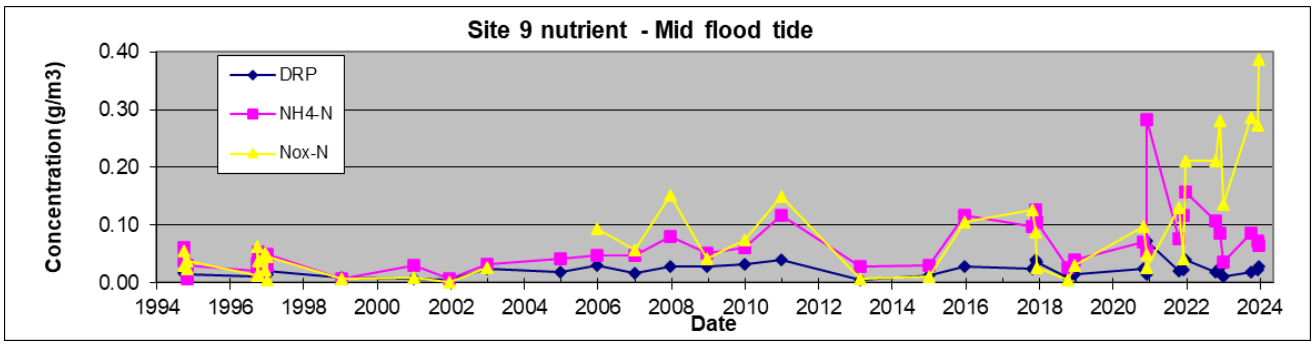
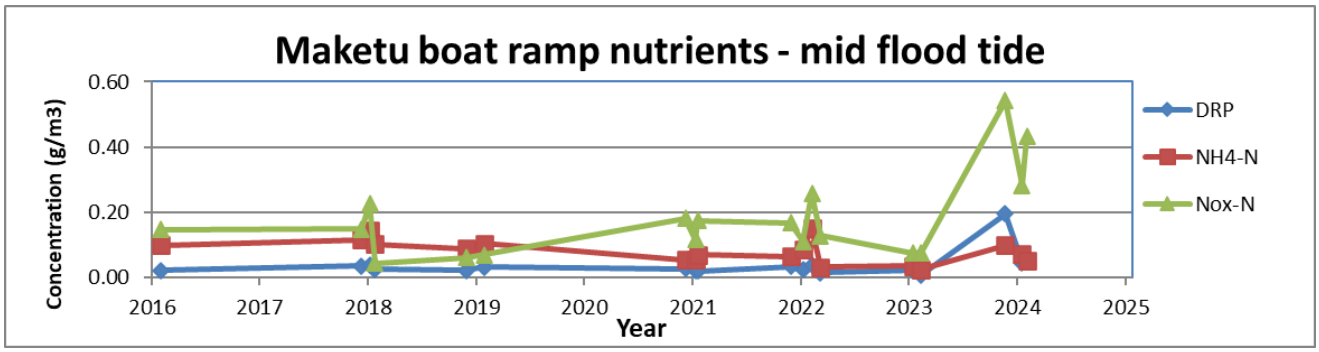
2022
2023
Year
Unidentified
Blue green
Ulva
Gracilaria



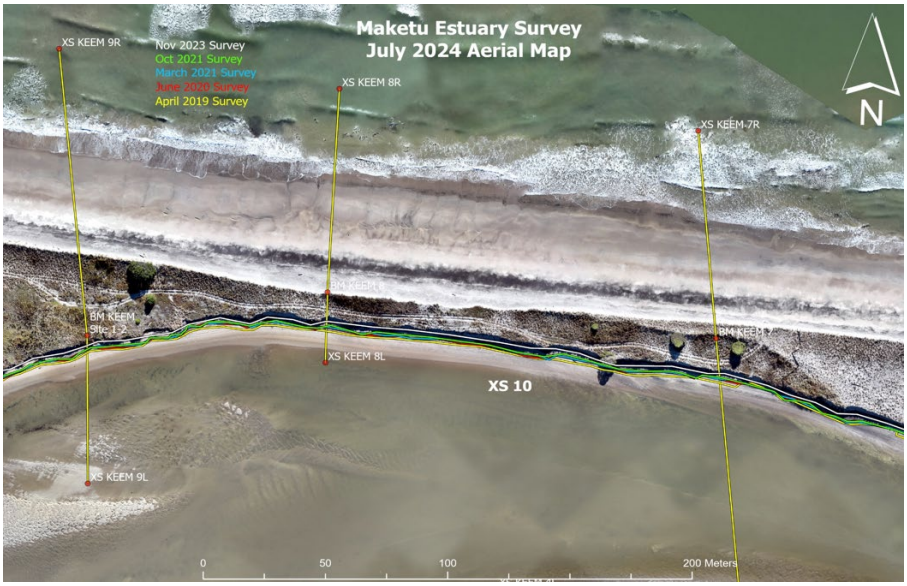






Only a sample of results have been presented here. Full memo of ecological and water quality monitoring results available on request.

