



WAIMAKARIRI
DISTRICT COUNCIL

Land and Water Committee

Agenda

Tuesday 22 March 2022

1.00pm

ZOOM

Members:

Councillor Sandra Stewart (Chairperson)

Deputy Mayor Neville Atkinson

Councillor Kirstyn Barnett

Councillor Al Blackie

Councillor Niki Mealings

Councillor Paul Williams

Mayor Dan Gordon (ex officio)

**AGENDA OF THE LAND AND WATER COMMITTEE TO BE HELD VIA ZOOM ON
TUESDAY 22 MARCH 2022 AT 1PM.**

Recommendations in reports are not to be construed as
Council policy until adopted by the Council

BUSINESS

Page No

1 **APOLOGIES**

2 **CONFLICTS OF INTEREST**

Conflicts of interest (if any) to be reported for minuting.

3 **CONFIRMATION OF MINUTES**

3.1 **Minutes of a meeting of the Land and Water Committee held on Tuesday
16 November 2021**

6-11

RECOMMENDATION

THAT the Land and Water Committee:

- (a) **Confirms**, as a true and correct record, the circulated Minutes of the meeting of the Land and Water Committee held on 16 November 2021.

4 **MATTERS ARISING**

5 **DEPUTATION/PRESENTATIONS**

Nil.

6 REPORTS

6.1 Cam River Enhancement Fund Review Decision – Sophie Allen (Water Environment Advisor)

12-21

RECOMMENDATION

THAT the Land and Water Committee:

- (a) **Receives** Report No. 220111002069.
- (b) **Notes** the Cam River Enhancement Fund projects of emptying existing sediment traps and bank reshaping to be carried out in autumn 2022, as well as the scoping and identification of Critical Source Areas for fencing projects.
- (c) **Notes** that the fencing projects are intended to be carried out by the Water Environment Advisor role in 2022-23.
- (d) **Approves** the Cam River Enhancement Fund fencing policy January 2022 (Trim 220124008290)
- (e) **Circulates** this report to the Waimakariri Water Zone Committee, the Rangiora-Ashley and Kaiapoi-Tuahivi Community Boards, the Mahi Tahī Joint Development Committee, and the Central Rural Drainage Advisory Group.

6.2 Community Biodiversity Funding – ZIPA Recommendation 2.8 – Sophie Allen (Water Environment Advisor)

22-29

RECOMMENDATION

THAT the Land and Water Committee:

- (a) **Receives** Report No. 211015166997.
- (b) **Approves** the allocation of \$20,000 to the Waimakariri Biodiversity Trust for operational and establishment expenses from the existing 2021-22 Zone Implementation Programme Addendum (ZIPA) Opex budget.
- (c) **Supports** creation of an open (contestable) funding round for 2022-23 and future budget allocations for ZIPA recommendation 2.8, if Waimakariri District Council staff resourcing is sufficient to administer an open fund.
- (d) **Circulates** this report to the Waimakariri Water Zone Committee and the WDC-Rūnanga Liaison meeting for information.

6.3 Private Well Study – Results From 2021 – Sophie Allen (Water Environment Advisor)

30-39

RECOMMENDATION

THAT the Land and Water Committee:

- (a) **Receives** report No. 220222024399.
- (b) **Notes** the findings of the 2021 study, with three wells above the nitrate-nitrogen Maximum Acceptable Value (MAV) set in the Drinking Water Standards for New Zealand 2005, amended 2018). Of the wells sampled 67% in Eyreton, 89% in Cust, 30% in Carleton and 40% in Swannanoa sampling areas were above half of the MAV (5.65 mg/L).
- (c) **Notes** that the median nitrate concentration for Eyreton and Cust sampling areas, as sampled in the 2021 study, do not meet the limit of a median of 5.65 mg/L nitrate-nitrogen in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. Swannanoa and Carleton sampling areas did meet this limit.
- (d) **Notes** that well owners of the three wells found to be above the MAV for nitrate have been contacted by WDC staff to discuss supply management or treatment, with the Cust property not currently in domestic use (ie.no one living at the house).
- (e) **Notes** that Waimakariri District Council and Environment Canterbury staff will continue to raise awareness of the health impacts of high nitrates, and to encourage private well owners to test water regularly, including updating and wider distribution of the publication of a 'managing a private well supply' pamphlet for the District.
- (f) **Notes** that Waimakariri District Council proposes to repeat this study in spring 2022 (with 10 wells in Eyreton, nine wells in Cust, 10 wells in Swannanoa and 10 wells in Carleton). Well owners from the previous sample rounds will be approached for repeat annual sampling, to allow for assessment of trends over time.
- (g) **Notes** that trends for nitrate concentration over time are not able to be concluded from data for only three years, or one year of data for Swannanoa and Carleton sampling areas.
- (h) **Circulates** this report to the Council, Community Boards and Waimakariri Water Zone Committee for information.

7 PORTFOLIO UPDATES

7.1 Biodiversity – Councillor Sandra Stewart

7.2 Land based Indigenous Reserves (Including River Margins) – Councillor Al Blackie

8 QUESTIONS

9 URGENT GENERAL BUSINESS

10 MATTERS TO BE CONSIDERED WITH THE PUBLIC EXCLUDED

Section 48, Local Government Official Information and Meetings Act 1987

RECOMMENDATION

THAT the public be excluded from the following parts of the proceedings of this meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution, are as follows:

Item N°	Minutes/Report of:	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
9.1	Minutes of a public excluded portion of a meeting of the Land and Water Committee held 16 November 2021	Confirmation of Minutes	Good reason to withhold exists under Section 7	Section 48(1)(a)

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987, and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:

Item N°	Reason for protection of interests	Ref NZS 9202:2003 Appendix A
9.1	Protection of privacy of natural persons To carry out commercial activities without prejudice	A2(a) A2(b)ii

CLOSED MEETING

See In Committee Agenda (blue papers)

OPEN MEETING

NEXT MEETING

The next meeting of the Land and Water Committee is scheduled for 1pm, Tuesday 17 May 2022.

WAIMAKARIRI DISTRICT COUNCIL

MINUTES OF THE MEETING OF THE LAND AND WATER COMMITTEE HELD IN THE COUNCIL CHAMBERS, 215 HIGH STREET, RANGIORA ON TUESDAY 16 NOVEMBER 2021 COMMENCING AT 1PM.

PRESENT

Councillors S Stewart (Chairperson), N Atkinson, K Barnett, A Blackie, N Mealings and P Williams

IN ATTENDANCE

Councillor P Redmond
C Brown (Manager Community and Recreation), G Cleary (Manager Utilities and Roading), K Simpson (Three Waters Manager), S Allen (Water Environment Officer), and E Stubbs (Governance Officer).

1 APOLOGIES

There were no apologies.

2 CONFLICTS OF INTEREST

There were no conflicts of interest recorded.

3 CONFIRMATION OF MINUTES

3.1 Minutes of a meeting of the Land and Water Committee held on Tuesday 20 July 2021

Moved: Councillor Barnett

Seconded: Councillor Stewart

THAT the Land and Water Committee:

- (a) **Confirms**, as a true and correct record, the circulated Minutes of the meeting of the Land and Water Committee held on 20 July 2021.

CARRIED

4 MATTERS ARISING

There were no matters arising.

5 DEPUTATION/PRESENTATIONS

5.1 Canterbury Water Management Strategy (CWMS) Goals and Progress Report - M Griffin and M Renganthan (ECan)

M Renganthan noted the purpose of the update was to provide an overview of the CWMS 2021 report and the work being done in the region which focused on the 2025 goals. The goals had been set in 2010 with ten target areas and had an ambitious 30 year time frame to meet. M Renganthan explained it was not just ECan and the Territorial Authorities delivering on the goals as community groups and other agencies were also assisting with meeting the goals.

M Renganthan advised that feedback on the two yearly report had been received. The Mayoral Forum wanted the information online to including a greater range and links to other agencies. There was a desire to move from activity based reporting to outcome based reporting to achieve a better understanding of which areas needed the most work. The 2021 report was a transition to that new reporting style and was very different to the paper copies produced in the past. It provided a much clearer idea of whether goals had been met.

In terms of the 2021 report it showed a range of results, however it was clear that a lot more work was required to meet the aspirational goals and required strong commitment and ongoing resourcing, not just from CWMS partners, but other groups as well.

There had been a lot of background work to meet the 2025 interim goals. In order to meet goals, and to provide evidence that goals were being met, joint work programmes had been prepared between the territorial authorities and ECan. It had also been identified that there needed to be improvements to the way information was gathered and shared so that information could be utilised better. Part of the Regional Committee's role would be to monitor the implementation of the CWMS.

M Renganthan noted a target and goals booklet had been produced as currently there was no single document where all the goals and targets could be viewed. This made it easier to track the goals from 2010 to 2040. In terms of the work of the Waimakariri District Council the work programme provided a list of actions to meet key target areas. It showed there were a number of projects that could be accomplished within the five key target areas and these target areas would help guide Long Term Plans (LTP) in the future.

S Allen explained the work programme was used to advise the LTP process. It had been reviewed by staff, particularly around the biodiversity work as the National Programme for Indigenous Biodiversity had not been in place at the time. The work programme was a guide for the LTP but need not be followed to the letter. G Cleary added that the Council was a 'part player' as there was only so much the Council controlled. In comparison to some Councils in Canterbury, the Waimakariri was proactive, and while the LTP did not capture all aspects it was heading in the right direction.

M Griffin spoke to the Waimakariri Zone Committee (WZC) Action Plan noting it was the latest iteration of priority setting. The priorities were aligned with the Long Term Plan's three year cycle for ECan and Waimakariri and were based on the Zone Implementation Programme and the ZIP Addendum.

M Renganthan commented that following the publication of the 2021 report the next step was to determine how best to work together towards achieving the 2025 goals. She noted the need to be mindful of a wide range of changes including Plan Change 7, Three Waters reform, the National Policy Statement on Biodiversity and Resource Management Act reforms. The Mayoral Forum was committed to the CWMS implementation.

