

Memo

Date	05 June 2019
To	Angela Fenemor
CC	Alastair Picken and Jason Holland
From	Meredith Macdonald

Community Engagement for the Waimakariri Land and Water Solution Programme

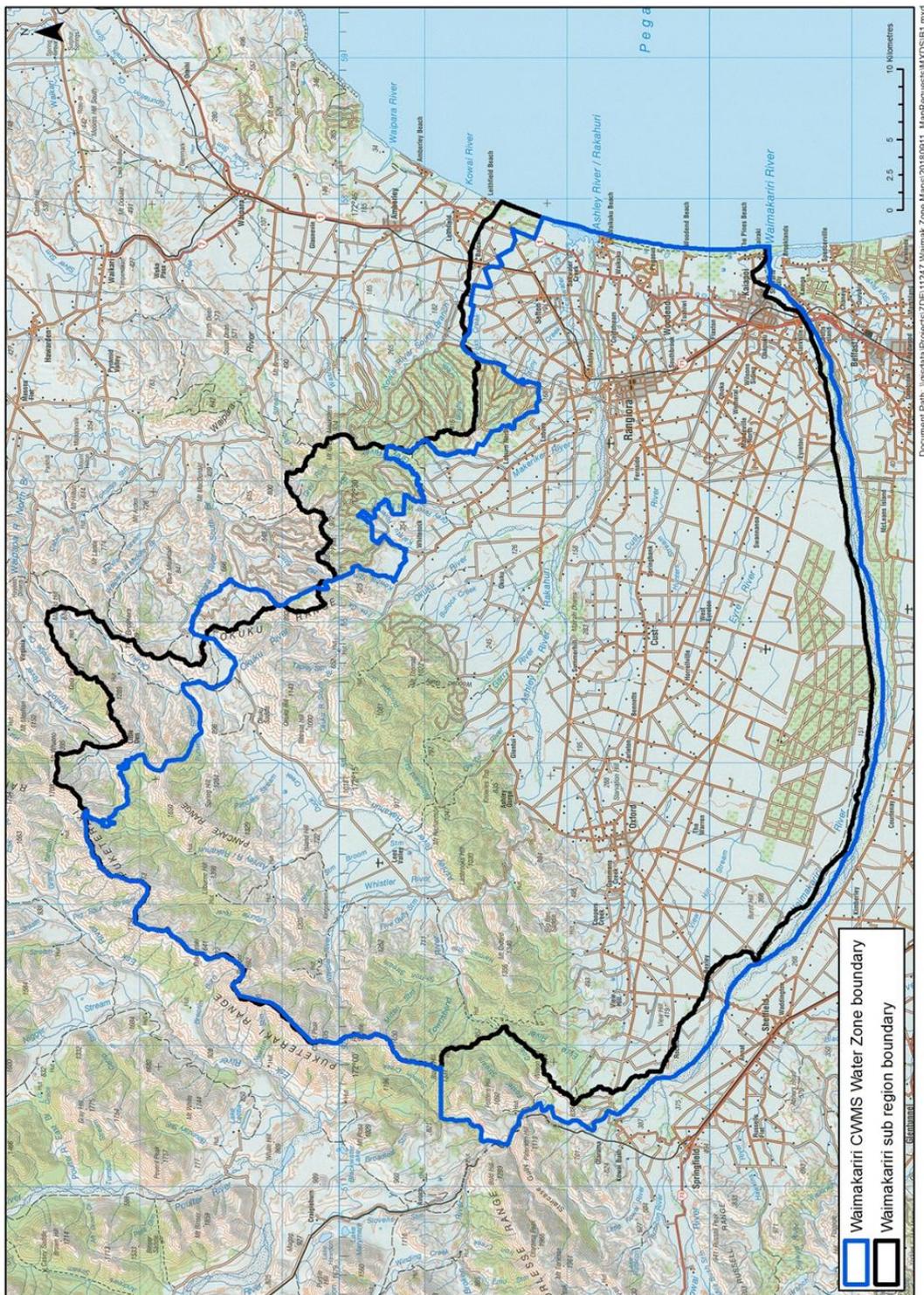
This paper provides an overview of the community engagement process for the limit setting process in the Waimakariri. It also provides some of the background and reasoning behind the community engagement approaches used in the Waimakariri catchment. The paper will outline the process from early 2015 through to when the Zone Implementation Programme Addendum was signed off by the Waimakariri Water Zone Committee in November 2019.

The Waimakariri sub-region, as shown in Map 1, lies to the north of the Waimakariri River and extends from Pegasus Bay in the east to the Puketeraki Range in the west with Mt Oxford, Mt Richardson and Mt Thomas in the foreground. In the north-western corner lies Lees Valley with Ashley River/Rakahuri flowing through the hills and onto the plains. As the Ashley flows it captures water from Okuku, Makerikeri and Garry Rivers ending up in Te Aka Aka (Ashley River/Rakahuri estuary).

Much of the land to the east of Rangiora is reclaimed swamp that is still subject to poor drainage and occasional flooding.

The rivers, streams, lagoons and the wetlands have always been an important place and food basket for tangata whenua. The sub-region is part of the takiwa of Ngāi Tūāhuriri Rūnanga and holds special significance. Before the Marae at Tuahiwi was established, several kilometres north of present Kaiapoi, Ngāi Tūāhuriri ancestors established an important cultural, political and economic settlement with the Kaiapoi pa at the centre of it. Gathering the resources the land provides, and passing on traditions/practices has been and continues to be an important part of Ngāi Tūāhuriri connection to the area.

Diversity abounds in Waimakariri sub-region due to its unique mix of small towns, farming, lifestyle blocks and its proximity to Christchurch. Despite rapid population growth, Waimakariri has been able to retain its rural/small town character with attractive town centres and surrounding rural areas.



Map1: Waimakariri Water Zone Boundaries

The limit setting process in the Waimakariri catchment was driven by the Canterbury Water Management Strategy (CWMS) and the National Policy Statement for Freshwater Management 2017 (NPSFM). The CWMS provides the basis for the collaborative approach to water management issues throughout Canterbury.

The Waimakariri Water Zone Committee (Zone Committee) is one of 10 Zone Committees that were established under the Canterbury Water Management Strategy (CWMS) to implement the strategy through collaboration, assessment and decision making. The Zone Committee guides the process, often advising ECan staff on actions to take in response to comments and concerns expressed by the wider community.

The Waimakariri zone is the seventh collaborative process to go through a collaborative approach after Hurunui Waiau, Selwyn-Te Waihora, Ashburton, South Coastal Canterbury, Upper Waitaki, Lower Waitaki and the Wairewa/Lake Forsyth catchment in Banks Peninsula. Collaborative processes in the Orari, Temuka – Opihi, Pareora zone, and a targeted process for the Hurunui, have occurred over similar timeframes to the Waimakariri process.

The Waimakariri Zone Committee started their journey to develop water quality and quantity recommendations for their Zone Implementation Programme Addendum (ZIPA) in April 2015. They finished the community engagement part in October 2018. A tabulated record of their consultation during this period is in Appendix B of this paper.

The Waimakariri Community

The community in the Waimakariri zone have been given many opportunities to inform the recommendations in the ZIPA throughout the process.

The Zone Committee are representatives of their community and it was important for them to engage with the community to inform, confirm understanding and test solutions. A diagram showing communication flow between the key groups is shown in Appendix A. As a result of the complexity of the information and group needs, the process ended up with a number of different stages as the understanding of the issues and possible ways forward presented themselves.

Ngāi Tūāhuriri rūnanga with Te Rūnanga o Ngāi Tahu (TRONT)

Waimakariri is part of the Ngāi Tūāhuriri takiwā. They have two representatives at the Zone Committee table. Capacity issues and several changes in rūnanga membership created difficulties during the process. However, earning and continued conversation over time has slowly allowed a relationship between representatives of Canterbury Regional Council (ECan) and Ngāi Tūāhuriri Rūnanga to build.

Waimakariri District Council (WDC)

WDC is a party to the CWMS and has been and continues to be fully engaged with the Zone Committee's work. They have supported and provided feedback on all stages of the community engagement. They have also provided information to local community boards and groups to make sure they have been informed of opportunities to engage.