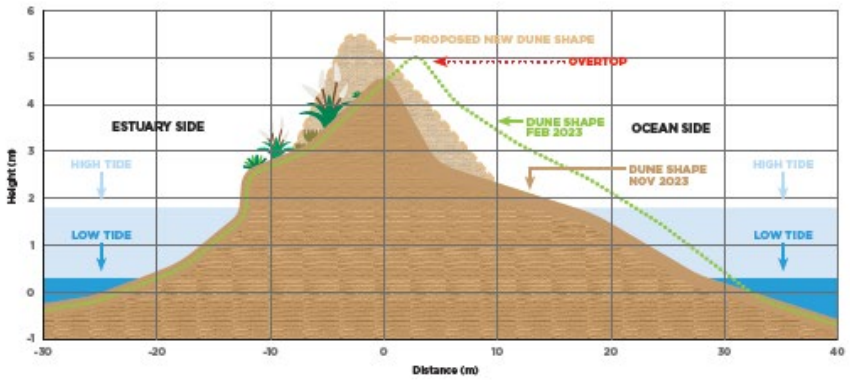
The following results are from surveys carried out by Hunter Smith, Regional Council Surveyor.



Due to narrowing and lowering of the spit opposite Whakaue Marae associated with both La Nina storms in 2023 and the gradual erosion of the estuarine side, there are plans to do a 'dune re-nourishment' or 'beach push-up' project in coming months. This is due to the potential negative ecological, cultural and recreational effects on the estuary from a breach. In the long run it is predicted that breaching risk will reduce as the Re-diversion's higher flows create wider and deeper channels in the lower estuary. The push-up will add just over a metre in height to the dune crest over about 150m length using sand from the adjacent beach.

WHAT COULD HAPPEN IN THE EVENT OF A STORM SURGE OR COASTAL INUNDATION

CROSS SECTION - SPIT MIDDLE



Got questions? Talk to our team:

Phone: **0800 884 880**
Email: **michael.tyler@boprc.govt.nz**

Planned Completion Date: 2030 – although consents are held through until 2050 and the project will continue indefinitely.

Project 7 – Wetland Re-Creation

Outputs - 7A Te Pā Ika Wetland/7B Te Pourepo o Kaituna Wetland/7C Whakapoukorero Wetland/7D Wetland projects within existing EEF/Environmental Programmes

Project Lead – Tegan Arnold/Michael Tyler (BOPRC)

Progress Update

Project 7A: Te Pā Ika Wetland

- Creation of up to 20 ha new wetland completed. Plantings now becoming well established.
- Pest plant control and predator control programmes ongoing.
- Erosion along re-diversion channel at Fords Cut continues to be monitored and protection measures can be implemented if erosion worsens.
- Rubbish dumping and damage to some plantings from white baiters and other members of community. New signage to address rubbish dumping to be installed.

Drone imagery captured 18/07/2024, looking at Te Palka wetland and Kaituna cut.

Drone imagery captured 18/07/2024, looking north across central spur at Te Pā Ika toward Kaituna cut.

Planned Completion Date: 30/06/2024

Project 7B: Te Pourepo o Kaituna Project

Public Easement on Tumu Kawa block

- Public easement being lodged with LINZ for registration.

Annual update of works

- Last year's 5 ha of planting that was partially undertaken by the education programme are establishing well
- Planting of remaining sedgeland areas in Waiomamae block were undertaken in autumn 2024 (30,000 plants)
- Further planting of the carpark block is to be undertaken in summer 2024/25 - 23,000 plants
- Continued pest plant control is ongoing throughout the whole wetland.
- Water levels and rainfall have been a continued challenge for the last year in terms of access, planting and pest plant control

Fish monitoring

- looking at macrophytes impact on fish and been monitoring fish in the wetland as a result of improved flows into the wetland through new culverts/fish friendly gates. Write up planned for the next year.
- Write up of results planned for 2024/2025

Predator control work

- DoC are funding crew to undertake predator control targeting mustelids, cats and rats.

Birds surveys

- Matuku surveys to be undertaken again November 2024
- Baseline bird surveys undertaken in 2019, the plan is to repeat these bird surveys this year and again in 5 years.

Drone imagery captured 18/07/24 looking over the planted dairy farmland from 2023 school education programme - Te Pourepo o Kaituna project area.