Councillor Atkinson referred to the goals and targets in the 'CWMS Targets and Goals' document and commented that they appeared extremely weak, for example, goals of 'made progress' or 'continue to report' did not inspire confidence. M Renganthan advised that the goals had been approved by the Mayoral Forum and by a wide range of stakeholders. G Cleary agreed there were a large number of stakeholders involved in setting goals. There would be little disagreement to Councillor Atkinson's point regarding the strength of the goals, however, they were the goals set by the Mayoral Forum so that was what was being reported.

Councillor Blackie referred to the drinking water goals which included having access to source water that did not require treatment and asked how that would fit with mandatory chlorination. G Cleary advised the government could override aspirations of the CWMS.

Councillor Stewart noted that she had been the WZC representative since 2016 and believed the 2021 report to be disappointing which was a view shared with the majority of the Committee. Strategies were well and good, but it was the actions that were important. There needed to be better communication of the actual on ground programs and what was in the budget. Councillor Stewart requested ECan to report on 'a project by project' basis and on what was being done to meet targets with the budget provided to enable everyone a clear idea of the status of the work still to be done. She was not concerned with whether the information was provided by written report or online. She was, however, deeply concerned that Tim Davies' report highlighted that nothing had been achieved after 11 years of CWMS.

Councillor Barnett asked, looking at the plan and seeing it was aspirational, what the areas where improvement had been made and which areas were falling behind. M Renganthan could only respond behalf of ECan, noting that while they had concentrated on a number of actions there had been insufficient collation or tracking of information relating to the goals. Areas that had been achieved included the setting of limits in the sub-regional planning process and ZIPAS, as well as understanding emerging contaminants. Areas which were failing were braided rivers, ecosystem health and biodiversity and kaitiakitanga.

Councillor Barnett noted that if the funding and resources were not available the goals should be made more realistic. M Renganthan replied that the goals had been set in 2010. There had been discussion at the Mayoral Forum regarding the reforms in this space and how to make the goals fit for the future. G Cleary added the Plan Change 7 (PC7) decision was to be released shortly and with the three Waters Reform there were questions around entity roles. There may be a need to have a relook at the goals.

Councillor Atkinson asked, in their role as elected members, should they send a message to the Mayoral Forum requesting that the goals be re-written so as to be achievable. Councillor Stewart commented that she believed there was strong support for reviewing the relevance of the goals. G Cleary believed staff or ECan should be providing advice to the Council regarding the goals, including the implications of the PC7 changes.

6 REPORTS

6.1 Cam River Enhancement Fund Review Decision – S Allen (Water Environment Advisor)

S Allen noted that there had been agreement at the July 2021 Land and Water meeting to review strategic options for the remaining Cam River Enhancement Fund. The Land and Water Committee held delegation for the fund.

Three options were looked at for the design of works.

1. Instream physical works
2. Instream physical works and catchment work
3. Education and engagement programme.

The recommendation was for option 2. If approved staff would seek approval from Fish and Game and consult with the Department of Conservation.

Councillor Atkinson asked if money would be retained from the \$180,000 for ongoing maintenance, for example clearing sediment traps. S Allen advised that some funds had been set aside for the Cam River works in the ZIPA budget and there were other rural drainage budgets which could potentially be utilized. G Cleary added there was an existing maintenance budget. He did not think it would be a good use of the fund by reducing it for maintenance works. He commented that storm water discharge in general was requiring more and more funding for maintenance and it was something they tried to allow for in the LTP.

Moved: Councillor Stewart seconded: Councillor Atkinson

THAT the Land and Water Committee:

- (a) **Receives** memo No. 211014166428.
- (b) **Approves** the strategic direction laid out in Option 2 'in-stream physical works, catchment works and engagement' (the preferred option) for the allocation of the remaining \$179,758 of the Cam River Enhancement Fund on in-stream and catchment works.
- (c) **Notes** that Council staff would seek the agreement of North Canterbury Fish and Game, and consult with the Department of Conservation for the allocation of funding to Option 2, as required by the Environment Court decision.
- (d) **Circulates** this report to the Waimakariri Water Zone Committee, the Rangiora-Ashley and Kaiapoi-Tuahiwi Community Boards, the Rūnanga-WDC Liaison meeting, and the Central Rural Drainage Advisory Group.

CARRIED

Councillor Stewart commented that the decision was a long time coming and she believed there was consensus around the table. The options had gone to the WZC and Ngai Tūāhuriri. The Environment Court Edict had been to improve the instream habitat. Improvements required landowner buy in to understand their effects on the stream. The environment had changed a lot since 2000 when the fund had first been set up.

Councillor Atkinson reminded members that the money was actually a fine rather than a fund. It was a shame that it had taken 21 years to spend and it should now progress with urgency.

7 PORTFOLIO UPDATES

7.1 Biodiversity – Councillor Sandra Stewart

The National Policy Statement (NPS) on Indigenous Biodiversity would be made public by the end of the year and that would have implications for the Council. A paper would be going to the Mayoral Forum regarding the need for provisions in upcoming Annual Plans to give effect to the NPS.

The Arohatia te Awa budget had \$250,000 in the current year. Significant progress had been made particularly on planting, surveying and fencing.

7.2 Land based Indigenous Reserves (Including River Margins) – Councillor Al Blackie

The Taranaki Stream inanga spawning ground project was progressing well.

A basic concept plan for the Mahinga kai area was being developed. The WHoW Aquaplay project were in consultation to carry out planting in the area at their own expense.

Councillor Atkinson asked if there was a tally kept of the number of trees that had been planted over the last 10 years by the Council and as community projects. Councillor Stewart advised that the following week there was to be a local Environmental networking forum. This was an inaugural meeting looking to bring together local community groups to share information on what was being carried out around the district and would be a good place to start to answer that question. C Brown noted the amount of the Council plantings could be determined and formed part of the wider Council environmental strategy.

J Ward asked if the Council tree planting was considered when looking at the carbon footprint. S Allen advised Trees that Count provided estimates and that could be extrapolated to district planting.

8 QUESTIONS

Nil.

9 URGENT GENERAL BUSINESS

Nil.

10 MATTERS TO BE CONSIDERED WITH THE PUBLIC EXCLUDED

Section 48, Local Government Official Information and Meetings Act 1987

Moved Councillor Stewart seconded Councillor Barnett

THAT the public be excluded from the following parts of the proceedings of this meeting.

The general subject of the matter to be considered while the public is excluded, the reason for passing this resolution in relation to the matter and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution, are as follows:

Item N°	Minutes/Report of:	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
10.1	Sophie Allen (Water Environment Advisor)	North Brook Trail – project endorsement and project support	Good reason to withhold exists under Section 7	Section 48(1)(a)

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987, and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:

Item N°	Reason for protection of interests	Ref NZS 9202:2003 Appendix A
10.1	Protection of privacy of natural persons To carry out commercial activities without prejudice	A2(a) A2(b)ii

CARRIED

CLOSED MEETING

See In Committee Agenda (blue papers)

OPEN MEETING

NEXT MEETING

The next meeting of the Land and Water Committee is scheduled for 1pm, Tuesday 15 February 2021 in the Council Chambers, 215 High Street, Rangiora.

There being no further business the meeting concluded at 2.21pm.

Chairperson

DATE

Unconfirmed

WAIMAKARIRI DISTRICT COUNCIL**REPORT FOR DECISION**

FILE NO and TRIM NO: DRA-19 / 220111002069

REPORT TO: LAND AND WATER COMMITTEE

DATE OF MEETING: 22 March 2022

AUTHOR(S): Sophie Allen – Water Environment Advisor

SUBJECT: Cam River Enhancement Fund – works update

ENDORSED BY:
(for Reports to Council,
Committees or Boards)


Department Manager


Chief Executive

SUMMARY

- 1.1 This report summarises planning and updates with Cam River Enhancement Fund projects, presents a fencing policy for approval, and provides an update on the amount remaining in the fund (\$179,441 as of 1 March 2022).
- 1.1.1 In Autumn 2022, two sediment traps installed on the Waituere (Tuahiwi Stream) under the Cam River Enhancement Fund will be emptied of accumulated silt, and a sediment trap on the Middle Brook created by the University of Canterbury will also be emptied. Trial use of a suction truck is proposed for emptying of one of the sediment traps. Bank stabilisation works on the North Brook between Boys Road and Marsh Road and the South Brook will also be completed.
- 1.2. The option adopted by the Land and Water Committee in November 2021 to reduce in-stream works, and include catchment projects as been verbally approved by North Canterbury Fish and Game, and sent to the Department of Conservation for consultation, with no feedback received to-date.
- 1.3. A policy has been proposed for funding of fencing for Cam River Enhancement Fund projects that aligns with stock exclusion requirements for Plan Change 7 of the Land and Water Regional Plan and the RMA Stock Exclusion Regulations (2020). Note that this policy specifically enables an exemption for funding of fencing for Māori-owned land, even if fencing is required by Plan Change 7 and/or RMA Stock Exclusion Regulations, to help address historic inequities of Māori land ownership. There is uncertainty on how to apply the Plan Change 7 rules, that has led to some potential projects not being included in the programme at present until there is more clarity on ephemeral waterways and intermittently flowing drains.

Attachments:

- i. Cam River Enhancement Fund fencing policy January 2022 (TRIM 220124008290)

2. RECOMMENDATION

THAT the Land and Water Committee:

- (a) **Receives** Report No. 220111002069.
- (b) **Notes** the Cam River Enhancement Fund projects of emptying existing sediment traps and bank reshaping to be carried out in autumn 2022, as well as the scoping and identification of Critical Source Areas for fencing projects.

- (c) **Notes** that the fencing projects are intended to be carried out by the Water Environment Advisor role in 2022-23.
- (d) **Approves** the Cam River Enhancement Fund fencing policy January 2022 (Trim 220124008290)
- (e) **Circulates** this report to the Waimakariri Water Zone Committee, the Rangiora-Ashley and Kaiapoi-Tuahiwi Community Boards, the Mahi Tahī Joint Development Committee, and the Central Rural Drainage Advisory Group.