Christchurch City Council & Christchurch West Melton Water Zone Committee

The Christchurch community was brought in the consultation in early 2018 when technical experts agreed that deep groundwater was flowing under the Waimakariri River, instead of

the Waimakariri River acting as a hydraulic barrier to groundwater flow (as previously understood). This led to a review of who to consult with.

The Christchurch City Council (CCC) and Christchurch-West Melton Water Zone Committee (CWM Zone Committee) received information about the issue and were provided opportunities to give feedback on proposed solutions. Meetings between staff, CCC, the CWM Zone Committee, and Waimakariri Zone Committee have been recorded in the Table of Consultation in the Appendix B.

Other stakeholders

Other key groups for community engagement were:

- Science Stakeholders Advisory Group,
- Farmers Reference Group
- Directly affected water take consent holders
- Ashley River / Rakahuri catchment consent holders
- Waimakariri River tributaries catchment consent holders
- Waimakariri Irrigation Limited

Waimakariri Irrigation Limited (WIL) and other consent holders were actively involved in consultation. WIL assisted with ECan to organise the initial discussion with landowners and managers in the Eyre catchment about the nitrate flowing under the Waimakariri river modelling results.

Science Stakeholders Advisory Group (SSAG) was established for participants to be involved with the development and understanding of the technical work.

Participants who were invited to SSAG:

- | | |
|--|-------------------------------|
| • Beef and Lamb | • Fish and Game |
| • Canterbury District Health Board | • Pork NZ |
| • BRAID/Ashley River Care Group | • Canterbury University |
| • Dairy NZ | • Te Rūnanga o Ngāi Tahu |
| • Department of Conservation | • Te Kōhaka o Tūhaitara Trust |
| • Foundation for Arable Research | • Ngāi Tūāhuriri Rūnanga |
| • Irrigation NZ | • Ngāi Tahu Farming |
| • Federated Farmers | • WDC |
| • Forest and Bird | • Deer NZ |
| • Lincoln University Silverstream River Care Group | • Whitewater NZ |
| • Waimakariri Irrigation Limited | |

Communication

The opportunities to engage in the limit setting process were advertised based around who was required to be engaged with and the purpose of the meeting or workshop at each stage on consultation.

Information about each session was advertised through some, or all, of the following means:

- Emails direct to affected stakeholders and organisations
- Online Social Media
- Kaiapoi Cinema
- ECan and WDC webpages
- Local Waimakariri newspapers and The Press
- Waimakariri E-newsletter (~1250 subscribed)
- Fliers in Council Offices and in shop windows
- Articles in North Canterbury News and Northern Outlook

In addition to the community meetings and workshops held in the Waimakariri Zone, the wider public were welcome to attend and participate in the monthly Zone Committee meetings. Zone Committee meetings provide an opportunity for the committee to discuss community feedback and respond to any concerns. Throughout the process the Zone Committee gave due consideration of community feedback, which informed the final recommendations in the ZIPA.

Stages of consultation

Between April 2015 and October 2018, the general stages of consultation are noted below and are explored in further detail later in this paper.

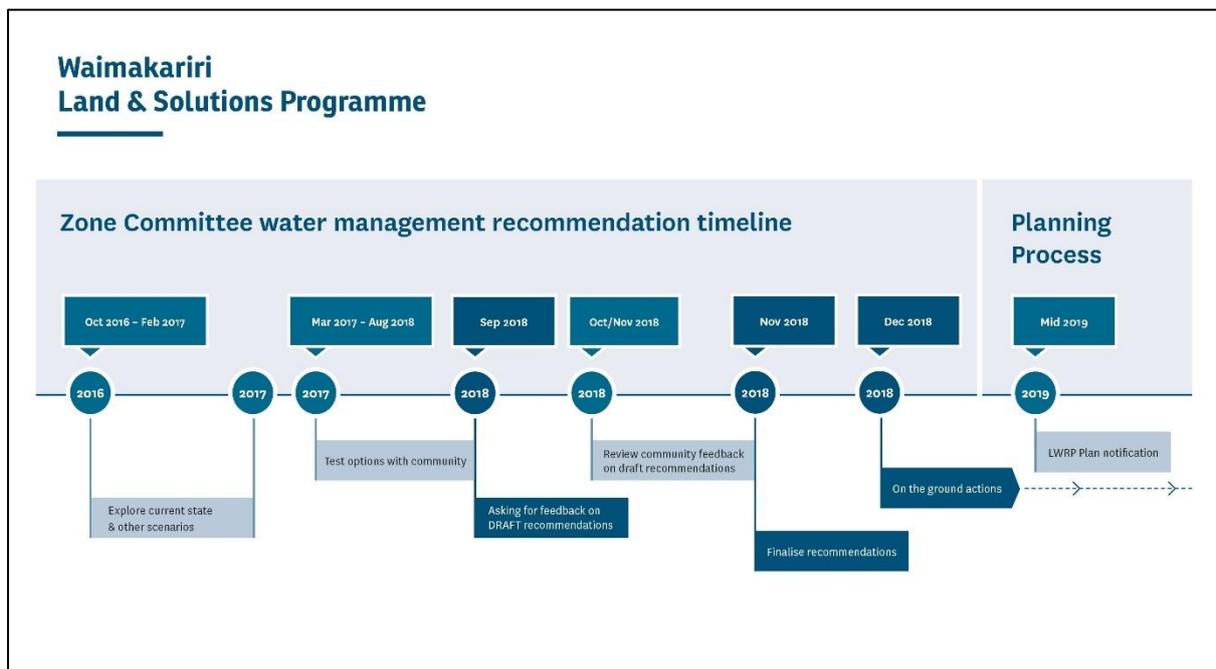


Figure showing the community engagement timeline

Initiation

The initiation stage focussed on introducing the Zone Committee's programme of works, within the context of the CWMS. This stage involved identifying and confirming water quality and quantity outcomes in the Waimakariri zone. Then from this what issues prevented those

outcomes being met. Ten community meetings were held across April and May 2015, with a further five held in November and December.

These rounds of community involvement engaged more than 400 people who were kept up to date on local water management issues and the lead into the sub-regional planning process through monthly email newsletter updates.

During the initiation stage, the Zone Committee had two field trips within the Waimakariri Zone looking at water ways and informally meeting with members of the public to describe the ZIPA process.

Scenario Testing

- Current State – October 2016
- Current Pathways – November 2016
- Alternative Pathways – March 2017

For the scenario testing stage, the Zone Committee took out three scenarios to the community. The purpose was to inform the community what the science was saying is currently happening (Current state) and two alternative pathways (Current and Alternative Pathways) as to what could happen. In response the Zone Committee asked the participants whether each scenario was acceptable or not and any solutions they might suggest.

At each workshop, the community were given a presentation on the science findings. Then around a table, community members were asked questions about each scenario. A Zone Committee member and a facilitator sat at the table helping them through the process. The overall feedback from these meetings were then provided to the Zone Committee at their next briefing.

Out of these workshops, the Zone Committee gained a better understanding of the key water management issues and what the community thought the drivers were in the zone.



Alternative Pathways Community Meeting on 15 March 2017

Consultation on specific topics (Targeted engagement)

From late 2017 through to the end of 2018, the Zone Committee decided to focus consultation on specific topics. Part of the reasoning was the assessment of water quality and quantity were at different stages of understanding and, secondly, concentrating on a particular topic would allow focussed feedback.

Environmental flow and allocation workshops

Discussions on environmental flows and allocation were held primarily with surface water and stream depleting groundwater consent water take users and Ngāi Tūāhuriri rūnanga. As holders of water permits they would be directly affected by changes to minimum flows and water allocation.

The first set of six workshops were held in November 2017 to build an understanding of what the specific water quantity issues were and what water reliability people were experiencing. Participants were asked what actions, or other solutions, could be put in place to remedy any issues. The workshops were attended by 77 people who provided feedback on what they experienced in their catchment.

Alongside this Simon Harris (ECan Consultant) conducted a survey sent out to all water takes users in the Waimakariri zone regardless of the size of their take. This survey asked about their current usage and reliability. The confidential survey was emailed out several times and was discussed at workshops. Unfortunately, there were only 21 respondents of which held a total of 17 surface water consents and 22 groundwater consents. Due to the low response little could be gleaned from the results.

The second set of workshops was held between April and June 2018. They focussed on alternative flow regimes to achieve water quality outcomes in each catchment.