Drone photo taken 2024/07/18 showing Tumu Kawa block now well established (planted 2020)

Planned Completion Date: 30/06/2025

Project 7C: Whakapoukorero Wetland

- Continuing operational works associated with the newly signed environmental programme.
- Drone trial completed for pampas pest plant control in southern area of wetland.
- School planting programme being held at Whakapoukorero 2024 run by Maketū Ōngātoro Wetland Society and supported by the wetland committee, involving approximately 8 local schools.
- Predator control programme being implemented and pest plant control work brief for 2024/25 being renewed.
- Fish surveys planned for early 2025.
- Investigations for improving hydrological connections.
- Enhancement and track repairs scheduled for summer to ensure safe access for public and contractors.

1.5 Operational objectives / targets

1. To restore and maintain indigenous vegetation communities by achieving the following before the completion of this EP:

(a) reducing key environmental weeds to very low levels (<5% cover for pampas, arum lily, & Japanese honeysuckle) over the whole wetland.

(b) maintain very low density of willow and other pest plants in Vegetation Type 19 and reduce the grey willow densities to <5% cover.

(c) eliminate saltwater paspalum and other low incidence species (casuarina, tradescantia, blue morning glory, castor oil plant, kahili ginger, spindle tree, parrot's feather, and black locust) with the aim of eradicating (high priority).

2. To maintain and/or enhance populations of Threatened, At Risk, and regionally uncommon plant species present in the wetland.

3. Maintain or enhance populations of fernbird and spotless crake through animal pest control (focusing on rats, possums and mustelids). Pest animal control to be implemented by August 2023 subject to confirmation of the presence of crake and/or fernbird.

4. To protect and enhance fish populations through installation of fish friendly floodgates and hydrological investigations and fish monitoring.

5. Continue implementing programme to enhance public interaction with the site, while maintaining the sites ecological integrity.

Additional shared objectives Refer to Te Maru o Kaituna River Authority, Project 7C (wetland restoration and re-creation)

Recent drone trial February 2024 to spray pampas at Whakapoukorero

Recent Photoblique looking over Whakapoukorero wetland toward Maketū township

Project 7D: Te Huauri o Te Kawa

- New Environmental Programme (EP) was signed in November 2023.
- Funded by Bay of Plenty Regional Council (BOPRC) and Western Bay of Plenty District Council (WBOPDC).
- Total funding of $59,664.00 and $19,888.00 provided by BOPRC and WBOPDC respectively, over a four-year period between 2023 and 2027 Maketū Taiapure Trust undertaking fish monitoring with emphasis on inanga.
- This is a Maketu Taiapure project, with Maketū Ōngātoro Wetland Society undertaking the operational works associated with the Environmental Programme (EP).
- Operational works continuing successfully to further restore the site.
- Signage being drafted to support community awareness and interaction with the wetland.
- Work briefs for operational activities in the EP being renewed for 2024/2025.

Objectives

1. To protect and enhance the aquatic habitats:
   1.1 Provide suitable habitat for native migratory and non-migratory fish (refuge, rearing, residence).
   1.2 Maintain and protect inanga (*Galaxius maculatus*) spawning and rearing habitat.
2. To protect and enhance the wetland habitat for native flora and fauna.
   2.1 Suppress pest flora and fauna pressures on native biodiversity.
   2.3 Assist regeneration of geographically appropriate flora.
3. Biomonitoring on ecological and biological objectives to ensure objectives (1 & 2) are being achieved.
4. Support further opportunities for the community to engage with the wetland for educational and awareness purposes as appropriate.

These objectives are shared with and support the objectives of the Te Tini a Tuna – Kaituna Action Plan 2019-2029, Project 7 (Wetland re-creation project).

Photoblique image of Te Huauri o Te Kawa (looking upstream) with Kaituna wetland in the distance.