3. BACKGROUND

- 3.1. The Cam River Enhancement Fund was established by an Environment Court ruling in July 2001. This ruling required the consent holder (WDC) to provide an amount of \$25,000 per year over a five year period for habitat restoration in the Cam River system. The purpose of the fund, as noted in the Environment Court decision, was to be used “for habitat restoration in the Cam River system ... as agreed between North Canterbury Fish and Game Council and the consent holder in consultation with the Department of Conservation.”
- 3.2. It was on this basis that a Cam River and Tributaries Enhancement Committee was informally set up with Council staff. Given their interest in the Cam River, representatives of Te Ngāi Tūāhuriri Rūnanga, the Cam River Working Party, and Environment Canterbury were also invited to attend.
- 3.3. Initially landowner applications were accepted for the fund, with some budget allocated to planting and fencing projects. A strategic catchment approach, however, was decided to be undertaken by the Committee. The Committee commissioned a scoping strategy of the Cam River and its tributaries from Dr Henry Hudson. A final version of this report was delivered in 2017 (TRIM 170410035142[v2]).
- 3.4. Based on the Dr. Henry Hudson Scoping Strategy, funding was allocated to in-stream engineering projects. Detailed engineering design of elements was completed over the period 2018-20.
- 3.5. Due to consent conditions, landowner feedback and design concerns, a strategic update was undertaken that was presented to the Land and Water Committee meeting on the 16 November 2021. This strategic review recommended to re-incorporate catchment initiatives, such as fencing of critical source areas, in addition to in-stream works.

4. ISSUES AND OPTIONS

Approval of the Strategic Review

- 4.1. Verbal approval from North Canterbury Fish and Game has been received for option approved by the Land and Water Committee in November 2022. Additional written feedback may also be received. No reply has been received to-date from consultation information sent to the Department of Conservation, apart from confirmation that the information had been received by the correct party. Waimakariri District Council staff intend to proceed with the strategic review changes to the work programme, such as fencing projects in 2022-23.

Work programme

- 4.2. Works programmed for autumn 2022 are shown in Table 1. Indicative works for 2022-23 are shown in Table 2.
- 4.3. Project management from June 2022 – May 2023 will be provided by the maternity leave cover for the Water Environment Advisor role.

- 4.4. An experimental trial of a recycler truck, to suck and centrifuge out sediment then cart it away, is proposed for the emptying of a Greens Road sediment trap (STS1) on the Waituere (Tuahiwi Stream). This is partly due to the preference to not leave sediment to de-water along the road reserve, as is the case if an excavator was used. It will also be possible to contrast the recycler truck and excavator methods for if there are any potential environmental benefits.

Proposed fencing policy

- 4.5. The proposed fencing policy allows for the discretion to fund up to 100% of fencing costs on a property has been disadvantaged from development due to current or historic discriminatory legislation and/or regulations relating to Māori-owned land since the signing of te Tiriti o Waitangi. This is in line with government changes to Te Ture Whenua Maori Amendment Act (2020) to support Māori land owners and their whānau to connect with, govern and realise their aspirations for their whenua. A map of Māori-owned land is available from the Ministry of Justice as guidance of which properties this exemption would apply to.
- 4.1. Clarity is being sought from Environment Canterbury planners whether Plan Change 7 of the Land and Water Regional Plan stock exclusion rules also apply to ephemeral waterways and intermittently flowing artificial watercourses, such as drains. Until there is this clarity, there is some difficulty with assessing whether some projects scoped by the Water Environment Advisor meet the fencing policy for funding from the Cam River Enhancement Fund. Some potential projects have been excluded from this report until there is more certainty around how to apply the Plan Change 7 stock exclusion rules.

Stream walks / site inspections

- 4.2. The Water Environment Advisor has completed a North Brook stream walk between Northbrook and Marsh Road, and completed site inspections of drains of the Cam River main stem, and the Waituere / Tuahiwi Stream. Areas identified for future site inspections to identify possible catchment projects (based on 2016 Environment Canterbury stream walk data) are the left bank of the lower Cam River below its confluence with South Brook, the right bank of the lower South Brook, and the left bank of the upper South South Brook.

Table 1: Programmed works for the Cam River Enhancement Fund in autumn 2022-23

Project description	Location (waterway)	Estimated cost	Project manager
Greens Road (STS1) and Church Bush Road (STS4) sediment trap emptying.	Waituere (Tuahiwi Stream)	\$4,500 for STS1 (Hydrotech cost estimate for a recycler truck and spoil disposal fees) \$2,350 for Church Bush Road (STS4). Excavator provided by CORDE	Water Environment Advisor
Middle Brook sediment trap emptying (created by the University of Canterbury).	Middle Brook	\$2,350 for University of Canterbury sediment trap. Excavator provided by CORDE	Water Environment Advisor
Argillite roading trial for sediment run-off/dust control on Marsh Road, Waikoruru Road and Camside Road intersections	Cam River main stem	\$15,000 (fund contribution to full cost)	Roading Engineer
Bank stabilisation and erosion control works – see Figure 1	North Brook between Boys Road and Marsh Road	\$2,000	Land Drainage Engineer
Bank stabilisation works	South Brook below the Rangiora Wastewater Treatment Plant	\$2,000	Land Drainage Engineer

Table 2: Indicative works for the Cam River Enhancement Fund 2022-23

Project description	Location (waterway)	Estimated cost	Project manager
Fencing of Critical Source Area and drains of the Cam River mainstem (Tuahiwi Road) – See Figure 2	Drains connected to the Cam River mainstem	\$15/m (2 hot wires for cattle exclusion). 219m of CSA on Māori Land (ephemeral ponding), = \$3,285	Water Environment Advisor

		\$15/m (2 hot wires for cattle exclusion). 135m of an intermittently flowing drain = \$2,025	
Fencing of Waituere / Tuahiwi Stream. See Figure 3 3m setback probably required under the RMA Stock Exclusion 2020 Regulations	Waituere / Tuahiwi Stream	\$20/m sheep fence or \$15/m cattle fence TBC. Okaihau Road Māori-owned land (104m) = \$1560-\$2080.	Water Environment Advisor
North Brook Trail funding between Boys Road and Marsh Road (Stage 1) – Fencing off of Critical Source Areas with at least 6m setback. Meets the fencing policy - moving back of an existing functional fence. –see Figure 4	North Brook	\$3,000 estimate towards the full fencing cost of the North Brook Trail project	Spark family/ Waimakariri Landcare Trust
BS1 – Bank stabilisation south of Marsh Road	Cam River mainstem	\$TBC	Water Environment Advisor



Figure 1: Willow removal and bank stabilisation on the North Brook to prevent further scour and erosion.

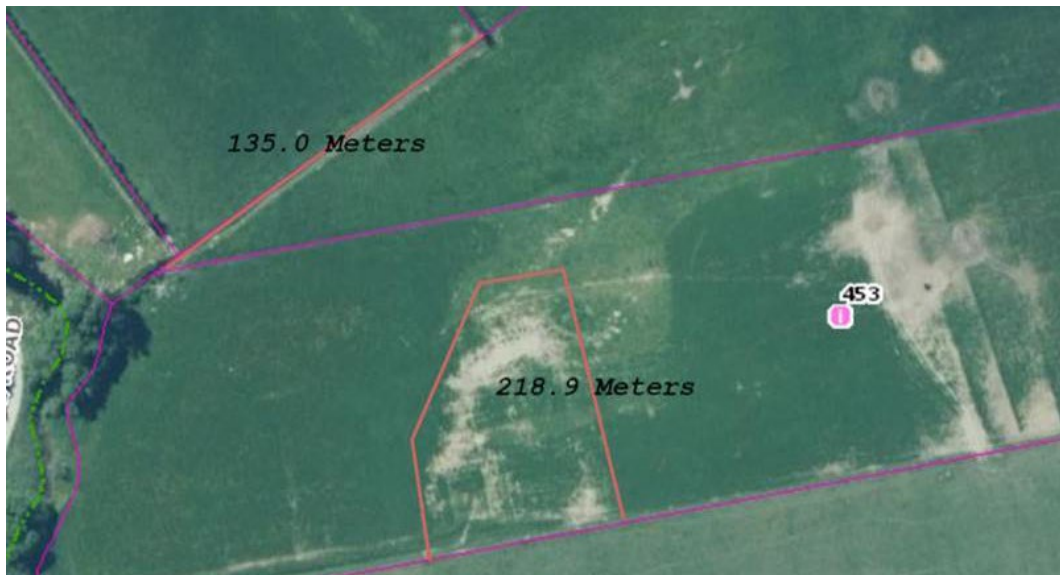


Figure 2: Fencing (orange lines) at properties with drainage into the Cam River mainstem, with recurrent ponding on Māori-owned land (219m), and an ephemeral drain (135m)



Figure 3: Fencing (orange line) at a property along the Waituere/ Tuahiwi Stream, at Okaihau Road (104m)



Figure 4: A Critical Source Area (CSA) on the Spark property between Boys Road and Marsh Road. Partial funding of a fence by the Cam River Enhancement Fund is proposed to move the fence back approximately 6 metres.

Implications for Community Wellbeing

There are not implications on community wellbeing by the issues and options that are the subject matter of this report.

- 4.3. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

- 5.1.1. Te Ngāi Tūāhuriri hapū are likely to be affected by, or have an interest in the subject matter of this report. Therefore this report will be presented and/or circulated at a Mahi Tahi Committee meeting.

5.2. Groups and Organisations

- 5.2.1. There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as the North Canterbury Fish and Game Council.
- 5.2.2. The Cam River Enhancement Fund subcommittee, under which budget allocation was made but was disestablished in 2019, had representation from North Canterbury Fish and Game, Te Ngāi Tūāhuriri Rūnanga, the Cam River Working Party, as well as the agency representatives from the Department of Conservation and Environment Canterbury.

5.3. Wider Community

- 5.3.1. The wider community is not likely to be affected by, or to have an interest in the subject matter of this report. The wider community has not been specifically consulted on the Cam River Enhancement Fund.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

- 6.1.1. There are no financial implications of the recommendations sought by this report.
- 6.1.2. This budget is included in the Annual Plan/Long Term Plan 2022-23 as a budget that has been carried over from previous annual budgets.
- 6.1.3. It is anticipated that there will be some funds remaining after completion of works from works in 2021-22. Consent conditions may incur extra costs that have not been scoped, such as erosion and sediment control measures. WDC staff will review and seek allocation of any remaining budget with the Land and Water Committee in 2022-23.

