



FRESHWATER & PARTNERSHIPS

1 ACTIVITY OVERVIEW

- 1.1.1 Horizons' Freshwater & Partnerships Team works closely with other Horizons teams and people external to the organisation, to implement water quality and aquatic habitat improvement works.
- 1.1.2 The team draw on the scientific monitoring work carried out by Horizons and other agencies to prioritise and focus implementation efforts. The programme actively seeks funding from other sources, allowing the acceleration of works. Activities include riparian fencing and planting for water quality improvement and fish habitat enhancement, the identification and enhancement of whitebait spawning habitat and fish passage improvement, sewage treatment plant upgrades, work with horticulture growers and lake weed harvesting.
- 1.1.3 The Freshwater and Partnerships Activity is presented in six sections:
- The Regional Freshwater programme
 - The Manawatu Accord/ Manawatu **Freshwater Improvement Fund (FIF)** project;
 - The Whangaehu Catchment FIF project
 - The Lake Waipu (Ratana) FIF project; and
 - The Lake Horowhenua Accord & FIF project; and
 - Freshwater improvement work with horticulture growers.

2 ANNUAL PLAN TARGETS

- 2.1.1 The annual plan targets are aggregated in the Table 1 below shown individually in the sections below. Overall the programme has achieved some targets already and is on track to meet all of its targets. Some aspects of the programme are oversubscribed this year and work is being allocated into next year. A map of the work allocated this year is provided in Map 1.

Table 1: Freshwater & Partnerships programme progress on the 2019-20 Annual Plan targets. Note the Annual Report targets are not reported on here, these were provided as a part of Environment Committee reporting in August 2019^{1,2}

	Riparian fencing (km's)				Riparian planting			
	Target	Complete	Allocated	% complete	Target	Complete	Allocated	% complete
Regional	12	2.984	14.001	25%	20,000	9,405	22,034	47%
Manawatū	50	13.524	59.244	27%	40,000	47,470	92,916	119%
Whangaehu	17	0	9.426	0%	3,333	0	8,515	0%
Total³	79	16.508	82.671	21%	63,333	56,875	123,465	90%

	Fish passes				Community projects			
	Target	Complete	Allocated	% complete	Target	Complete	Allocated	% complete
Regional	1	0	1	0%	1	1	2	100%
Manawatū	4	0	1	25%	9	0	14	0%
Whangaehu	2	0	0	0%	4	0	7	0%
Total³	7	0	2	0%	14	1	23	7%