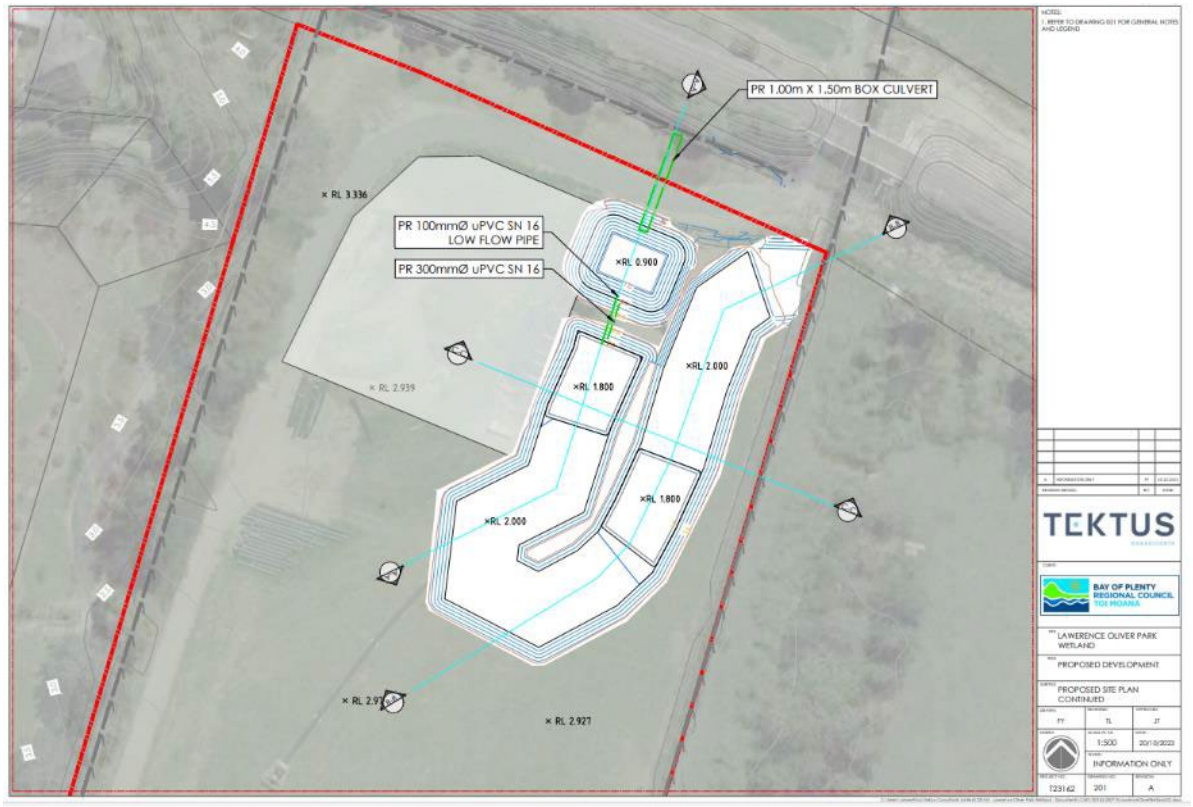
Outputs – 7E Lawrence Oliver Park Constructed Wetland

Project Lead – Jackson Efford (BOPRC)

Progress Update

A brand new publicly accessible wetland development and restoration is planned for Lawrence Oliver Park in Te Puke. This low-lying reserve owned by WBOPDC was previously leased for grazing but given its close proximity to town and the Te Ara Kahikatea Pathway tracks, the site has been flagged for restoration and enhancement including the construction of a biodiversity and treatment wetland. The project team includes BOPRC, WBOPDC, the Te Ara Kahikatea Pathway Society, Waitaha and Tapuika Iwi, with funding support from Fonterra. A consent and design has now been completed, and procurement for a earth works contractor to build the wetland is now underway. Earthworks will likely commence in November 2024. The design is based on the DairyNZ/NIWA constructed treatment wetland guidelines.

Lawrence Oliver Park in Te Puke- the future location of a constructed wetland and biodiversity area alongside the Te Ara Kahikatea walkway.



Wetland design for Lawrence Oliver Park.

Planned Completion Date: 30/06/2025

Project 8 – Kaituna Habitats Network

Output - 8A Work Programme developed – Te Puke/Maketū Reserve Management Plan

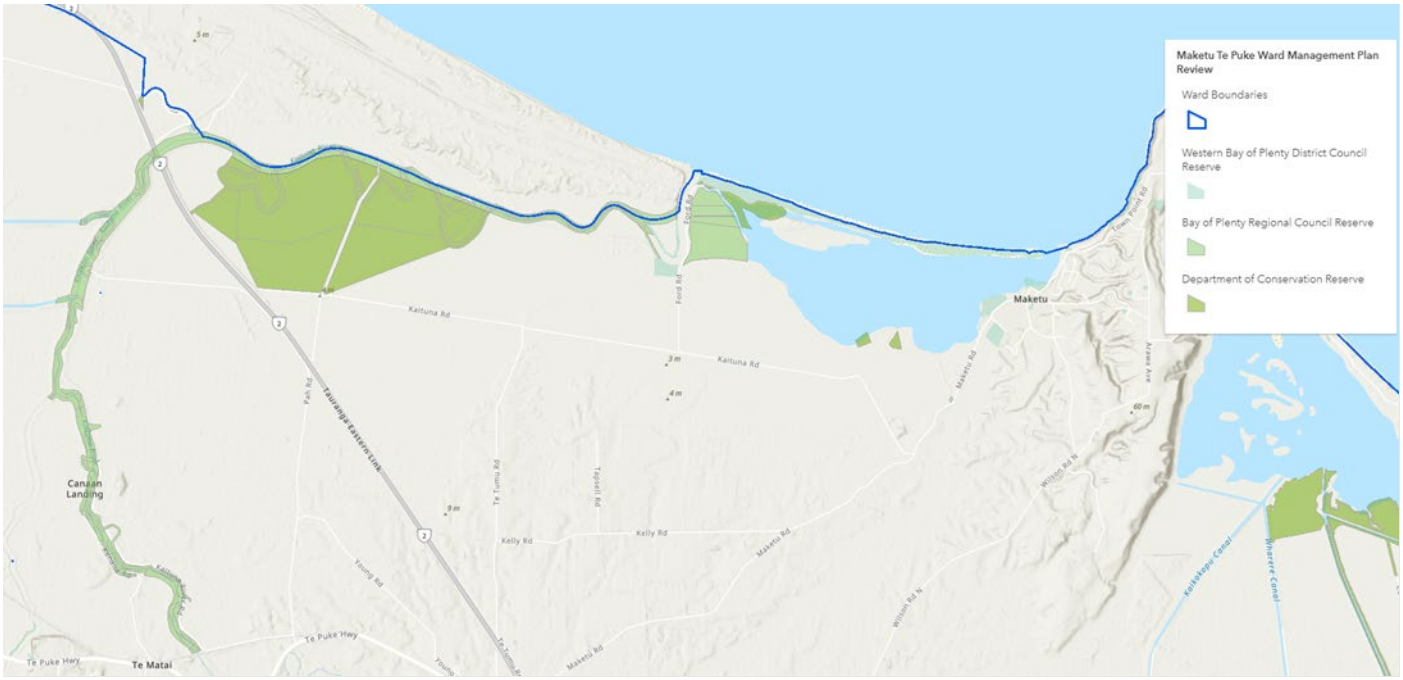
Project Lead – Jason Crummer (WBOPDC)