6.2. Sustainability and Climate Change Impacts

- 6.2.1. The recommendations in this report do not have specific sustainability and/or climate change impacts.

6.3 Risk Management

- 6.2.2. There are no specific risks arising from the adoption/implementation of the recommendations in this report.
- 6.2.3. COVID-19 pandemic response requirements and resource consent condition requirement and notification timelines could impact on the delivery of planned projects.

6.3 Health and Safety

- 6.2.1. There are no specific health and safety risks arising from the adoption/implementation of the recommendations in this report. Suitable safety procedures will also be determined for contractors working within the Cam River main stem or its tributaries when a contractor is confirmed.

7. CONTEXT

7.1. Consistency with Policy

- 7.1.1. This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

- 7.2.1. Resource Management Act (1991). Resource consents are issued under this Act.

7.3. Consistency with Community Outcomes

- 7.3.1. The Council's community outcomes, particularly 'There is a healthy and sustainable environment' relevant to the actions arising from recommendations in this report.

7.4. Authorising Delegations

- 7.4.1. No delegations apply. This report is for information only.

WAIMAKARIRI DISTRICT COUNCIL**MEMO**

FILE NO AND TRIM NO: DRA-19 / 220124008290
DATE: 24 January 2022
MEMO TO: Kalley Simpson – 3 Waters Manager
FROM: Sophie Allen – Water Environment Advisor
SUBJECT: **Cam River Enhancement Fund policy for fencing costs**


1. Fencing Criteria

- 1.1. WDC staff request the discretion to fund up to 100% of reasonable fencing costs if:
 - 1.1.1. Movement of an existing and 'functional' fence is required in order to achieve the required setback or stock exclusion for a Cam River Enhancement Fund project. 'Functional' is defined as meeting Canterbury Land and Water Regional Plan (LWRP) stock exclusion rules (including Plan Change 7 as it has been notified).

An exemption (requiring individual negotiation) is if a fence is currently not on a correct property boundary.
- 1.2. WDC staff request the discretion to be able to fund up to 100% of reasonable fencing costs for a new fence if:
 - 1.2.1. A fence is required for effectiveness of a Cam River Enhancement Fund project, but fencing is **not** required under Plan Change 7 of the Land and Water Regional Plan stock exclusion rules. (e.g. installation of sheep fencing to prevent grazing of plants) and/or
 - 1.2.2. A significant setback from the waterway will be created that is not required by the Land and Water Regional Plan (including Plan Change 7) or the RMA Stock Exclusion Regulations (2020).
- 1.3. WDC staff request the discretion to be able to fund up to 50% of reasonable fencing costs if a new fence is required that is on a shared property boundary with WDC.
- 1.4. WDC staff proposes to fund none of the fencing costs (i.e. 0%) if a new fence or fence upgrade is required under Plan Change 7 Land and Water Regional Plan stock exclusion rules. Under Plan Change 7 fencing of artificial watercourses is required in some cases in the Waimakariri Water Zone.
 - 1.4.1. An exemption to 1.4 above: WDC staff request the discretion to be able to fund up to 100% of reasonable fencing costs for a new fence (even if a new fence or fence upgrade is required under Plan Change 7 Land and Water Regional Plan stock exclusion rules) if:
 - 1.4.1.1.A property has been disadvantaged from development due to current or historic discriminatory legislation and/or regulations relating to Māori-owned land since the signing of te Tiriti o Waitangi. Consideration to who the stock owner is, and whether

they have the ability to fund fencing will also be taken into account by WDC staff.

- 1.5. WDC staff request the discretion to not move a fence to obtain the RMA Stock Exclusion Regulations (2020) setback of 3m (where required) if:
 - 1.5.1. There is an existing fence that is of good condition;
 - 1.5.2. A landowner is not willing to move a fence line to the ideal desired setback distance.

WAIMAKARIRI DISTRICT COUNCIL**REPORT FOR DECISION****FILE NO and TRIM NO:** WAT-10-14 /211015166997**REPORT TO:** LAND AND WATER COMMITTEE**DATE OF MEETING:** 22 March 2022**AUTHOR(S):** Sophie Allen – Water Environment Advisor**SUBJECT:** Community biodiversity funding – ZIPA Recommendation 2.8**ENDORSED BY:**
(for Reports to Council,
Committees or Boards)
Department Manager
Chief Executive**1. SUMMARY**

- 1.1. An allocation of \$20,000 per annum of Zone Implementation Programme Addendum (ZIPA) budget is earmarked for community group support to carry out biodiversity work under ZIPA recommendation 2.8.
- 1.2. This report proposes the criteria for assessment and recommends the allocation of \$20,000 in 2021-22 to the Waimakariri Biodiversity Trust, with a review for the allocation of funding proposed in 2022-23.
- 1.3. The criteria used to prioritise allocation of the funding in 2021-22 were;
 - 1.3.1. The community organisation must be a legal entity, such as an incorporated society or charitable trust.
 - 1.3.2. The organisational vision and proposed projects must align with the Waimakariri Water Zone Committee Action Plan 2021-24 (Attachment i)
 - 1.3.3. The ability to coordinate an overarching vision and discussion platform for the Waimakariri Community (for example the ability to hold biodiversity/environmental networking forums within the District).
 - 1.3.4. The ability to provide community engagement support for WDC-endorsed projects, including Arohatia te Awa and the North Brook Trail.
 - 1.3.5. The ability to provide community education and advice to Waimakariri District landowners for indigenous biodiversity projects.
- 1.4. The funding is proposed as organisational support to enable the establishment of the Waimakariri Biodiversity Trust, specifically the following deliverables:
 - 1.4.1. Recruitment and wages of a part-time coordinator for the Trust.
 - 1.4.2. Support for indigenous biodiversity projects in the district (including Arohatia te Awa and the North Brook Trail).
 - 1.4.3. Communications planning and creation of marketing materials that clearly visually and verbally communicate the vision of the trust.
 - 1.4.4. Mapping and detailing current biodiversity initiatives in the region.
 - 1.4.5. Event coordination, including the preparation of communication material, locate and communicate with the various biodiversity groups in the Waimakariri District.
 - 1.4.6. Website creation, hosting and web designer fees.

- 1.4.7. Response to requests from private landowners for advice about, and help with, indigenous biodiversity, planting and restoration projects.
- 1.5. If Waimakariri District Council staff resourcing is available, an open (contestable) funding round is recommended for the allocation of the \$20,000 per annum from 2022-23, which could consider multi-year funding options.

Attachments:

- i. Waimakariri Water Zone Committee Action Plan 2021-2014 (TRIM 211015167102)

2. **RECOMMENDATION**

THAT the Land and Water Committee

- (a) **Receives** Report No. 211015166997.
- (b) **Approves** the allocation of \$20,000 to the Waimakariri Biodiversity Trust for operational and establishment expenses from the existing 2021-22 Zone Implementation Programme Addendum (ZIPA) Opex budget.
- (c) **Supports** creation of an open (contestable) funding round for 2022-23 and future budget allocations for ZIPA recommendation 2.8, if Waimakariri District Council staff resourcing is sufficient to administer an open fund.
- (d) **Circulates** this report to the Waimakariri Water Zone Committee and the WDC-Rūnanga Liaison meeting for information.

3. **BACKGROUND**

3.1. Waimakariri District Council approved the Zone Implementation Programme Addendum (ZIPA), developed by the Waimakariri Water Zone Committee in December 2018.

3.2. Recommendation 2.8 of the Zone Implementation Programme Addendum (ZIPA), states:

That Environment Canterbury and the Waimakariri District Council work with community groups to address indigenous biodiversity protection and enhancement by means such as:

- *Provision of administrative support;*
- *Provision of financial assistance;*
- *Identification of funding sources;*
- *Provision of technical advice; and*
- *Endorsement of projects.*

3.3. An allocation of \$20,000 per year has been earmarked to this recommendation in the Waimakariri District Council Long Term Plan 2021-31 (TRIM 210401054372). This allocation of funding is anticipated to lead to strengthened community-led biodiversity work in the District in the future.

3.4. The proposal for a Waimakariri Biodiversity Trust was raised by the Biodiversity Working Group of the Waimakariri Water Zone Committee (WWZC). Judith Roper-Lindsay, a community member of the WWZC, offered to establish the Trust and sought expressions of interest from the public to be trustees.

3.5. The Waimakariri Biodiversity Trust received registration as a charitable trust in March 2022 with the following trustees as officers of the Trust:

- *Judith Roper-Lindsay of Ashley, retired ecologist;*

- *Simon Rutherford of Kaiapoi, business owner and weaver;*
- *Rhoda Quinn of Oxford, retired solicitor;*
- *Peter Courtney of Rangiora, a secondary school teacher;*
- *Fiona van Petegem of Ashley, an engineer;*
- *Matt Lester of Waikuku Beach, a landscape architect; and*
- *Felicity Wolfe of Rangiora, a journalist and communications specialist.*

3.6. The Trustees held their first meeting in July 2021, with subsequent trust meetings since then. Greg Byrnes, manager of Te Kōhaka o Tūhaitara Trust, has offered to support the Waimakariri Biodiversity as an advisor in a personal capacity.