The workshops all had a similar target audience and format to the November workshops. Letters and emails were sent out to surface water and stream depleting groundwater consent water take users inviting them to participate in the workshops. Each workshop was set up around specific catchment(s), there were seven meetings in total. The facilitated workshops had 76 people attend. At each table participants were asked a set of questions and were encouraged to talk with each other over maps about their opinions and thoughts of the solutions the Zone Committee had put forward.

As a result of a wider community discussion, some communities requested specific meetings on their catchment. This occurred for the irrigators on the Cam River in June 2017, and water users on the Cust River in October 2018.



Environmental flow and allocation workshops in Fernside and Clarkville Halls November 2017

Workshops on managing nitrates

The nitrate workshops and meetings resulted from a groundwater model changing the agreed understanding that the Waimakariri River was a barrier to deep groundwater (Etheridge and Whalen 2019). When these findings came out, the Zone Committee had to amend their timetable to allow time for the wider community to consider what it meant on meeting freshwater outcomes, and the potential effects on landowners and managers.

For community engagement it meant widening consultation to Christchurch City Council and Christchurch West-Melton Water Zone Committee in early 2018, so they were informed of the modelling results, and to provide opportunities to give feedback to the Waimakariri Zone Committee on proposed solutions.

The first public meeting on nitrates in the Waimakariri zone was held at West Eyreton Hall in May 2018 with landowners and managers from the modelled source area of nitrate loss flowing under the Waimakariri River. Shareholders from Waimakariri Irrigation Ltd (WIL) were included as they manage much of the land in the area. The meeting was jointly run by WIL and ECan with at least 30 participants attending.

The series of workshops to consult on nitrates in July 2018 was advertised across the entire Waimakariri district because the source and receptor areas collectively covered a wide area. The intent was to raise awareness of this issue and the potential level of change this presented to existing land use and management in some parts of the District.

Three workshops were held in Kaiapoi (18 July), Oxford (19 July) and Rangiora (25 July). Each workshop started with a presentation followed by plenty of time for questions. This was followed up by facilitated questions at tables supported by Zone Committee members. Interest in the subject was high and about 210 participants in total turned up to each workshop to learn about the new scientific understanding and provide feedback on how to manage nitrates within the zone.

The discussion regarding how to manage nitrate loss was animated and as a result some local farmers and property owners formed the Next Generation Farmers group. This group indicated they wanted to work with the Zone Committee as they saw themselves as the young farmers who would need to solve the nitrate issue over the longer term.

Consultation with Ngāi Tūāhuriri rūnanga and Te Rūnanga o Ngāi Tahu

Alongside engagement with the wider community and Ngāi Tūāhuriri rūnanga on specific topics, there was specific engagement with Ngāi Tūāhuriri rūnanga. As has occurred in previous community processes it was important to allow the rūnanga time and resources to gather information for their purposes to inform the process. This includes how their values associated with water are being affected and what would be required for manawhenua to reconnect and continue to be connected to their resources and taonga. This resulted in the Cultural Opportunity Mapping Report (COMAR; Representatives of Te Ngāi Tūāhuriri and Tīpa, G. 2016).

Between the COMAR being finalised and May 2018 there were several changes in rūnanga membership which created complications during the process. After this time Ngāi Tūāhuriri rūnanga worked with ECan to improve understanding of what was important to Ngāi Tūāhuriri rūnanga and their expectations (see Consultation tables for details).

Consultation on draft Addendum to the Waimakariri Zone Implementation Programme

The final stage (September and October 2018) before the Zone Committee had to finalise their recommendations was to bring their conversations and decisions together in a package for the community to consult on.

Advertising of the draft ZIPA was through newspapers, Kaiapoi cinema, WDC and ECan websites, an e-newsletter was sent out, and several articles were published. The Zone Committee wanted plenty of opportunity for the community and stakeholders to provide feedback. Therefore, ten workshops were set up across the zone and in Christchurch city, some in the evenings and others in the daytime. The workshops were held in Ohoka Market (21 Sept), Kaiapoi (26 Sept), Pegasus (27 Sept), Oxford (3 Oct), Belfast (4 Oct), Ohoka Market (5 Oct) and Rangiora (10 Oct). The Zone Committee also hosted one-on-one sessions for people who wanted to discuss issues in more depth in Rangiora (1 Oct).



Set up for draft ZIPA workshops September 2018



Draft ZIPA workshop in Oxford 3 October 2018



Draft ZIPA workshop in Ohoka Market 21 Sept 2018



Draft ZIPA workshop in Ohoka Market 5 Oct 2018

The draft Addendum, with supporting technical information and summaries of community meetings held, were provided to the community on Zone Committee's website (hosted by Environment Canterbury).

Throughout the process the Zone Committee gave due consideration of community feedback and resulted in the final recommendations in the Addendum. 85 individual items of

feedback were received in various forms including via email, via the zone website ('Have your say'), electronic and hard copy feedback forms, letters in addition to one on one discussions at the ten sessions.

A couple of separate meetings were held with the Cust River water consent holders. They were concerned about the proposed minimum flow increase and how this would affect their reliability. These meetings resulted in focussed analysis of their situation and the consent holders providing alternative solutions for the Zone Committee's consideration.

After each series of workshops or meetings, feedback was summarised in memos back to the Zone Committee for consideration.

The Zone Implementation Programme Addendum was signed off by the Zone Committee on 19 November 2018.

Conclusion

This paper documents the community consultation process undertaken to assist the Waimakariri Water Zone Committee determine recommendations to management freshwater in their zone.

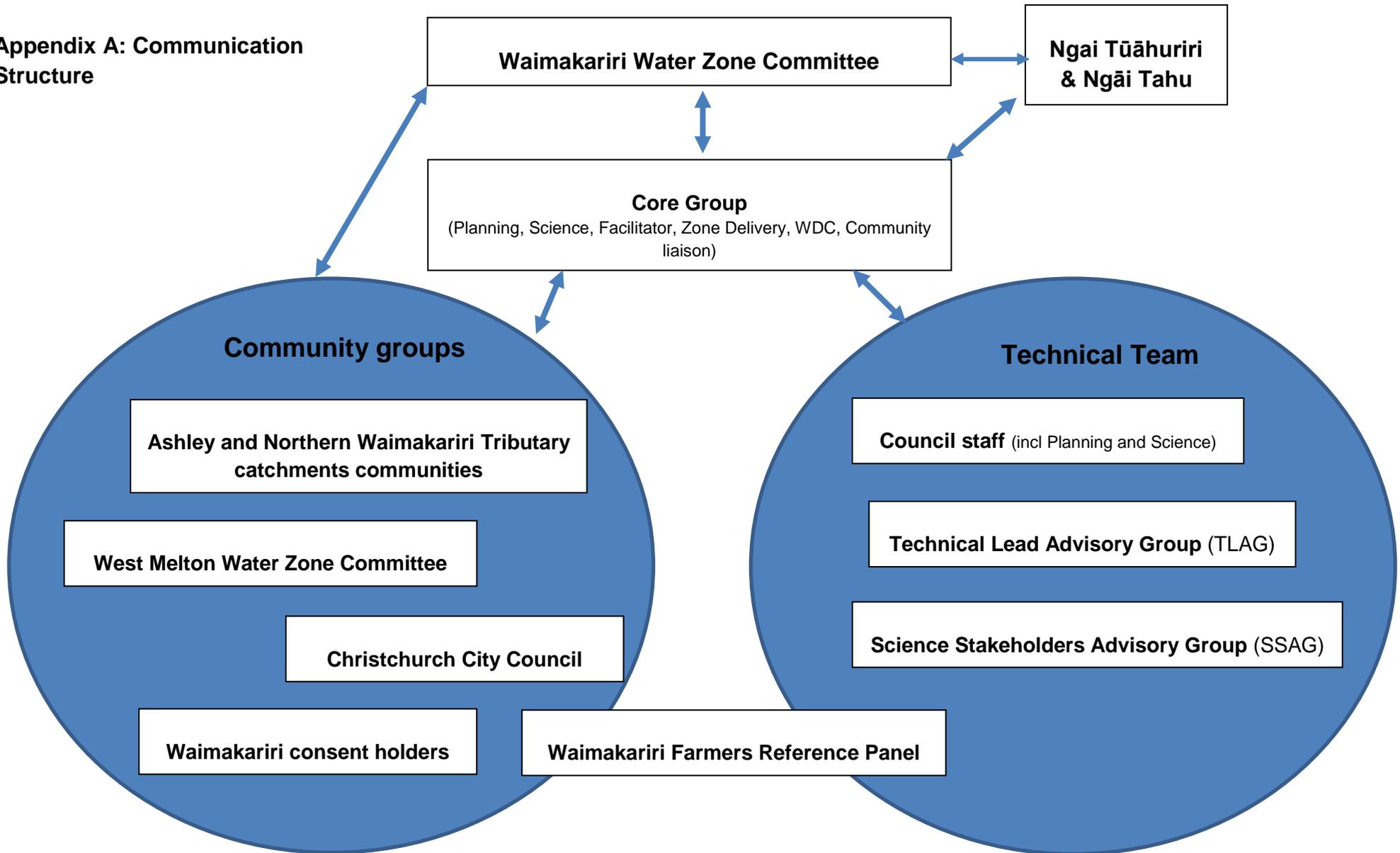
It provides an overview of the significant commitment to consultation and engagement that has occurred over the past three years, particularly in the last 12 months.