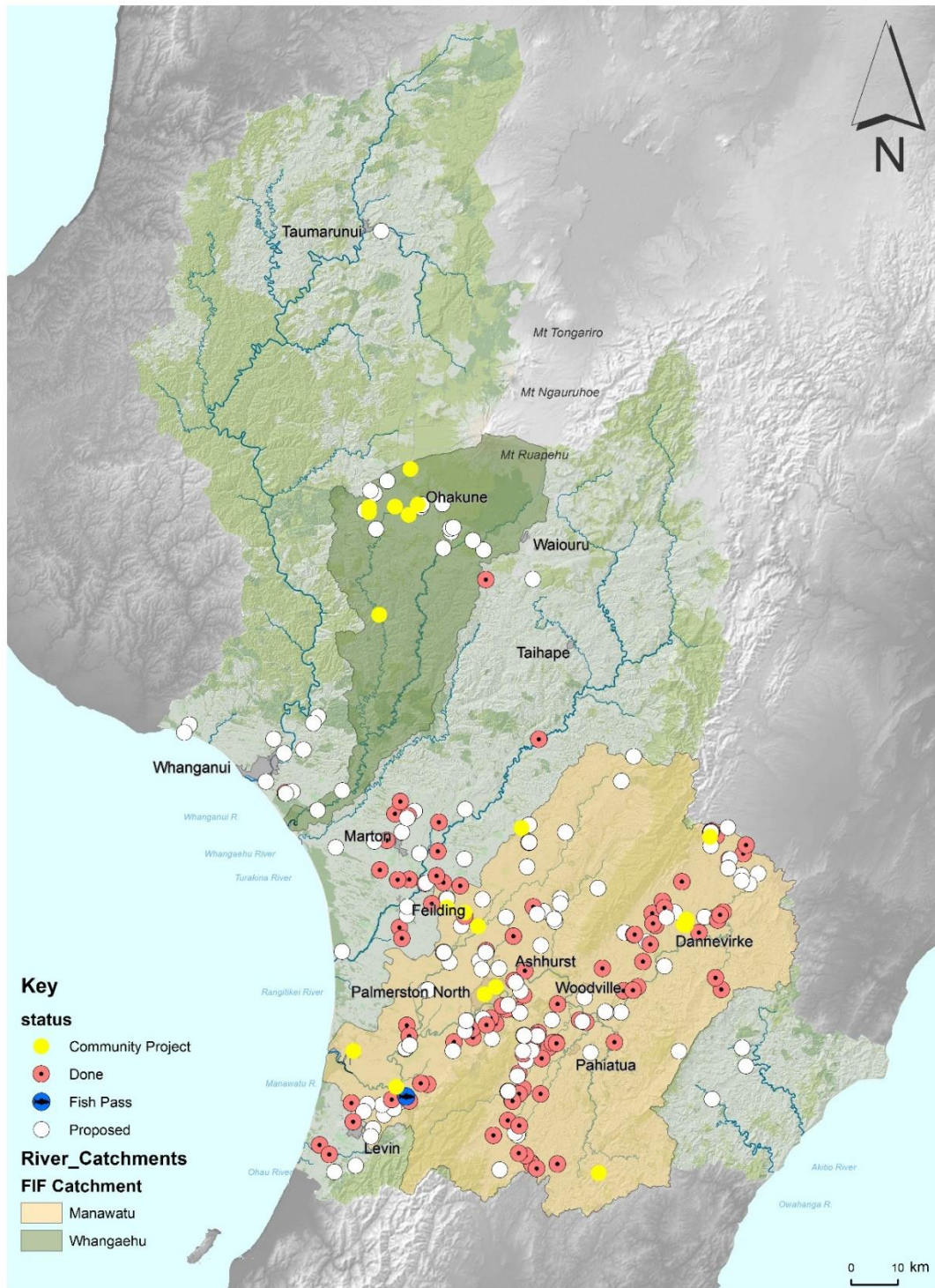


Photo 1 Riparian and fencing in the Rangitikei catchment during the 2019 planting season

¹ <http://www.horizons.govt.nz/HRC/media/Media/Agenda-Reports/Environment-Committee-2019-14-08/19118%20Natural%20Resources%20%20Partnerships%20Report.pdf>

² <http://www.horizons.govt.nz/HRC/media/Media/Agenda-Reports/Environment-Committee-2019-14-08/19118%20Annex%20A%20Freshwater%20Activity.pdf>

³ Note the totals in these target tables represent and overall total, achieving these totals does not necessarily mean all targets have been met, as it is the individual targets that are in the Annual Plan.



Freshwater Programme October 2019

Map prepared by L Ferguson, NRP Group on 7 Oct 2019

Map 1 Location of the Freshwater Grants allocated and completed in 2019-20, including the Regional, Manawatū and Whangaehu programmes. Each point on the map represents one fencing, planting, fish pass or community project.

3 REGIONAL FRESHWATER PROGRAMME

3.1 Programme Overview

3.1.1 This programme focuses on the protection and enhancement of waterways across the Region, excluding the Manawatū and Whangaehu FIF projects. The main component of the Regional Freshwater Programme is supporting stock exclusion from waterways via Freshwater Grants, advice and education, riparian enhancement and planting where desirable, aquatic habitat enhancement, and supporting industry and community-led initiatives.

3.2 Annual Plan Targets

3.2.1 A summary of progress against the Annual Plan targets is provided in Table 2.

Table 2 Progress reporting for Regional Freshwater programme Annual Plan targets for 2019-20.

	Target	Allocated	% allocated	Completed	% completed	Status
Stream fencing	12 km's	14,001	117%	2,984	25%	On-track
Riparian planting	20,000	22,034	111%	9,405	47%	On-track
Fish passes	1	2	200%	0%	0%	On-track
Community projects	1	1	100%	1	100%	Complete

3.3 Activity Update

3.3.1 The current level of interest in stream fencing and riparian planting is above the annual budget and the programme is currently allocating the water quality and quantity reserves (as approved via a resolution of Council). By December these reserves will likely be fully allocated and any new work signed up will be allocated to the 2020-21 financial year (starting 1st July 2020).

3.3.2 Horizons Freshwater and River Management teams held a meeting with the Akitio Community to discuss the potential removal of the two significant fish barriers in the Akitio catchment. As a follow up further information will be sought on how far further inland the salt water wedge will travel as a result of the removal of weir and also how much sediment is currently behind the weirs.