3.7. The draft Waimakariri Biodiversity Trust deed states:

*The **VISION** of the Trust is to see vibrant, healthy, indigenous ecosystems valued across the Waimakariri District.*

*The **PURPOSE** of the Trust is to provide the necessary information, education and resources to enable the community to protect, restore, create and sustainably manage indigenous biodiversity in the Waimakariri District. To achieve this purpose the trustees will:*

- i. value the principles of mātauranga Māori and of ecological science in implementing a Ki uta ki tai – Mountains to Sea approach to indigenous biodiversity protection and restoration across the Waimakariri District*
- ii. work collaboratively and with honesty, integrity and professionalism;*
- iii. bring a positive message and approach to inspire and encourage;*
- iv. respect cultural diversity and the principles of the Treaty of Waitangi;*
- v. in the course of the Trust's activities commit to limiting any adverse environmental impact.*
- vi. develop guidelines for the operation of the Trust, against which all Trustee activity is measured. These are to be reviewed annually or as required and updated, if necessary.*

4. ISSUES AND OPTIONS

Criteria for biodiversity funding within the District

4.1. There were five key criteria whereby the Waimakariri Biodiversity Trust was assessed for funding from the ZIPA Recommendation 2.8 budget:

- 4.1.1. The community organisation must be a legal entity, such as an incorporated society or charitable trust.
- 4.1.2. The organisational vision and proposed projects must align with the Waimakariri Water Zone Committee Action Plan 2021-24 (Attachment i)
- 4.1.3. The ability to coordinate an overarching vision and discussion platform for the Waimakariri Community (for example the ability to hold biodiversity/environmental networking forums within the District).
- 4.1.4. The ability to provide community engagement support for WDC-endorsed projects specifically Arohatia te Awa and the North Brook Trail.
- 4.1.5. The ability to provide community education and advice to Waimakariri District landowners for indigenous biodiversity projects.

- 4.2. The Waimakariri Biodiversity Trust has been incorporated as a charitable trust in March 2022, and therefore is a legal entity.
- 4.3. Funding of the Waimakariri Biodiversity Trust aligns with the Zone Committee's Action Plan 2021-2024, thereby meeting the second funding criterion. Specifically the target for increased indigenous biodiversity in the Zone is met by:
- *Facilitating the establishment of a Waimakariri Biodiversity Trust and provide ongoing support to this Trust;*
 - *Provide ongoing support and encouragement to groups in the zone advancing indigenous biodiversity values.*
- 4.4. The Waimakariri Biodiversity Trust is well-placed to coordinate a biodiversity/environmental networking forum within the district, meeting the third criterion. Best-practice for such forums is to be community-led, due to increased durability and ability to be held at an 'arms-length' from the Council. It is a possible that the Waimakariri Biodiversity Trust will assume the coordination of an environmental networking forum commenced by Waimakariri District Council in December 2021, but is not a specific deliverable of the 2021-22 funding due to uncertainty at this stage of the future of the environmental networking forum and whether it will continue to be led by Waimakariri District Council.
- 4.5. The Waimakariri Biodiversity Trust is well-placed to provide community engagement support for WDC-endorsed projects, as well as education and advice for indigenous biodiversity projects- meeting the fourth and fifth criteria for funding. It should be noted that this is not a unique role, i.e. there are other trusts such as the Waimakariri Landcare Trust and Landcare Trust and other place-based trusts that would also be well-placed to provide such a service.

Proposed funding deliverables of the Waimakariri Biodiversity Trust

- 4.6. It is proposed that the \$20,000 of funding is allocated to the following deliverables, which are proposed to be expended by the Waimakariri Biodiversity Trust by 30 June 2023:
- 4.6.1. Recruitment and wages of a part-time coordinator for the Trust.
 - 4.6.2. Support for indigenous biodiversity projects in the district (including Arohatia te Awa and North Brook Trail)
 - 4.6.3. Communications planning and creation of marketing materials that clearly visually and verbally communicate the vision of the trust.
 - 4.6.4. Mapping and detailing current indigenous biodiversity initiatives in the region.
 - 4.6.5. Event coordination, including the preparation of communication material, locate and communicate with the various biodiversity groups in the Waimakariri District.
 - 4.6.6. Website creation, hosting and web designer fees.
 - 4.6.7. Response to requests from private landowners for advice about, and help with, indigenous biodiversity, planting and restoration projects.
- 4.7. Visioning work for the Trust is anticipated be carried out with \$5,000 of funding from the Waimakariri Water Zone Committee's Community Fund, and therefore is not a deliverable for the funding from the ZIPA budget.

Next Steps

- 4.8. Accountability reporting of outcomes achieved are proposed be submitted for sixth monthly reporting from the Waimakariri Biodiversity Trust to WDC Biodiversity staff. This accountability reporting will then be included in reporting to the Land and Water Committee meeting, potentially via a report from WDC Biodiversity staff and/or a deputation by the Waimakariri Biodiversity Trust.

Contestable fund creation

- 4.9. An open (i.e. contestable) fund could be created for allocation of the ZIPA 2.8 budget (\$20,000/year) for greater transparency with existing community and environmental groups within the District. The creation of a contestable fund is feasible for 2022-2023 onwards. However, contestable funds usually have a high staff resource cost to administer, and are therefore not recommended unless there is sufficient WDC staff resourcing, and multi-year funding was considered (for example the allocation of budget for three years, 2022-25).

Other matters

- 4.10. A real or perceived conflict of interest should be noted that the chair of the Waimakariri Biodiversity Trust is also a member of the Waimakariri Water Zone Committee (WWZC). However there is no known or potential conflict of interest of the members of the Land and Water Committee who hold the delegated authority to allocate ZIPA funding.

Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report.

- 4.11. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by, or have an interest in the subject matter of this report. If this report is no longer public excluded after the Land and Water Committee meeting, it will be circulated for information at a Rūnanga-WDC Liaison meeting.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as biodiversity organisations within the District who are seeking operational funding.

5.3. Wider Community

The wider community is not likely to be affected by, or to have an interest in the subject matter of this report.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

There are no financial implications of the decisions sought by this report. The budget is existing budget allocated in the Long Term Plan 2021-31. This report is regarding allocation of the budget to a community group.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do have sustainability and/or climate change impacts. Successful allocation of the ZIPA Recommendation 2.8 budget to a community biodiversity group could achieve sustainability and/or climate change mitigation and adaptation outcomes.

6.3 Risk Management

There are minor risks arising from the adoption/implementation of the recommendations in this report that proposed outcomes will not be achieved by the recommended community group. This is mitigated by requiring accountability reporting of the Waimakariri Biodiversity Trust that enables a review of effectiveness.

6.3 **Health and Safety**

There are no health and safety risks for the Council arising from the adoption/implementation of the recommendations in this report. The health and safety of the coordinator role at the Waimakariri Biodiversity Trust would fall with the Trust if an employee, as defined as a Person Conducting a Business or Undertaking (PCBU), or with a contractor for the trust.

7. **CONTEXT**

7.1. **Consistency with Policy**

This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. **Authorising Legislation**

7.2.1. No applicable legislation

7.3. **Consistency with Community Outcomes**

7.3.1. The Council's community outcomes are relevant to the actions arising from recommendations in this report.

7.4. **Authorising Delegations**

7.4.1. The Land and Water Committee holds the delegation for the allocation of the Zone Implementation Programme Addendum (ZIPA) budget.

Waimakariri Water Zone Committee

Action Plan July 2021–June 2024



Image – Ashley River / Rakahuri

This summary highlights the key actions agreed by the zone committee for the next three years.

For more detail on the zone committee and plan, visit ecan.govt.nz/waimakariri-water-zone.

Our purpose:

To uphold the mana of the freshwater bodies within the Waimakariri Water Zone by facilitating enduring land and water management solutions that give effect to the Canterbury Water Management Strategy (CWMS) vision, principles and targets in our zone.

The CWMS aims to enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.

Our functions:

Community engagement – continuing an active programme of engaging with communities on freshwater management matters and facilitating the provision of advice to councils (relevant territorial authorities and Environment Canterbury) and others (e.g. private sector) contributing to freshwater management.

Enhancing delivery capability and coalition of the willing – working with stakeholders across all sectors to extend the resources available to implement the CWMS, including securing additional resources and seeking opportunities to promote, support, leverage and expand catchment-based initiatives that advance CWMS implementation.

Progress reporting – annual progress reporting to councils on progress towards delivery of the zone-specific priorities and CWMS target areas identified in the Zone Committee Action Plan.

Our Councils' priorities for our zone committee are:

Waimakariri District Council

Ecosystem Health and Biodiversity

- To maintain or improve existing high-quality indigenous dryland ecosystems in intermontane basins and on the plains;
- Reduction of threatened or at-risk status of indigenous fish species compared with 2020;
- All coastal lagoons, hāpua and estuaries show improvement in key ecosystem health indicators compared with 2010.

Drinking Water

- Implementation programmes in place for each zone to achieve catchment load limits;
- Achieve nutrient efficiency targets for the zone on all new irrigated land and 80% of other land in major rural land uses (pasture, major arable, and major horticulture crops, and have 100% of rural properties working towards these targets (and for properties within urban boundaries that apply nutrients over significant areas).

Recreation and Amenity Opportunities

- Cyanobacterial risk for priority contact recreation sites in Canterbury rivers and lakes is understood and managed for public health;
- Manage water demand through meeting requirements under the Land & Water Regional Plan and continue regular community education/behaviour change campaigns on water use management and conservation.

Environment Canterbury

Kaitiakitanga Wāhi Taonga and mahinga kai targets

Grow support and resources to achieve the goal of five mahinga kai projects.

Ecosystem health and biodiversity targets

- Increased riparian management to protect aquatic ecosystems;
- Reducing the number of fish barriers;
- Protection and enhancement of wetlands.

Recreation and amenity targets

Achieving the 2025 target to restore priority freshwater recreation opportunities in each zone.



This taniko (woven pattern for clothing) Pātikitiki, represents lashing or binding together. The smaller diamonds represent pātiki (flounder). The Aramoana are white chevron shaped spaces representing the ocean waves. Together they represent the sustainment of our waters and the binding organisations that protect them. Pātiki is also the symbol for abundance.

– Ariki Creative

Waimakariri Water Zone Committee

Action Plan 2021–2024

Improved monitoring of groundwater and surface water in the zone

To encourage community understanding and awareness of monitoring and clarify future monitoring requirements in the zone by:

- Facilitating collaboration to develop a wider monitoring network in the zone;
- Encouraging more monitoring by catchment and landcare groups.

We will measure this by:

- Establishing a working group to bring together relevant organisations to review existing freshwater monitoring in the zone and address future monitoring requirements across the zone;
- Promoting the benefits of monitoring and establish options for the community to be involved in monitoring;
- Working with ECan and WDC to ensure monitoring results are accessible and understandable to the community;
- Facilitate catchment and landcare groups and the wider community working together with Councils to expand the freshwater monitoring in the Waimakariri and share information.