As with previous collaborative processes, in support of plan changes, this process has been limited by the tight timeframes and the complex nature of the hydrology and water quality issues. The results of the groundwater modelling meant the process had to adjust to make sure information was updated, the right stakeholders were informed, and adequate time for stakeholders and the community to consider the issues and possible ways forward was provided.

References

- Etheridge, Z. and Whalen, M. 2019: Waimakariri Land and Water Solutions Technical Assessment Overview. Environment Canterbury Report No. R19/73. May 2019
- Representatives of Te Ngāi Tūāhuriri and Tipa, G. 2016: Cultural health assessments and water management for the Rakahuri – Waimakariri zone (COMAR) and endorsement letter dated 12/6/2017. Tipa and Associates.

Appendix A: Communication Structure



Appendix B: Record Tables of Consultation

Zone Committee Workshops and Meetings

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
3 June 2015	MEETING Committee Update on the SSAG and TLAG	WDC Council Chambers
8 June 2015	MEETING Waimakariri Limit Setting Process – Introductory Community engagement – review Workshops; Matt and Murray	WDC Council Chambers
22 June 2015	MEETING Discussion about Priority (community) Outcomes, Matt and Murray	WDC Council Chambers
6 July 2015	WORKSHOP Follow up to the Waimakariri Limit Setting Process – Introductory Workshop; Matt and Murray	WDC Council Chambers
10 August 2015	MEETING Groundwater Quality Investigation in the Loburn Area, Lisa Scott	WDC Council Chambers
31 August 2015	WORKSHOP 1 st Biodiversity Stakeholders Meeting hosted by WWZC	Rosburn Receptions
7 September 2015	MEETING Waimakariri Sub Regional Plan Timeline – Update	WDC Council Chambers
5 October 2015	MEETING Priority outcome narratives; Tech team work plans overview	WDC Council Chambers
2 November 2015	MEETING Briefings on the LWRP planning framework and PC5, Jason & Devon	WDC Council Chambers
1 February 2016	MEETING Sub-regional plan – scope of work, and Nov-Dec 2015 community meetings reviewed	Function Room Rangiora Town Hall

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
7 March 2016	MEETING WQ and Ecology Gap Filling, Michael Greer	Function Room, Rangiora Town Hall
21 March 2016	WORKSHOP Conceptualisation of the Waimakariri Zone hydrogeology, Zeb	WDC Council Chambers
4 April 2016	MEETING History and Rationale For The Current Environmental Flow And Allocation Regime – Ashley/Rakahuri River, John Glennie	Function Room, Rangiora Town Hall
4 April 2016	WORKSHOP Waimakariri Priority Outcomes and Narratives Workshop, Matt D	Function Room, Rangiora Town Hall
18 April 2016	WORKSHOP Waimakariri proposed process, Dirk and Matt	WDC Committee Rooms
2 May 2016	WORKSHOP Sub-Regional Planning Process – Briefing, D Brand; Outcomes and Indicators – Workshop, Matt and Dirk	Function Room, Rangiora Town Hall
16 May 2016	WORKSHOP Waimakariri Hydrology – Mark Megaughin; Ashley/Rakahuri Estuary and contact recreation programme – Lesley Bolton-Richie	WDC Council Chambers
18 May 2016	WORKSHOP 2 nd Biodiversity Stakeholders Meeting hosted by WWZC	Rosburn Receptions
13 June 2016	MEETING Community Outcomes and NPSFM Values - Workshop – D Brand; Community Outcomes and Indicators - Workshop – M Dodson Ashley/Rakahuri And Phormidium – Tara McAlister (PhD student from the Waterways Centre for Freshwater Management at the University of Canterbury)	Function Room, Rangiora Town Hall
20 June 2016	WORKSHOP Technical indicators, Matt	WDC Council Chambers
11 July 2016	MEETING Community Engagement Plan - Workshop – J Stapleton; Draft Scenarios - Workshop – M Dodson	Function Room, Rangiora Town Hall

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
25 July 2016	WORKSHOP Briefing on Land and Water Solutions Programme communications and community engagement	WDC Council Chambers
8 August 2016	MEETING Overview of Scenarios Workshop – J Stapleton and I Whitehouse; Community Engagement Review Workshop – A Arps And J Stapleton	Function Room, Rangiora Town Hall
29 August 2016	WORKSHOP Proposed boundaries review – using Sub regional planning boundaries instead of CWMS boundaries, Matt Dodson and Jo Stapleton	WDC Council Chambers
12 September 2016	MEETING Business as usual scenario (later renamed current pathways), Matt Dodson Confirmation of boundaries for sub-regional process	WDC Council Chambers
21 September	WORKSHOP 3 rd Biodiversity Stakeholders Meeting hosted by WWZC	Rosburn Receptions
3 October 2016	WORKSHOP Presentation of the Cultural Health of streams in the Waimakariri–Rakahuri Zone & the aspirations of whanau by Gail Tipa	WDC Council Chambers
31 October 2016	WORKSHOP Current pathways scenario findings, for WWZC meeting	Rosburn Receptions
7 November 2016	MEETING Current Pathways Scenario for Waimakariri Land and Water Solutions Programme Workshop – M Dodson; Waimakariri Mana Whenua Significant Sites Assessment Briefing – J Stapleton	Function Room, Rangiora Town Hall
12 December 2016	WORKSHOP Waimakariri Alternative Pathways Scenarios Workshop – M Dodson; November Community Meetings Feedback Briefing – J Stapleton	Function Room, Rangiora Town Hall
19 Dec 2016	WORKSHOP Current Pathways Scenario – Technical Review, Matt Dodson and Zeb Etheridge	WDC Council Chambers
30 January 2017	WORKSHOP	WDC Council Chambers

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
	FMU memo – Alastair Picken, Current State & Pathways Scenario – key issues summary, Sub-regional scope of work review Waimakariri Big Rocks work programme review – A Arps	
10 February 2017	WORKSHOP Agreed Purpose and Culture Statement: To facilitate improved and sustainable land and water management in the Waimakariri Zone	WDC Council Chambers
13 February 2017	MEETING Lees Valley Farmers Group presentation and catchment workshop Sub-regional scope of work overview WDC District Development Strategy presentation	Function Room, Rangiora Town Hall
27 February 2017	WORKSHOP Overview of the COMAR recommendations, including Whanau flow preferences and ecological minimum flows Overview of Alternative Pathways scenario Overview of technical indicators	Rosburn Receptions
13 March 2017	MEETING Information on Lees Valley – response to Lees Valley Farmers Group concerns Summary of Key Issues in Waimakariri	Function Room, Rangiora Town Hall
27 March 2017	WORKSHOP: Proposed Waimakariri solutions programme Canterbury Maps and Zone Delivery overviews	WDC Committee Rooms
10 April 2017	MEETING Tuahiwi values briefing Joint meeting with Hurunui/Waiarau Zone Committee	Tuahiwi Marae
19 April 2017	Biodiversity Stakeholders WORKSHOP: Current state reports discussed	Rosburn Receptions
24 April 2017	WORKSHOP	WDC Committee Rooms