Progress Update

Project 8A is closed off now that the Te Puke-Maketu RMP has been adopted by Council. The decision story for the review of this RMP is available HERE and public maps can be viewed HERE.

Formal consultation on the Te Puke-Maketu Reserve Management Plan is complete and the final plan adopted by Council on 14 June 2022.

As part of this review, a reserves map has been developed for the Te Puke-Maketu Ward with plans. This map is now available on Council's website and includes locations of reserves, public toilets, public playgrounds and picnic/BBQ areas. It also includes BOPRC Reserve and DOC Reserve information. This map can be further developed to include where specific wetlands are located, to better understand the Kaituna Habitats Network. Consideration will also be given to including Iwi owned land. A link to the map which is now publicly available is here.



Project 8 – Kaituna Habitats Network

Outputs – 8C Work Programme developed

Project Lead – Tegan Arnold (BOPRC)

Progress Update

- Land Management Officers are continuing work with landowners in the wider Kaituna catchment to support environmental restoration projects.
- Work continues with the Paraiti Catchment Care Group to retire and plant marginal land and undertake predator control in bush corridors and margins between the Kaharoa Conservation Area and Ōtānewainuku.
- A project is currently under development for the protection and enhancement of a 70 hectare area of native bush adjacent to the Kaharoa Kōkako Trust management area where it is expected that kōkako are likely to expand to in the future.
- A public meeting was held in April 2024 with landowners in the Kaharoa area to discuss predator control and planting works in the upper Paraiti/Mangorewa catchment adjacent to Kaharoa Kōkako Trust area. There has been some interest in a coordinated approach for pest animal control in this area.

Planned Completion Date: 2050

Project 8 – Kaituna Habitats Network

8C At least one Habitat Network Connection Project complete

Project Lead – Raponi Wilson (Tapuika Iwi Authority)

Progress Update

- Kokako Ecosystem Expansion Programme. An ambitious, multi-generational project that aims to work with its stakeholders to support connectivity between isolated populations of kokako, through habitat expansion, predator control and the creation of green corridors.
- Broad range of stakeholders invested including mana whenua, care groups, catchment groups, the forestry sector, local government, and NGO's.
- The Tapuika project "Te Wao Nui o Tapuika" a Kōkako corridor pest control project connecting the Kaharoa and Otanewainuku Kōkako populations is well underway with the install of 500+ hectare of trap and toxin infrastructure throughout the Te Matai native and pine forests. The first toxin operation is set to be undertaken in September 2024 giving the forest some much needed pest control.

Planned Completion Date: Ongoing Project with no end date as yet identified.

Project 9 – Pataka Kai

Outputs - 9A Kaiawa Working Group established/9B Work programme developed/9C Priority habitat restoration projects identified

Project Lead – Raponi Wilson (Tapuika Iwi Authority)

Progress Update

Highlights over the last six months:

The implementation of Pātaka kai has commenced and progress is steady, the Tapuika Iwi Authority have entered into 2x Environmental Management Plans in partnership with landowners and the BOPRC for the restoration of 2x sites which include:

- Kaiwaka - An old oxbow at the confluence of the Paraiti and Kaituna rivers which was cut out in a straightening of the Kaituna river which occurred in middle of the 20th century, to date Tapuika have carried out baseline water testing and planted over 6000 plants around the perimeter of the oxbow. Discussions have begun with BOPRC about the reconnection of fresh water via a culvert to increase the water flow and improve water quality.