3.3.3 Staff attended the Moawhango catchment group meeting held at Aorangi Station which visited the Aorangi Stream. Staff from Massey University, Wellington Fish and Game, and Landcare Trust were also present. The group also looked at some of the works that had been completed with co-funding through Horizons Sustainable Land Use Initiative (SLUI) programme.

4 MANAWATU RIVER ACCORD/FIF PROJECT

4.1 Activity Overview

4.1.1 The Manawatū River Leaders' Accord Action Plan includes an array of activities related to improving water quality, to achieve the goals of the Accord. This activity funds works to improve water quality in the Manawatū Catchment as part of the Accord, including excluding stock from streams, riparian planting, improving fish passages and supporting community projects.

4.1.2 During this financial year and the following four years the targeted rate is to be used as Horizons' contribution to the Manawatu Catchment Freshwater Improvement Fund project that is managed by Horizons Freshwater and Partnerships Team.

4.2 Annual Plan Targets

4.2.1 A summary of progress against the Annual Plan targets is provided in Table 3.

Table 3 Progress reporting for Manawatū Freshwater Improvement Fund Annual Plan targets. The totals for completed work are as at 2 October 2019.

	Target	Allocated	% allocated	Completed	% completed	Status
Stream fencing	50km's	59,244	118%	13,524	27%	On-track
Riparian planting	40,000	92,916	232%	47,470	119%	Target achieved
Fish passes	4	1	25%	0	0%	Work in progress
Community projects	9	14	156%	0	0%	On-track
Annual report	1	1	100%	1	100%	Target achieved

4.3 Activity Update

Allocation levels

4.3.1 During the reporting period stream fencing and riparian planting flyers were delivered via rural post throughout the Manawatū Catchment to encourage landowners to get in touch with a Freshwater advisor if they are interested in stream fencing and riparian planting. Another round of advertising was planned for October 2019 however, with the current level of interest in the programme in the Manawatū Catchment this has been cancelled for this financial year.

4.3.2 During the reporting period orders/grants for riparian planting in the Manawatu Catchment have been closed off for the 2020 planting season. The level of interest and demand has exceeded

the staff capacity to be able to get any more plants in the ground for the next planting season. This cut off only applies for new enquiries received after the 1st October. This is likely to be applied to the rest of the riparian programme in the next month and any new planting jobs will need to be accommodated into winter 2021.

Stream Fencing and the Essential Freshwater programme

- 4.3.3 With the recent government announcements there has been an increase in enquiries around stream fencing. Although the recent announcements are only proposals at this stage, the programme has adopted an approach where any streams that will be subject to the proposed guidelines (greater than a metre wide and within the mapped area), the average five metre buffer requirement will be applied with an aim to future proofing the work.
- 4.3.4 The online map provided as part of the proposal provides important guidance to those areas that will be affected for those streams that are **wider** than a metre. There are still multiple streams and waterways that fall within the mapped area that will fall outside of the proposed regulations and continuing to work in these areas will result in water quality benefits.

Community Projects

- 4.3.5 Applications for the second round of community led projects closed on the 9th August with 20 applications received seeking a total of \$392,000 from a fund of \$100,000. The FIF project Governance Group selected eleven new projects to be funded and three are continuing into their second year. The total funding awarded is \$100,700. The new successful projects awarded funding are:
- Source 2 Sea - Plastic Pollution (Phase II);
 - Oroua Catchment Care Group – Windows to the Oroua (Phase II);
 - Source Manawatu River Road enhancement & access;
 - Save Our River Trust – giant weeping flax planting along Foxton Loop;
 - Source of Kiwitea – Gully retirement & planting;
 - Fallow Ave – Wapiti Ave – walkway & gully planting;
 - Mangaone West Landcare group – weed control;
 - Te Taiao Ukaipo – Taumata 2 – reinforce kaitiakitanga values at two sites within the catchment;
 - Huia Range School - Umutaoroa Ngarehe;
 - Te Keo Wetland – wetland enhancement project; and
 - Te Roopu Taiao o Ngati Whakatere - Te Maire Wetland Restoration.

5 WHANGAEHU FIF PROJECT

5.1 Activity Overview

5.1.1 This programme focuses on the delivery of the Ngā Wai Ora o Te Whangaehu Freshwater Improvement Fund project, which focuses on the protection and enhancement of waterways within the Whangaehu Catchment. The main components of the programme are supporting stock exclusion from waterways, riparian enhancement and planting where desirable, aquatic habitat enhancement and supporting industry and community-led initiatives. The following report provides the annual summary to Council on the Ngā Wai Ora o te Whangaehu Awa Freshwater Improvement Fund project as required by a Long Term Plan target.