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
	101 on Surface water& stream depletion and Groundwater Issues/Options	
8 May 2017	MEETING Denitrification wall field study briefing, Recreational Opportunities	Function Room, Rangiora Town Hall
8 May 2017	WORKSHOP on Instream ecosystems and Biodiversity Issues/Options	Function Room, Rangiora Town Hall
15 May 2017	WORKSHOP 101 session on Surface water and Issues/Options on nitrate key decision areas	Rossburn Receptions
19 June 2017	MEETING Recreational areas and Biodiversity values	Function Room, Rangiora Town Hall
19 June 2017	WORKSHOP Phase 1 MKT report on Wahi tapu and Wahi Toanga was presented, Principles for Instream ecosystems and values, Other Plan tools	Rossburn Receptions
10 July 2017	MEETING Plan Change 5 and Farm Environment Plan Process Outline what existing plans have on Biodiversity – RPS and WDC	Function Room, Rangiora Town Hall
24 July 2017	WORKSHOP Progress against the Solution Programme Schedule and introduction of revised schedule to enable investigation into identified groundwater flow uncertainty	Rossburn Receptions
7 August 2017	WORKSHOP Saltwater Creek sub-catchment & Kōwai Groundwater Zone – no staff	Rossburn Receptions
14 August 2017	MEETING Land systems update and go back over what solutions they have for this KDA Adopting the revised Solutions Programme Schedule	Function Room, Rangiora Town Hall
14 August 2017	WORKSHOP Instream ecosystems A3 – review	Rossburn Receptions
28 September 2017	WORKSHOP Draft Engagement plan Lower Ashley discussed	Rossburn Receptions

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
9 Oct 2017	MEETING Immediate Steps funding Applications, Introduction of Big Rocks Project	Function Room, Rangiora Town Hall
9 October 2017	WORKSHOP Presentations of Farmers' Panel and DairyNZ Research	WDC Committee Rooms
30 October 2017	WORKSHOP John Glennie presentation on Ashley River, Brett Painter on storage history, Current ZIP recommendations	Rosburn Receptions
13 November 2017	MEETING WDC Stormwater Consent, Silverstream Salmon Hatchery update	Function Room, Rangiora Town Hall
13 November 2017	WORKSHOP Feedback on Stormwater Framework and WDC consent application, River lines and hydrological catchments	WDC Council Chambers
27 November 2017	WORKSHOP Instream Ecosystems Interventions- Management Options	Rosburn Receptions
11 December 2017	WORKSHOP Briefing ZC on the outcome of the groundwater flows below Waimakariri River	WDC Council Chambers
11 December 2017	MEETING Feedback from Targeted Community Engagement	Function Room, Rangiora Town Hall
12 February 2018	WORKSHOP Process, Outcomes and target for Eyre NAZ	Rosburn Receptions
26 February 2018	WORKSHOP Instream ecosystems draft recommendations	Rosburn Receptions
12 March 2018	MEETING Sub-regional solutions programme schedule review QEII biodiversity covenants in the zone, especially Lees Valley	WDC Council Chambers
12 March 2018	WORKSHOP Rūnanga/MKT/TRONT - Recognising and Protecting Cultural Values in the Waimakariri Zone	WDC Council Chambers
26 March 2018	WORKSHOP	Rosburn Receptions

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
	Northern Waimakariri: Flows, GW limits, big rocks (Biodiversity) and nitrate	
26 April 2018	WORKSHOP Northern Waimakariri: Flows, GW limits, big rocks (Biodiversity) and nitrate	Rossburn Receptions
30 April 2018	WORKSHOP Northern Waimakariri: Flows, GW limits, big rocks (Biodiversity) and nitrate – continued from 26 April	Rossburn Receptions
7 May 2018	WORKSHOP Interzone groundwater briefing	Rossburn Receptions
14 May 2018	WORKSHOP Waimakariri Zone minimum flows and allocations	Rossburn Receptions
28 May 2018	WORKSHOP Farmers Reference Panel Ashley/Rakahuri draft recommendations for River minimum flows, allocation limits (rivers and groundwaters), nitrate limits, managing risk of nitrate over-allocation, phasing out river over-allocation	Rossburn Receptions
11 June 2018	WORKSHOP Test ZIPA against Rūnanga aspirations, science monitoring and review cycle, supporting innovation and new tools on farm,	Rossburn Receptions
11 June 2018	MEETING Sub-regional solutions programme schedule update Kaiapoi river rehabilitation update	WDC Council Chambers
18 June 2018	WORKSHOP Managing nitrates – technical advice towards draft recommendations	Rossburn Receptions
2 July 2018	WORKSHOP Review draft ZIPA and key messages for community meetings on nitrates	Rossburn Receptions
9 July 2018	MEETING Update on ZIPA progress Ngai Tahu Farming presentation on farming practices	WDC Council Chambers
9 July 2018	WORKSHOP	WDC Council Chambers

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
	Draft ZIPA conversation on possible nitrates recommendations	
30 July 2018	WORKSHOP Agree on Nth Waimakariri Tribs draft ZIPA recommendations for water quantity including recommendations for coastal streams/lagoon	Rosburn Receptions
13 August 2018	MEETING Kaiapoi River investigations DairyNZ & Waimakariri Irrigation Ltd briefing	WDC Council Chambers
20 August 2018	WORKSHOP Farmers Panel and Next Generation Farmers Group presentations CWMZC presentation of feedback to the WWZC on the GW interzone issue and ZIPA approach	Rosburn Receptions
27 August 2018	WORKSHOP Biodiversity and SW draft recommendations Update on ZIPA consultation	Rosburn Receptions
30 August 2018	WORKSHOP Instream ecosystems and biodiversity draft recommendations Nitrate and Runoff Management solution – introduction	Rosburn Receptions
3 September 2018	WORKSHOP Te Aka Aka – climate change impact Kaiapoi River clarification of catchments SW summary tables Nitrate and Runoff Management solution Overallocation Priority Management Zones – soil drainage, DWS recharge Permitted Activity rules	Rosburn Receptions
10 Sept 2018	WORKSHOP Draft ZIPA – initial ZC review Review of amendments and confirmation of conventions	WDC Council Chambers
10 Sept 2018	MEETING	WDC Council Chambers

Date	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme	Location
	WDC Stockwater race closures – ZC feedback Draft ZIPA engagement and feedback	
24 October 2018	WORKSHOP Draft ZIPA – summary of feedback Cust River flow and allocation recommendations	Rosburn Receptions
29 Oct 2018	WORKSHOP Instream and Biodiversity recommendations review	Rosburn Receptions
5 Nov 2018	WORKSHOP Reducing nitrates recommendations review Feedback on drinking water Nitrate floor option review Prioritisation Management Zones review	Rosburn Receptions
12 Nov 2018	WORKSHOP Quality & Quantity recommendations review	Rosburn Receptions
19 Nov 2018	WORKSHOP Final review of ZIPA	WDC meeting room
19 November 2018	MEETING ZIPA recommendations are finalised and signed off	WDC Council Chambers
10 December 2018	MEETING Final ZIPA presentation WDC Stockwater Race policy ad strategy for ZC feedback Woodend Stormwater consent presentation	WDC Council Chambers

Waimakariri Water Zone Committee sub-committee

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
31 Aug 2015	Waimakariri Zone Committee	Rosburn	Zone update (Grant), Updates from Agencies and Stakeholders, next steps

	Biodiversity Working Group		
18 May 2016	Waimakariri Zone Committee Biodiversity Working Group	Rossburn	Updates, Current Initiative on Biodiversity in The Zone, Strategy, next steps
21 Sept 2016	Waimakariri Zone Committee Biodiversity Working Group	Rossburn	Information updates, ZC programme update and ZIPA, strategy discussion
19 April 2017	Waimakariri Zone Committee Biodiversity Working Group	Rossburn	Info update; current state, current and alternative pathways, community comments, district development strategy, recommendations
7 June 2017	WDC/Ecan biodiversity meeting	Tuam Street	Discussion about a joint WDC/Ecan biodiversity meeting item and discussion about WWZC recommendations

Community Engagement Table

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
2015			
28 Apr 2015	Community Meetings – Round 1	West Eyreton Hall	All 10 meetings followed the same format, based on two presentations. •This first presentation is an overview of the Canterbury Water Management Strategy (CWMS) and water management priorities for the Waimakariri Zone. This was presented by the Zone Committee Chairperson, Claire McKay. Deputy Chairperson, Grant Edge, presented at the Rangiora and Kaiapoi meetings.
29 Apr 2015		Oxford Jaycee Hall	
30 Apr 2015		Clarkville Hall	
5 May 2015		Waikuku Beach Hall	
6 May 2015		Loburn Domain Pavilion	
7 May 2015		Cust Hall	
8 May 2015		Lees Valley School	