Increased indigenous biodiversity in the zone

To protect and improve the indigenous biodiversity, habitat or ecosystems in the zone through:

- Managing and eliminating plant and animal pest species;
- Assisting all landowners and managers to integrate indigenous biodiversity management into the wider aspects of land and water (catchment) management.

We will measure this by:

- Facilitating the establishment of a Waimakariri Biodiversity Trust and provide ongoing support to this Trust;
- Provide ongoing support and encouragement to groups in the zone advancing indigenous biodiversity values;
- Encourage catchment and landcare groups to protect, enhance and create more indigenous biodiversity habitat on properties;
- Promoting greater community understanding about biodiversity, and wetlands, and the benefits of their protection and enhancement.

Promoting the natural braided character and increased flow of the Ashley River/Rakahuri

To protect the braided river values associated with the Ashley River/Rakahuri, ki uta ki tai, by:

- Promoting an improved community understanding of land and water use impacts on braided river character and the lower catchment ecosystems;
- Working to make the Ashley River/Rakahuri safe for contact recreation, with improved river habitat, fish passage and customary use, and flows that support natural coastal processes.

We will measure this by:

- Encouraging the improved understanding of landowners and wider community of climate change impacts on the Ashley River/Rakahuri;
- Encouraging landowners and agencies to protect the landscape and indigenous biodiversity values in the upper catchment;
- Supporting weed control in the upper and middle sections of the catchment;
- Supporting an investigation into existing consents and water use in the Ashley River/Rakahuri catchment;
- Encouraging landowner and agency efforts to improve the habitat health of lowland spring-fed tributaries;
- Supporting investigations focused on understanding and improving the ecosystem health of Te Aka Aka/Ashley estuary.

Protection and enhancement of recreation in the zone

To protect and manage the natural landscape and recreation resources in the Waimakariri Water Zone by:

- Facilitating the extension of recreation corridors and amenity space in the zone;
- Encouraging awareness of land use impacts on high value landscapes in the zone.

We will measure this by:

- Supporting the completion of the Silverstream loop;
- Supporting specific Arohatia te Awa marginal strip recreation works;
- Encouraging investigation into the causes of cyanobacteria blooms;
- Encouraging reductions in pollutants/contaminants to help reduce nuisance algal growths in waterways.

Improved Mahinga Kai within the Waimakariri Water Zone

To protect and enhance mahinga kai practices in waterways within the Waimakariri Water Zone, while also:

- Encouraging a wider understanding of mahinga kai practices in the community;
- Increasing Mahinga kai enhancement and access on the plains.

We will measure this by:

- Supporting the Ngāi Tūāhuriri mahinga kai enhancement projects on the plains and in lowland waterways;
- Encouraging catchment and landcare groups to protect and improve riparian habitat to support mahinga kai practices on the plains and lowland waterways;
- Supporting mahinga kai workshops across the zone.

Want to get involved?

Head to ecan.govt.nz/waimakariri-water-zone



Image courtesy of N Ledgard & G Davey



New committee member, Martha Jolly

Image – Burgess Stream, near Eyreton

WAIMAKARIRI DISTRICT COUNCIL**REPORT FOR INFORMATION**

FILE NO and TRIM NO: WAT-10-14-01/220222024399


REPORT TO: LAND AND WATER COMMITTEE

DATE OF MEETING: 22 March 2022

AUTHOR(S): Sophie Allen – Water Environment Advisor

SUBJECT: Private well study – results from 2021

ENDORSED BY:
(for Reports to Council,
Committees or Boards)



Department Manager



Chief Executive

1. SUMMARY

- 1.1 Waimakariri District Council (WDC), alongside Environment Canterbury and Canterbury District Health Board, have been recommended in the Zone Implementation Programme Addendum (ZIPA) to develop a programme for testing and reporting of water quality in private drinking water supply wells.
- 1.2 This report summarises the findings of the WDC private well study for 2021, and compares to results from the 2019 and 2020 studies carried out for wells in the Eyreton and Cust sampling areas. Carleton and Swannanoa were new sampling areas that were added to the study in 2021. Nitrate and other chemical parameters were sampled in 39 wells in total; nine in Cust (same wells as 2019 and 2020), 10 in Eyreton (same wells as 2019 and 2020), 10 in Carleton and 10 in Swannanoa.
- 1.3 There was a decrease in the nitrate mean and median from 2019 to 2020 in both Cust and Eyreton samples, however this increased in the 2021 study to be similar again to the 2019 results. It is not possible to conclude any long-term trend in nitrate levels from only three data points for each well. Carleton and Swannanoa areas were sampled for the first time in the 2021 study, with nitrate-nitrogen medians lower than found for Cust and Eyreton, however the Carleton area showed a lot of variability (see Figure 1).
- 1.4 In the 2021 sampling round, three wells (one each in Cust, Carleton and Swannanoa) measured above the Maximum Acceptable Value (MAV) of 11.3 mg/L (17.3 mg/L, 15.1 mg/L and 16 mg/L nitrate-nitrogen respectively). The MAV is set in the New Zealand Drinking-water Standards for New Zealand (DWSNZ 2005, amended 2018). It should be noted that private wells that are domestic self-suppliers do not need to comply with the DWSNZ except at the building consent stage, however are used for guidance values in this report. Well owners with water found to be above the MAV have been contacted to discuss supply management or treatment. The Cust property is not currently in domestic use, with no one living at the house.
- 1.5 67% of the wells in Eyreton, 89% for Cust, 30% for Carleton and 40% Swannanoa were above half of the MAV (5.65 mg/L) for nitrate-nitrogen. The median nitrate concentration for Cust and Eyreton, as sampled in the 2021 study would not meet the limit of a median of 5.65 mg/L nitrate-nitrogen (half of the MAV) in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. This is as was found in the 2019 study, however Eyreton did meet this limit in 2020.

- 1.6 In 2021, no correlation between increasing well depth and decreasing nitrate level was found. In 2019 and 2020 a weak correlation was found for this relationship. Other factors such as geochemical processes and nitrate recharge sources for likely play a larger role than depth.
- 1.7 Other chemical parameters analysed in the 2021 study are not presented in this report for brevity. Other contaminants that were found to be over a MAV were turbidity and pH. The Guideline Value (GV) for iron was also exceeded in some wells. Microbiological testing was not carried out due to the risk of contaminating a sample if not trained appropriately.
- 1.8 This nitrate study is intended be repeated in spring 2022 with the same 39 wells with the purpose of allowing for assessment of trends over time. Well owners from the 2019-21 sample rounds will be approached again for repeat annual sampling.
- 1.9 A pamphlet about managing a private well water supply has been produced by Waimakariri District Council, with the support of the groundwater team at Environment Canterbury. This will be updated to include information about the Water Services Act 2021, and requirements for drinking water suppliers, which includes those who share water supplies or have a commercial premise (i.e. anyone who is not considered a domestic self-supplier).

2. **RECOMMENDATION**

THAT the Land and Water Committee:

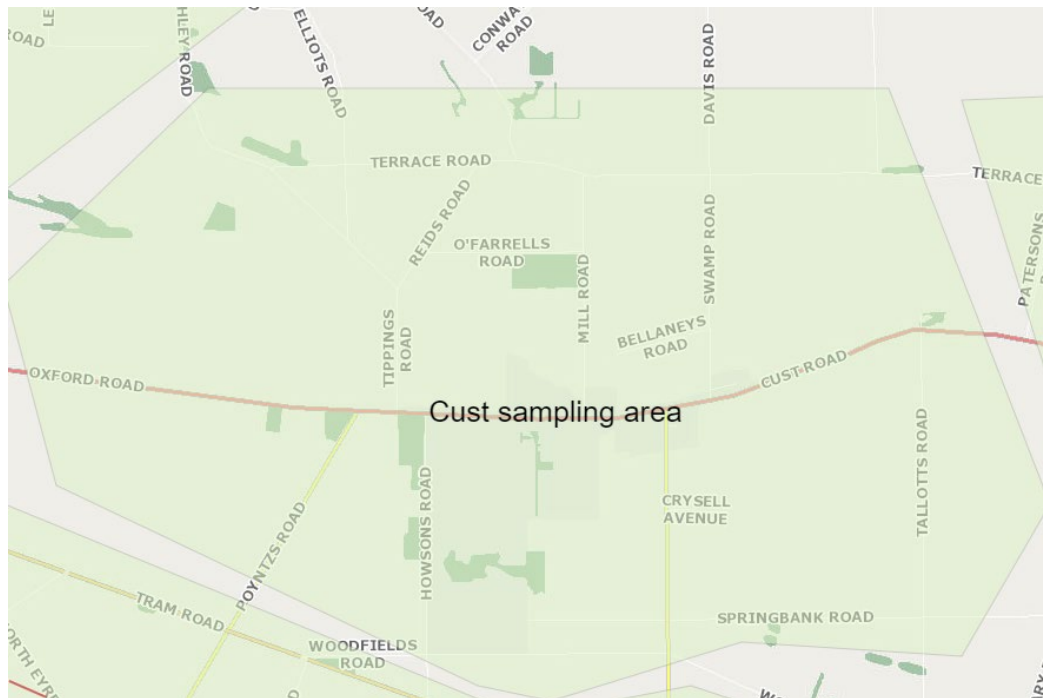
- (a) **Receives** report No. 220222024399.
- (b) **Notes** the findings of the 2021 study, with three wells above the nitrate-nitrogen Maximum Acceptable Value (MAV) set in the Drinking Water Standards for New Zealand 2005, amended 2018). Of the wells sampled 67% in Eyreton, 89% in Cust, 30% in Carleton and 40% in Swannanoa sampling areas were above half of the MAV (5.65 mg/L).
- (c) **Notes** that the median nitrate concentration for Eyreton and Cust sampling areas, as sampled in the 2021 study, do not meet the limit of a median of 5.65 mg/L nitrate-nitrogen in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. Swannanoa and Carleton sampling areas did meet this limit.
- (d) **Notes** that well owners of the three wells found to be above the MAV for nitrate have been contacted by WDC staff to discuss supply management or treatment, with the Cust property not currently in domestic use (ie.no one living at the house).
- (e) **Notes** that Waimakariri District Council and Environment Canterbury staff will continue to raise awareness of the health impacts of high nitrates, and to encourage private well owners to test water regularly, including updating and wider distribution of the publication of a 'managing a private well supply' pamphlet for the District.
- (f) **Notes** that Waimakariri District Council proposes to repeat this study in spring 2022 (with 10 wells in Eyreton, nine wells in Cust, 10 wells in Swannanoa and 10 wells in Carleton). Well owners from the previous sample rounds will be approached for repeat annual sampling, to allow for assessment of trends over time.
- (g) **Notes** that trends for nitrate concentration over time are not able to be concluded from data for only three years, or one year of data for Swannanoa and Carleton sampling areas.
- (h) **Circulates** this report to the Council, Community Boards and Waimakariri Water Zone Committee for information.