- Titirangi - Tapuika have begun work on a property near the Maungarangi Road bridge, working in collaboration with the landowner, Tapuika has managed to remove weeds and plant native tree's protecting a 30-year-old Kauri grove on the edge of the Kaituna, further works at this site include planting and fencing off a large series of puna (springs) which flow into the Kaituna and retiring old grazing land. This riverside property is also the location of an old Tapuika pā called Titirangi.

- Tapuika and BOPRC have been having encouraging discussions with landowners stretching down this side of the river about creating a corridor of planting to improve the riparian habitat stretching this length of the river. Watch this space.

Planned Completion Date: TBC

Project 10 – Kaituna Community Connection

Outputs - 10A Communications Strategy developed/10B TMoK Website Developed/10C Annual work plan released/10D At least one annual community event/10E River Symposium held

Project Lead – Chairman Flavell/Raponi Wilson (TMoK)

Progress Update

10A Communications Strategy Developed – The website has now been completed with training to be provided in the New Year. The website forms a major part of the communications strategy., The communications strategy is being finalised as a final draft for approval by the committee.

Planned Completion Date: 28/02/2023

10B TMoK Website Developed - Work on a new website for Te Maru o Kaituna has been completed.

Planned Completion Date: 31/08/2022

10C Annual Work Plan Released - The secretariat work plan has been completed.

Planned Completion Date: 31/08/2022

10D At least one annual community event – Update will be provided within the next Biannual Report.

Planned Completion Date: TBC

10E River Symposium held – This has been picked up by the Tapuika Iwi Authority to lead and will be undertaken as per the date below.

Planned Completion Date: 30/04/2025

Project 11 – Kaituna River Access

Outputs - 11A River Access Mapping Task Completed/11B – Feasibility Study Completed for Waka Launching Site

Project Lead – Jason Crummer (WBOPDC)

Progress Update

Project 11A – Formal consultation on the Te Puke-Maketu Reserve Management Plan is complete and the final plan adopted by Council on 14 June 2022.

This plan includes reserve specific information for Council owned reserves and outlines key information and approaches to the management of these, including community aspirations for each site and specifically recognises Te Tini a Tuna – Kaituna Action Plan 2019-2029.

Improved access to the Kaituna River has been reflected in the plan and especially under the reserve management approach for Bell Road Reserve, where Te Tini a Tuna and the investigation for the site to be used for a waka launching site is specially included.

Click on the link to view the Te Puke – Maketū Reserve Management Plan Te Puke-Maketū RMP.

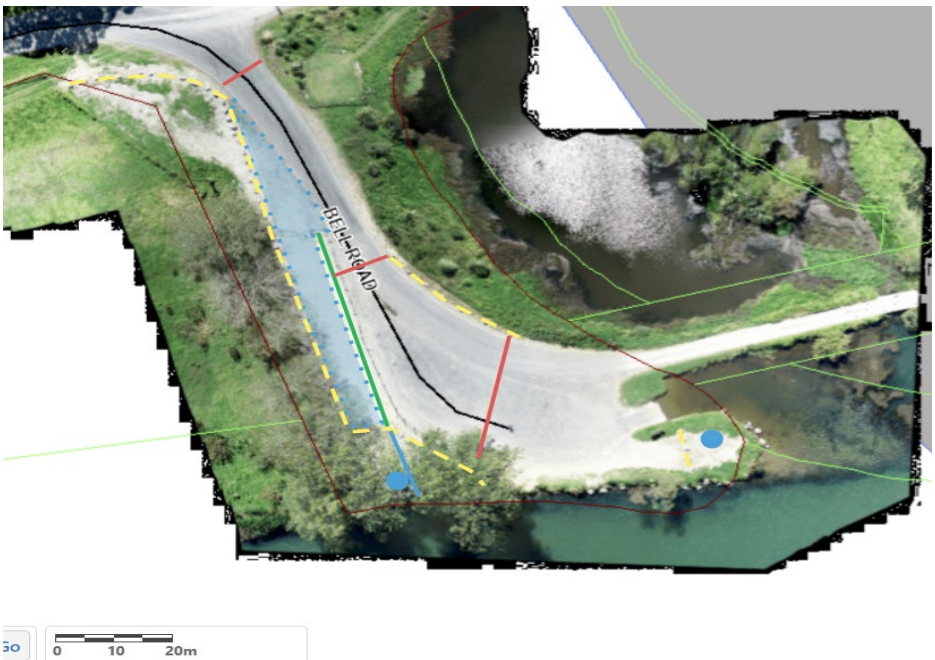
Project 11B – Council has completed the feasibility study that brings together and draws upon the insights from tāngata whenua and community representatives associated with the Kaituna River and includes sights along the Waiari Stream. The final report is being circulated to all respective tāngata whenua and stakeholders who fed into the study. WBOPDC staff will use a collaborative and design-led approach to implementation of key actions within the feasibility study that involves tāngata whenua, BOPRC river engineers, and where applicable, landowners, local groups, and stakeholders.