5.2 Annual Plan Targets

5.2.1 A summary of progress against the Annual Plan targets is provided in Table 4.

Table 4 Progress reporting for Whangaehu Freshwater Improvement Fund Annual Plan targets.

	Target	Allocated	% allocated	Completed	% completed	Status
Stream fencing	17 km's	9.426	55%	0	0%	Work in progress
Riparian planting	3,333	8,515		0	0%	On-track
Fish passes	2	0	0%	0	0%	Work in progress
Community projects	4	7	175%	0	0%	On-track
Annual report	1	1	100%	1	100%	Target achieved

5.3 Activity Update

5.3.1 During the reporting period 1,141 stream fencing and riparian planting flyers were delivered via rural post throughout the Whangaehu catchment to encourage landowners to get in touch with a Freshwater Advisor if they are interested in stream fencing and riparian planting. Another round of advertising for stream fencing is being undertaken in October 2019 however, the reference to riparian planting has been removed given the current level of interest in the riparian planting programme in the catchment.

5.3.2 The Community Grants project was opened to applications on the 24th June 2019. Applications closed on the 9th August 2019 with eight applications being received seeking \$103,000 with \$43,000 being able to be allocated. The Governance Group decision making panel met on the 22nd

August 2019 to discuss the applications and agreed to fund six applications. The six successful projects are:

- Horopito Ratepayers Residents and Ratepayers Association – predator control along the Makotuku Stream;
- Moana Ellis and Makarunui Whanau and Winiata Campsite Trust - Restoration and protection of Taonui stream and tuna reserve at Makaranui;
- Mo Te Katoa Marae - Nga Manakitanga o te Makotuku, further riparian planting and fence construction on the Makotuku River;
- Ohakune School – Ohakune Primary School Miro Street stream restoration and development project;
- Raetihi Promotions Charitable Trust – continuation of Makotuku Walkway and educational signage;and
- Ruapehu College - Makaronui Monitoring and Restoration Education Programme

6 LAKE HOROWHENUA ACCORD AND FIF PROJECT

6.1 Activity Overview

6.1.1 The Lake Horowhenua Accord is a partnership between the Lake Horowhenua Trust, Horowhenua Lake Domain Board, Horowhenua District Council, Horizons Regional Council and the Department of Conservation to address water quality issues in Lake Horowhenua.

6.1.2 The Freshwater Improvement Fund project is led by the Horowhenua II part Reservation Trust (the Lake Horowhenua Trust). The project is in three parts comprising stormwater upgrades, cultural monitoring and groundwater research. Horizons' involvement in the project is sub-project related to groundwater research. The sub-project seeks to develop a better understanding of the water balance of Lake Horowhenua and the groundwater quality entering the lake to inform decisions around water allocation and water quality management.

6.2 Annual Plan Targets

- 6.2.1 A summary of progress against the Annual Plan targets is provided in Table 5. An annual report was provided to Council regarding lake Horowhenua in September 2018⁴ and further updates have been provided to subsequent Environment Committee meetings.

Table 5 Progress reporting for the Lake Horowhenua Accord Annual Plan Targets.

Annual plan target	Year to date	Target	% Complete	Status
Annual report to Council on lake restoration activity including the Freshwater Improvement Fund project for Lake Horowhenua.	0	1	100%	0

6.3 Activity Update

- 6.3.1 The Freshwater Improvement Fund project was intended to start on the 1st July 2018. The project is currently on-hold with the Ministry for the Environment awaiting the decisions of the Courts on the Lake Trust elections. Horizons has initiated the groundwater research independently of the Freshwater Improvement Fund project using Horizons co-funding component. This has included assessing the information needs for groundwater modelling and undertaking some field data collection including installation of two new flow sites on inflowing streams the Patiki and the Mangaroa (northern tributary).
- 6.3.2 NIWA have completed further analysis as a part of the legacy sediment report that was part of the Te Mana o Te Wai fund project. An updated report was produced during the reporting period and a further update is on track to be completed in November.