3. **BACKGROUND**

- 3.1 Drinking-water safety is the joint responsibility of territorial authorities, the Regional Council (Environment Canterbury) and the local health board (Canterbury District Health Board). Environment Canterbury manages the quality at source. Territorial Authorities, such as WDC, manage the quality of water coming out of the tap. For public supplies, this is through management of the supply, storage and distribution network. For private supplies, this is through the issuing of a resource consent for new developments (which will specify how water is to be sourced) and issuing of a building consent for new dwellings which confirms that the water is potable at the time of issuing the consent. The District Health Board manages the impact of the water quality on public health, and can give advice on the health impacts of water quality.
- 3.2 A pilot study of nitrate levels in private wells in the Cust and Eyreton areas was carried out in late 2019 and late 2020, by WDC for nitrate and a range of other chemical parameters. Carleton and Swannanoa were added to the study in 2021. Refer to Maps 1-4 for the definition of the Eyreton, Cust, Carleton and Swannanoa sampling areas.
- 3.3 The purpose of the private well study is to work towards implementing the Zone Implementation Programme Addendum (ZIPA) Recommendation 3.16, adopted by Council in December 2018. Recommendation 3.16 states 'That Environment Canterbury, Waimakariri District Council and Canterbury District Health Board work together to:
- a. Develop a programme for testing and reporting of water quality in private drinking water supply wells, and
 - b. Raise awareness of health impacts from high nitrates in drinking water.'
- 3.4 Cust (Map 1) and Eyreton (Map 2) were recommended as the two areas for the pilot study in 2019 due to previous high nitrate levels reported in Environment Canterbury monitoring wells and reports from private well owners. Nitrate levels had been reported to Council in 2018, by private well owners in the Eyreton area, that were close to the Maximum Acceptable Value (MAV) of 11.3 mg/L of nitrate-nitrogen as defined in the Drinking-water Standards for New Zealand.
- 3.5 The sampling areas of Carleton (Map 3) and Swannanoa (Map 4) were added to the study in 2021. These areas were selected as areas that will be modelled by Environment Canterbury groundwater scientists in preparation for Plan Change 7 of the Canterbury Land and Water Regional Plan to potentially see the greatest future rises in nitrate-nitrogen levels within the Waimakariri Water Zone.



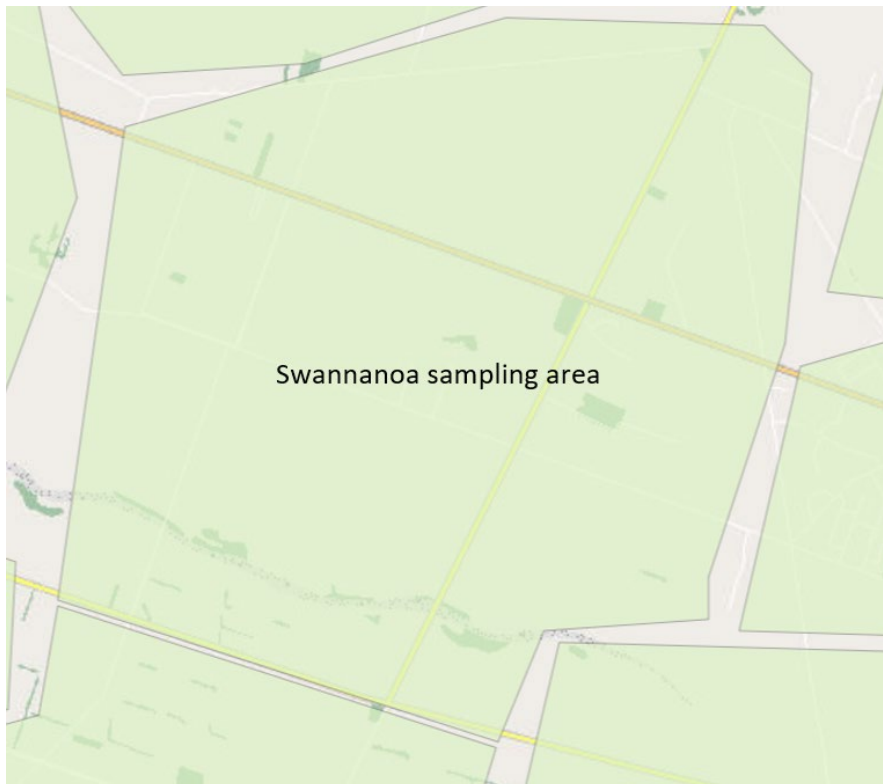
Map 1: Eyreton private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA)



Map 2: Cust private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).



Map 3: Carleton private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).



Map 4: Swannanoa private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).

4. **ISSUES AND OPTIONS**

Nitrate limits

- 4.1. The median nitrate concentration for Cust and Eyreton wells, as sampled in the study does not meet the limit of a median of 5.65 mg/L nitrate-nitrogen in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. The nitrate-nitrogen median measured for Cust was 7.76 mg/L, a slight increase from 7.38 mg/L in 2019 and 7.11 mg/L in 2020 (see Figure 1). Eyreton wells sampled had a median of 6.98 mg/L, an increase from 6.96 mg/L in the 2019 study and 5.01 mg/L in the 2020 study. The Eyreton median excludes a well that was already known to have a high nitrate level, to avoid sampling bias of results. In the 2021 study the Carleton area median was 3.78 mg/L, and the Swannanoa area median was 5.62 mg/L. Note that wells were selected based on a geographic spread over an area and range of well depths.

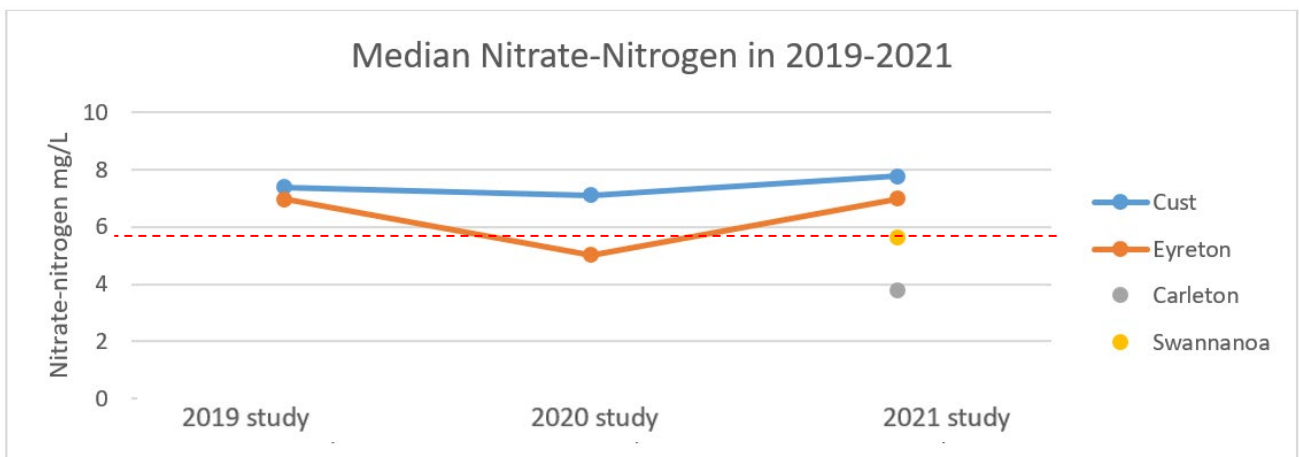


Figure 1: Median nitrate-nitrogen (mg/L) found in the private well study 2019-21 for Eyreton (n=9), Cust n=9), Carleton (n=10), and Swannanoa (n=10). Red dotted indicates ½ MAV for nitrate-nitrogen (5.65 mg/L). One well was excluded from the median calculation in Eyreton as high nitrate levels were already known to be present before the study.

- 4.2. Three wells measured over the MAV of 11.3 mg/L for nitrate-nitrogen, and 36 wells were below the MAV. It is likely that there are other private wells, not sampled in this study, that exceed the nitrate MAV in some wells in some wells in the sampling areas, however this proportion has not been estimated in this study. Environment Canterbury has modelled that up to an estimated 75 private wells could be exceeding the MAV for nitrate within the Waimakariri Water Zone (ZIPA, December 2018). Due to this risk of nitrate levels over the MAV in private wells, WDC, together with Environment Canterbury and Community Public Health, will continue to raise awareness of the health impacts of nitrate, and the need for regular testing of well water.