Bell Road Boat Ramp (Road Reserve)

WBOPDC has completed the following enhancements to this area including new CCTV camera:

Yellow dash line - boulders, Red solid line - judder bars, Green solid line - concrete swale, Blue solid line- Drainage pipe

Blue dashed area- Carpark- gravel, Blue dot- furniture.



Otaiparia Reserve – Ford Road, Maketu

WBOPDC have proposed to push out funding to implement the Otaiparia Reserve concept plan from 2024/25 to 2026/27 (decision to be confirmed September 2024).

Next steps – Continue investigating opportunities to enhance river access areas as outlined in the key actions of the waka launching feasibility study.

Planned completion date: Indicative timing for feasibility and implementation is 2022-2026.

Project 12 – Kaituna Cycleway/Walkway

Outputs - 12A Strategy Completed/12B Strategy Implementation (TEL to Maketū Connection)

Project Lead – Scott Parker (WBOPDC)

Progress Update

The only change since the previous update, is that WBOPDC's application to the Tourism Infrastructure Fund (Round 6), for funding towards a cycleway along the stopbank between the TEL and Ford Road (Otaiparia Reserve) at Maketū, was declined. The project status is currently "amber" reflecting that funding is not yet allocated towards this project and therefore cannot be advanced for now. Implementation timing remains subject to funding prioritisation (zero funding is currently allocated) and all land access requirements resolved.

We understand that discussions by BOPRC with a private property owner, about cycleway route alignment along a short section of privately owned stopbank may have commenced and we look forward to an update about that if this is the case.

Staff have requested feedback from TMoK governance as to any expectations about timing or other aspects about this project – **none has yet been received**.

Planned Completion Date: Unknown at this stage

Project 13 – Kaituna Cultural and Historical Heritage

Outputs - 13A Interpretation Plan Completed/13B Interpretation Plan Implementation

Project Lead – Chairman Flavell/Raponi Wilson (TMoK)

Progress Update

Planned Completion Date: Yet to be confirmed

Project 14 – Upper Catchment 'Gateway'

Output - 14A Concept Plan Developed

Project Lead – Nick Chater (RLC)

Progress Update

The main initiatives we have actioned in 2023 and 2024, was to increase the area and effectiveness of our planting and pest eradication projects. As such the trust itself was grown to increase numbers from within our community to lead planting and pest eradication projects. We have new areas and are engaging with local Iwi to plant in such locations as the Houmaitawhiti Marae Urupa (Otaramarae). We applied for and were successful with funding from Rotorua Trust and this enabled the removal of pest species and to plant and in more areas. Alongside our projects we supported others in the community doing similar work (John Trainer).

Another outcome has been working with local social service, community organizations and having rangatahi and whānau groups be involved in planting projects.

Rotorua Trust Funding - Monies was spent on:

Pest eradication contractor.

Glyphosate spray and Dye, Cut and Paste Weedkiller.

Spades (x10) and electric weed sprayer (1)

Traps - ATT220s Autotraps x 19 & DOC 200s x 30

Fence materials

Plants x 9000, in 4 separate areas around the Okere Falls and Otaramarae.

Signage.

Wasp spray.

Collaborating on other projects, including pulling out of wildling pines with John Trainer.

Total numbers to date (2022 -July 2024):

646 Possums.

485 rats

8 Ferrets

5 Hedgehogs.

550+ man hours.

2kms of trap line.

45,000+ plants in the ground (9000 this autumn).

Regular bird counts and monitoring of plant growths.

Moving forward - our future aspiration is to continue with the mahi, check and monitor trapping lines. Check and monitor our planting areas, including the 'freeing' of plants and ongoing pest plant eradication. We will continually have areas to plant. Trapping, although numbers of possums and rats are being caught is very much slowing, this will be ongoing.

An aspiration we have is to continue collaborating with Te Maru o Kaituna River Authority as we believe we will have greater impact in a much wider area. If there is an opportunity to collaborate in the future, we are very keen. Also, any opportunity to access plants through other projects that TMoK and Tapuika are doing would be appreciated, as funding seems to get harder and harder to come by.

We are seeing greater numbers of birds returning and certain species such as Pohutukawa and our native Mistletoe returning.

Starting point Houmaitawhiti, Otaramarae.

Starting point for Houmaitawhiti planting.

Stage one of planting area Houmaitawhiti.