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
24 May 2015		Tuahiwi Marae with Ngāi Tūāhuriri Rūnanga	<ul style="list-style-type: none"> The second presentation focused on nutrient management rules of the Canterbury Land and Water Regional Plan, and how they affect farmers and land owners. This was presented by the Zone Committee member, David Ashby
26 May 2015		Rossburn Receptions, Rangiora	
28 May 2015		Kaiapoi Community Centre	
21 Sep 2015	Presentation to the Kaiapoi Community Board	Kaiapoi Service Centre	This presentation provided an overview of the 10 meetings held across the District and a summary of the presentation from those meetings.
28 Sept 2015	Loburn Community Meeting	Loburn Reserve Pavilion	Background to Waimakariri Zone Committee and work programme; Monitoring update; Community feedback
29 Sept 2015	Clarkville Community Meeting	Salmon Smolt NZ Hatchery at 430 Heywards Road	Proposal for additional monitoring 2015-16: 3. Key values and key concerns in the area - Community feedback
11 Sept 2015	Saltwater Creek Estuary Group	Svens house	Discussion on current water quality and health of Saltwater Creek catchment and Ashley estuary; need to review monitoring data and estuary report; worth in starting local monitoring programme
18 Nov 2015	Saltwater Creek Estuary Group	Sven Koops house	Monitoring programme for the estuary, Mana whenua engagement
Community meetings – Round 2			
23 Nov 2015		Oxford, Town Hall	Zone & Regional Committees; Sub-Regional Plan Process; Technical work programme; Current State of the Environment; Water Management Groups; GMP and Farm Environment/Lifestyle Block Management Plans
24 Nov 2015		West Eyreton, West Eyreton Hall	
26 Nov 2015		Ohoka, Ohoka School Hall	
9 Dec 2015		Rangiora, Rangiora showground	
10 Dec 2015		Pegasus, Flat White café	
14 Dec 2015	Oxford Community Meeting	Jaycee Hall – Oxford	Background to Waimakariri Zone Committee and work programme; Community feedback

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
16 Dec 2015	West Eyreton Water Management Group Meeting	West Eyreton Hall	Background to Waimakariri Zone Committee and work programme; Community feedback
17 Dec 2015	Lower Cust & Ohoka Water Management Group	Ohoka Domain Pavilion	Background to Waimakariri Zone Committee and work programme
2016			
22 Mar 2016	West Eyreton Water Management Group Meeting	West Eyreton Hall	Claire's update on ZC matters; MGM, Farm Portal and Nutrient Management Plan Change; Review of ZIP Priority Outcomes; Actions / Clarifications sought
31 Mar 2016	Oxford Water Management Group/Community Meeting	Town Hall A&P Room	Update on Environmental Quality of the Inland areas of the Waimakariri Zone; GMP, MGM & Farm Portal; Feedback on ZIP Priority Outcomes; History of land use change
15 Aug 2016	U3A (University of the 3 rd Age) presentation	Rangiora Showgrounds Function Centre	Grant provided an overview of the CWMS, role of the zone committee and sub-regional process as part of a series of presentations in August on water quality and the rivers in the Zone.
10 Oct 2016 12 Oct 2016 17 Oct 2016	Current State Community Meetings	Cust Community Hall, Rossburn Receptions, Waikuku Beach Hall	
	Beef + Lamb catch up	Environment Canterbury	Meeting with Julia Beijeman to discuss process and opportunities for engaging with Beef+Lamb farmers
14 Nov 2016 16 Nov 2016 21 Nov 2016	Current Pathways Community Meetings	Cust Community Hall Cancelled because of Kaikoura earthquake), Rossburn Receptions, Waikuku Beach Hall	
05 Dec 2016	Beef+Lamb Meeting	Oxford Working Men's Club	Beef+Lamb NZ providing information about Sub Regional Planning processes & providing guidance on how farmers can effectively engage in such processes
2017			

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
16 Jan 2017	Lees Valley Meeting	Lees Valley	Three landowners represented, Federated Farmers representative and Beef+Lamb representatives. Two Zone Committee Members attended.
15 Mar 2017 20 Mar 2017 22 Mar 2017	Alternative Pathways Community Meetings	Cust Community Hall, Rossburn Receptions, Kaiapoi High School	
23 May 2017	Cam River water Allocation	Ecan offices Matt Dodson Alastair Picken Mark Megaughin Richard Stalker	Discussion on solutions for water allocation on the Cam, including augmentation of the waterbody
15 Jun 2017	Cam River Irrigators Meeting	Rossburn Reception in Rangiora	Called by Richard Stalker to discuss Irrigators concerns regarding minimum flows and allocation
28 Jun 2017	Salmon Smolt	Silverstream Hatchery	Discussion about the issues in Silverstream and its effects on Salmon and possible ways forward.
15 Aug 2017	Lees Valley Meeting	Lees Valley function room	<ul style="list-style-type: none"> to know is what the farms are doing now in terms of land use (so ECan can compare to our current dataset); and what the farms want to do in the future – any significant changes to land use (this will enable modelling to identify likely change or impact going forward)
7 Oct 2017	Cam catchment meeting	Judith Roper-Lindsay (Waimakariri Zone Committee). Grant Edge (Waimakariri Zone Committee), Andrew Arps (ECan), Anna Veltman (ECan), Jason Butt (ECan). Apology: Sandra Stewart (Cam River	to discuss opportunities for integrated management of land and water in the Cam catchment under the CWMS.

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
		Enhancement Committee Chair)	
6th to 23 November 2017	TARGETED Consent holder workshops: Cust Main Drain/Cust River/No 7, Cam and 3 Brooks and McIntosh, Ohoka, Lower Ashley/Waikuku/Taranaki/Saltwater Creek, Ashley, Kaiapoi (Silverstream)/Courtenay, Greigs	Fernside Hall Woodend Community Centre Ohoka Hall Pegasus Community Centre Loburn Domain Pavilion Clarkville Hall	To gain an understanding from the community what reliability abstractors are currently experiencing
23 November 2017	Catch up with John Talbot	Local café – Mark M, Matt D and Meredith M	Inform him of the process and ask him about his appeal to the LWRP
2018			
9 February 2018	Simon Fraser and his son (Westburn Farm)	Ecan Offices	Discussion with Alastair and Jess about his consent, minimum flows on the Cust River and the process
22 February 2018	Christchurch West Melton ZC and ECan staff	ECan offices	Introducing nitrate issue (cross boundary)
18 April 2018	TARGETED Consent holder workshops: Ashley catchment community meeting on minimum flows and allocation	Woodend Community Centre	To discuss proposed changes to minimum flows and allocation regime
19 April 2018		Loburn Domain Pavilion	
24 April 2018		Waikuku Beach Hall	
2 May 2018	Meeting on nitrates in the Interzone	West Eyreton Hall	Inform landowners within the Interzone area, that nitrates leaking from this area have been modelled to be travelling to deep aquifers under Christchurch.

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
7 May 2018	Briefing on Interzone Issue – WWMZC and Christchurch West Melton ZC	Rossburn Reception	Briefing on Interzone
30 May 2018	TARGETED Consent holder workshops: Northern Waimakariri Tributaries meeting on minimum flows and allocation	Rossburn Receptions, Rangiora	To discuss possible recommended changes to minimum flows and allocation regime
31 May 2018		Fernside Hall	
6 June 2018		Ohoka Hall	
7 June 2018		Clarkville Hall	
8 June 2018	CCC and ECan councillors briefing	CCC offices	Briefing on Interzone
13 June 2018	Christchurch West Melton ZC members workshop on interzone nitrates issue	ECan offices	Receive a further technical briefing from ECan on interzone nitrate modelling
13 July 2018	Cust Surface water users	Cllr McKay's House	Discuss hydrological and ecological information
18 July 2018	Community Meeting on Nitrates	Riverside Church Hall, Kaiapoi	Briefing on current and modelled nitrate concentrations. Stepped approach to solutions
19 July 2018		Oxford Town Hall	
25 July 2018		Rossburn Receptions, Rangiora	
9 August 2018	CCC and ECAN staff	CCC building	Briefing on Interzone
10 August 2018	CHWM ZC Groundwater Working Group	ECan building	To discuss feedback on first attempt are draft recommendations regarding nitrate management cross zones
20 August 2018	CHCHWM-ZC Groundwater & Drylands Working groups	Rossburn reception	Feedback to WWZC on first draft on managing nitrates cross zones
13 September 2018	Infrastructure and Environment Committee of CCC	CCC building	Update on ZIPA process