Engagement with Private Well Supply Owners

WDC staff have collaborated with Environment Canterbury for the production of a well testing advice booklet, which advises on testing of water, as well as mapping indicative areas where issues such as high nitrate and arsenic could be an issue for proposed new wells. This booklet will be updated to include information from the Water Services Act 2021 regarding the definitions of domestic self-supplier and water supplier. It is anticipated that an increased number of water suppliers will no longer be defined as domestic self-supplier

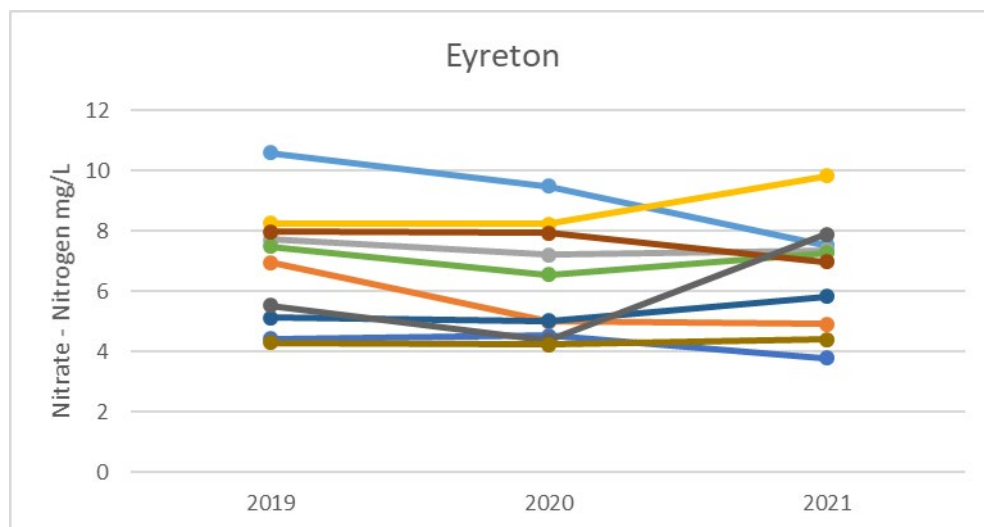
(i.e. if a water supply is shared, or for commercial use), with duties under the Water Services Act 2021, such as to meet the Drinking Water Standards for New Zealand.

Sample collection

- 4.3. Although efforts were made to select private wells randomly based on geographic spread over the sampling areas and for a range of depths, there is likely to have been some selection bias of the wells. Some locations within the chosen sampling areas have reticulated water, and therefore were not included in the sampling area.
- 4.4. All study participants from 2019 and 2020 were willing to have repeat sampling of their wells in 2021. This was likely to be due to the signalling from WDC that the 2019 pilot study had been extended to annual sampling, and value of the study appreciated by the participants. This repetitive sampling of the same wells will allow for better assessment of trends over time.

Trend Analysis

- 4.5. It is not possible to assess trends in nitrate concentration from only three data points for Eyreton and Cust wells, and one data point for Carleton and Swannanoa wells (see Figures 2-5). Nitrate leaching into groundwater is known to increase due to higher precipitation levels. Precipitation records for Rangiora and Kaiapoi show that 2019 was wetter than 2020, which may have been a factor in the slightly lower nitrate-nitrogen levels measured in most wells in 2020. Cust wells appear to have more stability in nitrate concentrations over time than Eyreton wells. Carleton wells showed a high amount of geographic variability. This is possibly due to some wells are near river takes from the Ashley Rakahuri River, whereas others are not as connected. In addition, modelling of oxygenated and reduced groundwater areas predicted some pockets where low oxygen levels lead to the denitrification of nitrates. The well data supports varying levels of oxygenation across the sampling area. Swannanoa wells were consistently around 5 mg/L nitrate-nitrogen, except one outlier that was located to the west of the sampling area with 16 mg/L nitrate-nitrogen.



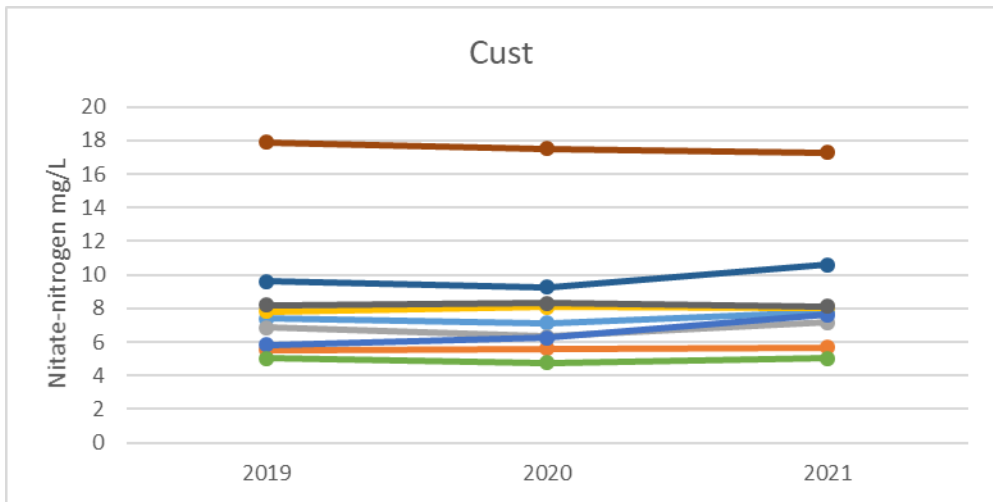


Figure 3: Individual Cust well results for 2019-21

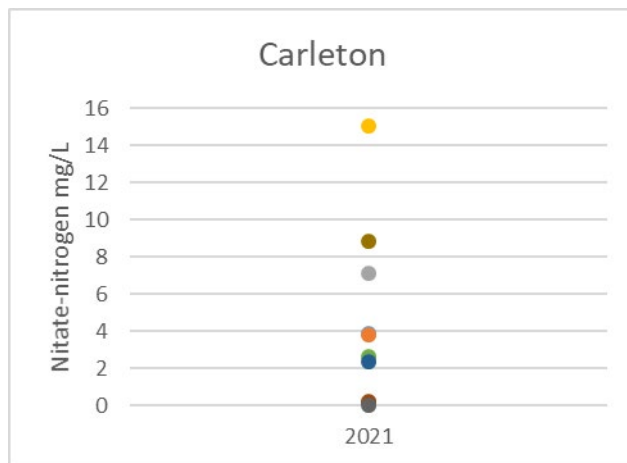


Figure 4: Individual Carleton well results for 2021

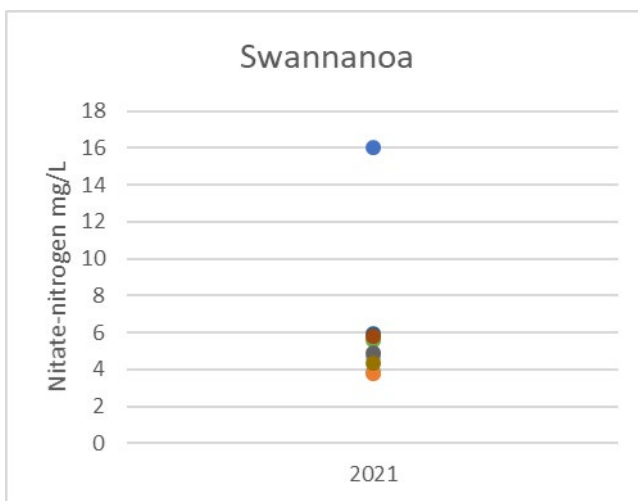


Figure 5: Individual Swannanoa well results for 2021

Well depth

- 4.6. Similar to the 2019 and 2020 studies, the highest nitrate-nitrogen concentrations in 2021 was found in a relatively shallow wells (4.3m, 7.6m and 19.51m deep). However,

increasing well depth was not found to have a correlation with nitrate levels in general in 2021.

Next steps

- 4.7. Well owners who took part in the study have been contacted by WDC to communicate test results and advised to contact a water treatment specialist if found to be over a MAV in the Drinking Water Standards of New Zealand.
- 4.8. It was intended that this study would test the sampling methodology for a potential wider and more extensive private well sampling programme of 180 wells (covering all 18 groundwater areas identified for Plan Change 7, with 10 wells from each area). Some refining of sampling methodology was able to be carried out in the 2020 and 2021 studies, however further refinement and discussion with Environment Canterbury around cost-sharing is required. If cost-sharing could be obtained, WDC staff could recommend a roll-out of a more extensive programme (i.e. gradually scaling up to 180 wells) from 2022-23 onwards.
- 4.9. The Water Services Act (2021) has changed the role of Territorial Authorities to take on responsibility to support private well owners with supplies that are shared between households to be compliant with the Drinking Water Standards for New Zealand (i.e any supply that is not a domestic self-supply. Individual water supplies (i.e. domestic self-supplies), remain the responsibility of the landowner under the Water Services Act (2021), and are not required to meet the Drinking Water Standards for New Zealand.

Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report, such as providing guidance on the current and future safety of private drinking well supplies in the Waimakariri District.

- 4.10. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by, or have an interest in the subject matter of this report. This study helps enable the vision of Te Mana o Te Wai – prioritising the health of groundwater as a first priority.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as resident associations for the sampling areas.

5.3. Wider Community

The wider community is not likely to be affected by, or to have an interest in the subject matter of this report, unless they are supplied water from a private well.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

6.1.1. There are no financial implications of the decisions sought by this report.

6.1.2. This budget is an existing budget (as part of the Zone Implementation Programme Addendum budget) included in the Annual Plan.

6.2. Sustainability and Climate Change Impacts

6.2.1. The recommendations in this report do have sustainability and/or climate change impacts. The management and safe use of groundwater will sustain rural communities into the future.

6.3 **Risk Management**

6.2.2. There are no risks arising from the adoption/implementation of the recommendations in this report. This report is for information only.

6.3 **Health and Safety**

6.2.3. There are no health and safety risks arising from the adoption/implementation of the recommendations in this report.

7. **CONTEXT**

7.1. **Consistency with Policy**

7.1.1. This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. **Authorising Legislation**

7.2.1. Health Act 1956 and Drinking-water Standards for New Zealand (2005, amended 2018) set the Maximum Allowable Value (MAV) for nitrate-nitrogen in drinking water at 11.3 mg/L.

7.3. **Consistency with Community Outcomes**

7.3.1. The Council's community outcomes are relevant to the actions arising from recommendations in this report.

7.3.1.1. There is a healthy and sustainable environment for all

7.3.1.2. Cultural values relating to water are acknowledged and respected.

7.3.1.3. Harm to the environment from the spread of contaminants into ground water and surface water is minimised.

7.4. **Authorising Delegations**

7.4.1. No delegations apply to this report, as this report is for information only.