Whanua planting day - Houmaitawhiti.

Community planting day - Houmaitawhiti.

Planned Completion Date: Unknown at this stage

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Project 16 – State of the Awa Integrated Monitoring and Reporting

Output - 16A Integrated Monitoring Plan Developed/16B Implementation of Integrated Monitoring Plan

Project Lead – Gina Mohi (BOPRC)

Progress Update

Incorporating Mātauranga Māori into research and monitoring within the Kaituna catchment:

- Discussions with affiliated iwi in the lower catchment have been initiated.
- The development of a collective, integrated approach to freshwater monitoring systems identified as high priority.
- Further development of mauri assessment frameworks and methodologies by on-going

Planned Completion Date: 2023-2025

Project 17 – Kaituna Catchment Network Mapping

Output - 17A Completed Stocktake and Collation of Available Information BOPRC most aspects, WBOPDC River Access and Cycleway Component

Project Leads – Georgia Edwards (BOPRC), Jason Crummer (WBOPDC)

Output - 17B – Completed Feasibility Study for Project 7

Project Lead – Georgia Edwards (BOPRC)

Output - 17C Completed Feasibility Study for Project 8 – BOPRC most aspects, WBOPDC River Access and Cycleway Component

Project Leads – Georgia Edwards (BOPRC), Jason Crummer (WBOPDC)

Progress Update

The layers in the dashboard have been updated to ensure that the latest data source is being used and that any layers that have been superseded are removed. Three new features have been added to the dashboard;

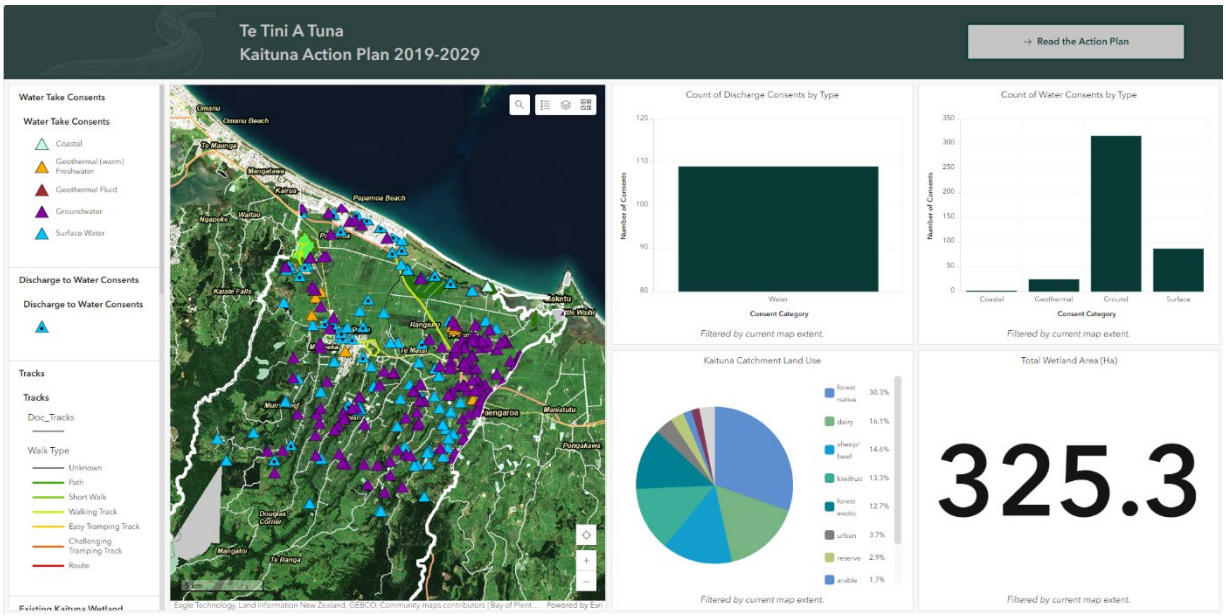
- A legend down the left-hand side of the map to make the information easier to use
- A bar graph showing the count of water discharge consents in a selected area, split by consent category.
- An indicator showing the hectarage of wetlands within a selected map area.

All datasets believed to be relevant to projects 7 and 8 and inform the feasibility of the projects have been added to the web map within the dashboard.

An ArcGIS Online group has been created with all of the internal BOPRC staff involved included, to allow them access to the dashboard. This group is able to be updated to include members from other organisations too if requested. Feedback has been requested from all members of this group.

Jason Crummer and Scott Parker from WBOPDC have been contacted around getting the most up to date cycleway and river access information from their organisation.

Planned Completion Date: Staff have requested feedback from TMoK governance as to any expectations about timing or other aspects about this project.



KAITUNA HE TAONGA TUKU IHO

A TREASURE HANDED DOWN

Te Maru o Kaituna