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
14 September 2018	CCC Water Forum		Update on ZIPA process
21 September 2018	Community engagement on draft ZIPA	Ohoka Market	Seeking feedback on draft ZIPA
5 October 2018			
24 September 2018	Combined Community Board presentation on draft ZIPA	WDC Chambers, Rangiora	Briefing on the draft ZIPA recommendations and community consultation for the draft ZIPA to WDC Community Board members.
26 September 2018	Two community workshops each day on draft ZIPA	Riverside Church Hall, Kaiapoi	Seeking feedback on draft ZIPA
27 September 2018		Pegasus Community Centre	
3 October 2018		Oxford Town Hall	
1 October 2018	Community drop in session with ZC on draft ZIPA	John Knox Church, Rangiora	Seeking feedback on draft ZIPA
4 October 2018	A community workshop on each day on the draft ZIPA	Belfast Rugby Club	Seeking feedback on draft ZIPA
10 October 2018		Rosburn Receptions, Rangiora	
30 October 2018	Cust Surface water users	Cllr McKay's House	Discuss ZC draft recommendation and listen to feedback on it

Ngāi Tūāhuriri Rūnanga engagement

Date	Hui	Location	Agenda items/discussion points
18 December 2016	Hui between Mahaanui Kurataiao Ltd (MKT), Ngāi Tūāhuriri and Environment Canterbury staff	Tūāhuriri Marae	Discussion on the first draft report on Wāhi taonga me Wāhi tapu in the Waimakariri area
27 February 2017	Comar report provided to Waimakariri Zone Committee	Rossburn receptions	Overview of the COMAR recommendations, including Whanau flow preferences and ecological minimum flows
28 June 2017	Waimakariri Rūnanga reps/ TRONT staff/Matt D	Te Rūnanga	Workshop with Te Rūnanga staff on Waimakariri Zone outcomes
10 August 2017	Matt Dale (TRONT)/ Jarred and Matt D	Tuam Street	TRONT wanting/asked to undertaking an stock take on the state of scientific knowledge in the Waimakariri zone as it relates to the key values identifies in the Cultural Impact Assessment undertaken by Gail
23 May 2018	Arapata, Murray, Lyn and Meredith	Te Whare o Te Waipounamu	To initiate discussions on how to work with Arapata, the new representative for Ngāi Tūāhuriri around the Zone Committee table
20 June 2018	First hui between staff and Ngāi Tūāhuriri Rūnanga	Tūāhuriri School	To discuss the Comar and MKT reports, the options presented in targeted engagement and where the ZC is sitting on preferred options to date.
30 July 2018	Second hui between staff and Ngāi Tūāhuriri Rūnanga	Tūāhuriri Marae	Further develop understanding of cultural recommendations
8 August 2018	WWZC and Ngāi Tūāhuriri rūnanga	Tūāhuriri Marae	WWZC listened and discussed cultural preferences with Representatives from Rūnanga

Technical Engagement Table

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
16 February 2015	SSAG	Rossburn	Discussion with stakeholders about how they want to be involved in the process, regarding the science. Outcome was to explore forming some advisory groups.
19 March 2015	SSAG	Rossburn	Discuss proposal of the SSAG and TLAG with stakeholders.
22 April 2015	SSAG	Rossburn	TOR for the SSAG, selection method of members of the TLAG
3 June 2015	SSAG	Rossburn	TOR; TLAG members selected
15 July 2015	SSAG	WDC Council Chambers	Presentation by Dan C, Adrian M and Matt D about Ecan's science data
9 September 2015	SSAG	WDC Council Chambers	Presentation by Mary Sparrow about the Social Assessment
16 October 2015	SSAG	Rossburn	Introducing the TLAG and discussion about priority (community) outcomes and discussion about key issues of contention requiring scientific input
26 November 2015	SSAG	Rossburn	Presentation from Simon H about the Economic Assessment
28 January 2016	SSAG	Rossburn	Waimakariri Sub-Regional Plan Overview by Jason Holland
16 February 2016	SSAG	Rossburn	Surface Water Hydrology & Ecology by Michael Greer
13 April 2016	SSAG	Rossburn	Conceptualisation of the Waimakariri Zone hydrogeology: Zeb Etheridge
11 May 2016	SSAG	Rossburn	Urban Stormwater Quality Programme by Kalley Simpson & Alicia Kos (WDC); Groundwater Model by Fouad Alkhaier
15 June 2016	SSAG	Rossburn	Waimakariri Hydrology – Mark Megaughin; Ashley/Rakahuri Estuary and contact recreation programme – Lesley Bolton-Richie
13 July 2016	SSAG	Rossburn	Waimakariri farm system and environmental economics project Justin Kitto (DiaryNZ); Administration and where here to from here
5 October 2016	SSAG	Rossburn	Proposed structure and timing of future SSAG workshops
26 October 2016	SSAG	Rossburn	Feedback from SSAG to Zone Committee from current state community meetings

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
25 January 2017	SSAG	Rossburn	SSAG Feedback on Current Pathways
5 April 2017	SSAG	Rossburn	SSAG feedback on Alternative Pathways Scenario
17 May 2017	SSAG	Rossburn	Managed Aquifer Recharge – Bob Bower of Golder and Associates
28 June 2017	SSAG	Rossburn	Surface water values mapping exercise
23 August 2017	SSAG	Rossburn	Groundwater modelling preliminary findings and explanation of why we needed more time
15 February 2018	SSAG	Rossburn	Waimakariri groundwater investigation results
27 September 2018	SSAG	Rossburn	Update on draft ZIPA recommendations – asking for feedback
17 August 2015	TLAG	Boardroom, Cafe Kudos	Start-up meeting: intro and workplan
7 and 11 September 2015	TLAG	Birmingham Drive, Middleton	Overview of technical team work plans
16 October 2015	TLAG	Field trip and Rossburn	Field trip: Introducing the TLAG to SSAG and discussion about priority (community) outcomes and discussion about key issues of contention requiring scientific input
29 October 2015	TLAG	Birmingham Drive, Middleton	Review session and where to from here
25 January 2016	TLAG	Birmingham Drive, Middleton	Review session 2
6 July 2016	TLAG	Tuam Street, Christchurch	Discussion about indicators and scenarios
8 November 2016	TLAG	Tuam Street, Christchurch	Pre- current pathways scenario meeting
15 February 2017	TLAG	Tuam Street, Christchurch	Pre-alternative pathways scenario meeting
20 April 2017	TLAG	Tuam Street, Christchurch	Solutions phase planning
16 May 2017	TLAG	Tuam Street, Christchurch	Solutions phase meeting (1)
15 June 2017	TLAG	Tuam Street, Christchurch	Solutions phase meeting (2)
6 September 2017	TLAG	Tuam Street, Christchurch	Solutions phase meeting (3)
3 November 2017	TLAG	Tuam Street, Christchurch	Solutions phase meeting (4)
8 February 2018	TLAG	Tuam Street, Christchurch	Solutions phase meeting (5) and tech lead hand over
27 Mar 2018	TLAG/Tech team	Tuam Street, Christchurch	Solutions phase and debrief from Community workshops
24 April 2018	TLAG/Tech team	Tuam Street, Christchurch	Solutions phase and debrief from Community workshops