⁴ <http://www.horizons.govt.nz/HRC/media/Media/Agenda-Reports/Regional-Council-Meeting-2018-25-09/18157%20Lake%20Horowhenua%20Update.pdf>, the appendices to this report can be downloaded at the following link <http://www.horizons.govt.nz/calendar/regional-council-meeting-2018-25-09.aspx>

7 FRESHWATER IMPROVEMENT WORK WITH THE HORTICULTURAL SECTOR

7.1 Activity Overview

- 7.1.1 Building on previous work with the Tararua Growers Association as a part of the Freshwater Clean-Up Fund project, Horizons established new funding of \$70,000 per year for work with the horticulture sector to reduce nutrient and sediment loss from horticulture farms. This funding is being used in part to contribute to a **Sustainable Farming Fund** (SFF) project Future-Proofing vegetable production.
- 7.1.2 The balance of the funding will be prioritised to implementation of work to reduce nutrient and sediment losses from horticultural farms, including establishment of sediment traps etc, similar to the way freshwater grants are paid for fencing and planting of waterways. This funding may be utilised to design the proposed interventions. The following report provides the annual summary to Council on the work with the horticulture sector through the Freshwater programme as required by an Annual Plan target.

7.2 Annual Plan Targets

- 7.2.1 A summary of progress against the Annual Plan targets is provided in Table 6.

Table 6 Annual Plan performance measures for Freshwater Improvement Work with the horticulture sector.

Annual plan target	Year to date	Target	% Complete	Status
Annual report on work with the horticulture sector through the freshwater and partnerships programme to improve water quality.	0	1	0%	On track

7.3 Activity Update

Future-proofing vegetable production

- 7.3.1 This project⁵ is mainly funded through the Sustainable Farming Fund with a number of other co-funders including Horizons. The project is not specific to the Lake Horowhenua Catchment, although a lot of the ground work and trials are to occur within the catchment where the

⁵ <http://www.landwise.org.nz/projects/future-proofing-vegetable-production/>

relationships have already been established through other work programmes such as the Clean-Up Fund. The intent is that once these projects have been trialled in the Lake Horowhenua Catchment they can be moved out into other parts of the Region. This project has three main deliverables:

- Guidelines for Novel Nitrogen Recapture Techniques;
- Updated Good Nutrient Management Practices; and
- Common Pool Resource Management which is about getting actual change for the better happening on farms.

7.3.2 During the reporting period the first quarterly report for year two from LandWise was submitted to MBIE (as administrators of the SFF), a copy of this report was also provided to HRC, a brief summary is:

- Further monitoring has been established in collaboration with Horizons. This monitoring has been undertaken throughout the Arawhata Stream network to try and identify nutrient “hot spots” to help identify spots where bioreactor/s could be installed in the catchment;
- Work is continuing in the project “Community Management of Common Pool Resources” with much discussion occurring outside of the project;
- Workshops were held covering soil sampling, soil test results and fertiliser in Levin and Gisborne on the 16th and 17th of July 2019; and
- Work has continued on the calibration of fertiliser application equipment and a range of grower trials underway focusing on matching fertiliser usage with crop demand for nutrient.

8 LAKE WAIPU FIF PROJECT

8.1 Activity Overview

8.1.1 The Lake Waipu Freshwater Improvement Fund project specifically seeks to remove the discharge into the lake from the Rātana Wastewater Treatment Plant. This is to be led by Rangitikei District Council (RDC) as the consent holder and Horizons’ project relates to monitoring the effect of the removal of discharge from the lake and to understand the lake’s internal processes. The aim is to develop a restoration plan that includes addressing the legacy issue resulting from the current discharge. The following report provides the annual summary to Council on the Lake Waipu Freshwater Improvement Fund project as required by an Annual Plan target.

8.2 Annual Plan Targets

8.2.1 A summary of progress against the Annual Plan targets is provided in Table 7.

Table 7 Annual Plan performance measures for Freshwater Improvement Fund for Lake Waipu.

Annual plan target	Year to date	Target	% Complete	Status
Annual report to Council on the Waipu Catchment Freshwater Improvement Fund project	1	1	100%	Target achieved

8.3 Activity Update

8.3.1 This project officially commenced on the 1st July 2019. A draft of a sub-contract between Rangitikei District Council (RDC) and Horizons has been provided to RDC for feedback.

8.3.2 Horizons Catchment Data team has installed a continuous monitoring buoy on the lake and is collecting data on temperature, dissolved oxygen, pH, conductivity, and turbidity at 15 minute intervals and is being telemetered back to the Horizons office.

8.3.3 RDC are currently looking at potential discharge locations to land in close proximity to the Waste Water Treatment Plant. This may involve the purchase of land, or a long term lease of land.

8.3.4 During the reporting Horizons has been scoping the feasibility of undertaken a kakahi (freshwater mussel) survey within Lake Waipu with NIWA. Lake Waipu is known to contain a population of adult kakahi but it is not known if there is any active recruitment of juveniles in the lake and therefore whether the population is sustainable. We are currently aiming to hold a working group meeting prior to the Christmas period.

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