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
24 May 2018	TLAG/Tech team	Tuam Street, Christchurch	Solutions phase and debrief from Community workshops
26 June 2018	TLAG/Tech team	Tuam Street, Christchurch	Solutions phase and debrief from Community workshops
24 July 2018	TLAG/Tech team	Tuam Street, Christchurch	Solutions phase and debrief from Community workshops
30 November 2015	Farmers panel	WDC Council Chambers	Start-up meeting and overview
7 January 2016	Farmers panel	WDC Council Chambers	PC 5 implications and land use mapping
3 March 2016	Farmers panel	Rangiora Town Hall Function Centre	Land use mapping and Matrix of Good Management (Melissa Robson)
31 March 2016	Farmers panel	Rangiora Town Hall Function Centre	Irrigation mapping; Simon starting the economic assessment and data sources
28 April 2016	Farmers panel	Rosburn	Steps in the sub-regional planning process; Typical farm financials
26 May 2016	Farmers panel	Rosburn	Economics and Nutrient modelling
4 August 2016	Farmers panel	Rosburn	Financial modelling; Modelling for overseer; Diary support
24 November 2016	Farmers panel	Rosburn	Mitigation measures
2 February 2017	Farmers panel	Rosburn	Nitrate Modelling: Zeb Etheridge. Leo Fietje: review of mitigation options for costing
16 March 2017	Farmers panel	Rosburn	Mitigation and options
4 May 2017	Farmers panel	Rosburn	Ina Pinxterhuis (DairyNZ) - results of the P21 study, discussion; Cost-benefit results - incorporation of feedback from previous meeting and progress report
22 June 2017	Farmers panel	Rosburn	Leo and Simon will be discussing with you the finalised the modelling, and confirming the classification of farm types for the economic impact report.
31 August 2017	Farmers panel	Rosburn	Leo and Simon will present the final results of technical and economic investigation; Matt Dodson will provide an outline of the timetable for the remainder of the work for the Waimakariri Zone
9 October 2017	Farmers panel/WWZC	WDC Council Chambers	Presentation by DairyNZ and of the results of the work of the farmers' panel to the Zone Committee
25 January 2018	Farmers panel	Rosburn	Groundwater flow results presentation, Zeb

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
12 July 2018	Farmer Panel	Rosburn receptions, Rangiora	To discuss feedback on draft recommendations
15 December 2015	Model Conceptualisation workshop	Ward Room, Commodore Airport Hotel, Christchurch	Major rivers conceptualisation project (Aqualinc); Aquifer properties and Eyre zone hydrostratigraphy investigation (PDP); Hydrogeology and water quality of the Kaipoi River catchment (Zeb); Land surface recharge project (Fouad); Coastal discharge boundary investigation (Zeb)
24 August 2015	Waimakariri Hydrological Model progress meeting	Birmingham Drive	Project scope
5 April 2016	Model Conceptualisation workshop	Birmingham Drive	Model development
7 April 2016	Model Conceptualisation workshop	Birmingham Drive	Discuss conceptual understanding of coastal zone, key questions to be addressed and how groundwater model should be built to represent coastal stratigraphy
13 June 2016	Numerical model optimisation review	Birmingham Drive	Scoping meeting for the GW flow investigation
31 May 2016	Model Conceptualisation workshop	Tuam Street	Discuss groundwater model build progress
29 June 2017	Waimakariri GW Model Advisory Team	Tuam Street, Christchurch	Assumptions, Approach Null Space Monte Carlo, Define probability distributions; Main model elements: coastal boundary, LSR, Southern model boundary conditions, spring-fed streams, Off-shore flow, Groundwater abstraction, Layering, Loss/gain rates for streams and rivers, Northern model boundary influx
21 August 2017	Groundwater Model Parameter Expert Judgement Workshop	Tuam Street, Christchurch	Waimakariri GW model input parameters probability distribution expert judgement workshop
27 October 2017	Waimakariri inter-zone transfer expert judgement workshop	Tuam Street	Evidence for under-river transfer: geochemistry & end member mixing. Evidence for under-river transfer: transfer pathway data

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
20 November 2017	Waimakariri groundwater model results evaluation	Tuam Street	Model optimisation and results; Null space monte carlo modelling; NSMC for Waimakariri Model; Nitrate load uncertainty analysis etc
22 August 2016	Water quality and ecology expert panel	Tuam Street	Discuss scope of work and objectives, including timeline, current state report, methods etc
12 Sept 2016	Water quality and ecology expert panel	Tuan Street	Discuss assumptions around GMP, Discuss values map, method etc
21 October 2016	Water quality and ecology expert panel	Tuam Street	Current pathways assessment meeting
1 March 2017	Water quality and ecology expert panel	Tuam Street	Alternative pathways assessment meeting
28 April 2017	Water quality and ecology expert panel	Tuam Street	panel discussed what the core environmental issues are for the Waimakariri Zone and mechanisms for mitigating them. Assessments included prioritising mitigations from most desired to least in terms of environmental impact. Also, likely magnitude of effect in terms of each mitigation's ability to reduce the severity of each issue.

Other Technical Meetings

Date	Meeting	Location	Agenda items/discussion points relating to the Waimakariri Land and Water Solutions Programme
31 March 2015	DairyNZ	Café near Birmingham Drive	Discussion around SSAG and TOR
31 March 2015	Maka Makarini /David Just and Matt Dodson	Kainga and Waimakariri spring-fed streams	what different allocations are in place (SW and GW), how allocations limits are determined, how we determine stream depletion effects, the general consenting process.

23 June 2015	Stream walk Silverstream with David B and Karl F	Silverstream	Field measurements from the river and general catch up
13 July 2015	DOC	Birmingham Drive	DOC: Ecan technical engagement
23 September 2015	Mahinga kai field trip with Makarini	Waimakariri spring-fed streams (field trip)	Field trip of the spring fed streams to discuss Mahinga kai with tech team members
6 October 2015	Economic data – Dairy NZ, B&L, FAR and WIL	Birmingham Drive	Sourcing economic data from key rural stakeholders
27 October 2015	Doug Rankin	Birmingham Drive	Social assessment and kayaking issues
28 October 2015	Irrigation Field Day	Larundel Dairy Partnership, 1901 Tram Road, Swannanoa	Farm and Irrigation System Information. Climate – Looking ahead – what will the season bring? Water wastage and how to improve. Irrigation research in the Waimakariri area
30 October 2015	Shane Kelly (NTF), PDP, Zeb and RMO	ECAN Offices Ellesmere Centre - 24 Edward Street, Lincoln.	Consent conditions and monitoring. One outcome from the meeting was that NTF would drill more monitoring bores
18 Nov 2015	ESR	ESR, Chch	Discussion about the TPP proposal
29 Jan 2016	ESR	ESR, Chch	Discussion about P for the TPP proposal
1 February 2016	Chris Bacon (WDC)	WDC, Rangiora	WDC flood modelling
2 February 2016	Richard Spencer-Bower	Claxby farmstead	Discussion about GW levels in their wells and general conversation about process
7 April 2016	Tuahiwi Organics	496 Tuahiwi Road	Site visit and spring mapping
12 April 2016	DairyNZ	Canterbury Agriculture & Science Centre, Gerald Street, Lincoln	Justin taking over from Shirley H – general catch up and talk about process
14 June 2016	Fish and Game	Tap N Grind	Ecological assessment and conclusions
5 May 2016	WIL	Artisan Cafe 18 High St, Rangiora	Summer student: would we do it again? What where the good things? What would we change?; Map to identify what farms are covered by WIL, so we know those farmers are ‘sorted’ in terms of FEP’s and consents for farming; Any info about the water use, the stockwater scheme
17 May 2016	ESR	Tuam Street	Site selection for the TPP

8 September 2016	Richard Stalker and Sven Koops	Tap N Grind Cafe	Discussion about process and how to engage with farming sector, and their information requirements
18 September 2016	TPP	Tuam Street	TPP overview and discussion on Year 1 work in the zone
22 September 2016	TPP	Lincoln Agritech offices, Lincoln	Transfer Pathways Programme Research Partners – End Year 1 meeting
6 April 2017	Zeb/WIL meeting	Rangioura	Discussion of MAR and stream augmentation
23 May 2017	Richard Stalker	Tuam Street	Discussion about Cam River flows and min flows
15 June 2017	Cam irrigators	Rosburn	Discussion points include changing minimum flows and all other aspects of stream health and effect of irrigation, surrendering of inactive consents and possibility of augmentation from Waimakariri Irrigation Ltd (WIL) water.
1 August 2017	Staff briefing to WDC Council	WDC Council Chambers	As partners, staff informed WDC Councillors the initial results of the GW model and that the ZC schedule needed to be changed.
25 October 2017	TPP	Lincoln Agritech offices, Lincoln	Transfer Pathways Programme Research Partners – End Year 2 meeting
13 December 2017	Craig McIntosh	Phone call with Matt Dodson	Discussion about min flows on the Cam and process
16 March 2018	Alan Hawkins	Phone Call with Zeb E.	Discussion of groundwater model uncertainty and measured stream nitrate concentrations

File reference: