



**HURUNUI**  
*District Council*



# Hurunui-Waiau Zone Committee

## Agenda

**3.00pm, Monday, 19 November 2018**

***1.00 – 2.30pm – Zone Committee only workshop***

***2.30 – 2.45pm – Public Workshop – Te Reo Maori***

**Waiau Hall, Waiau**

### **Committee Membership:**

John Faulkner (Chairperson)  
Mayor Winton Dalley (Hurunui District Council)  
Cr Vince Daly (Hurunui District Council)  
Cr Cynthia Roberts (Canterbury Regional Council)  
James Costello  
Ben Ensor (Deputy Chairperson)  
Michele Hawke  
Ken Hughey  
James McCone  
Makarini Rupene (Te Ngāi Tūāhuriri Rūnanga)  
Dan Shand  
Nukuroa Tirikatene-Nash (Te Rūnanga o Kaikōura)

### **Quorum:**

The quorum of the meeting consists of:

- half of the members if the number of members (including vacancies) is even; or
- a majority of members if the number of members (including vacancies) is odd.

**Committee Secretary** – Michelle Stanley

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### **The purpose of local government:**

- (1) The purpose of local government is—
  - (a) to enable democratic local decision-making and action by, and on behalf of, communities; and
  - (b) to meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses.
- (2) In this Act, **good-quality**, in relation to local infrastructure, local public services, and performance of regulatory functions, means infrastructure, services, and performance that are —
  - (a) efficient; and
  - (b) effective; and
  - (c) appropriate to present and anticipated future circumstances.

*(Local Government Act 2002 – Amendment Act 2012)*

HURUNUI – WAIAU ZONE COMMITTEE  
WORKSHOP & MEETING  
Monday, 19 November 2018,  
**Waiau Hall, Waiau**

- 1.00pm – 2.30pm**      **Zone Committee only workshop**  
– feedback on proposed HWRRP plan change (first schedule consultation) and response.
- 2.30pm – 2.45pm**      **Zone Committee public workshop**  
– Te Reo Maori: places in the zone

**AGENDA**

	3.00pm	<b>Zone Committee Meeting commences</b> with karakia and formal order of business <ul style="list-style-type: none"> <li>• Apologies</li> <li>• Announced urgent business</li> <li>• Interests register (updated)</li> <li>• Confirmation of minutes – 17 October 2018</li> <li>• Proposed 2019 meeting schedule</li> </ul>	4 5-15 16
1	3.25pm	Update on Regional Committee Winton Dalley and Michele Hawke	17
2	3.35pm	Update from Zone Committee members on activities and meetings attended that relate to the Committee's outcomes for the zone	
3	3.40pm	Requirements for nutrient monitoring in proposed changes to HWRRP – certified organic farms Ian Henderson, Milmore Downs	18-19
4	3.55pm	Other Public Contribution	
5	4.05pm	Update from AIC	
6	4.25pm	Update from other organisations wishing to speak	
7	4.30pm	Update from Zone Delivery Andrew Arps, Environment Canterbury	
	4.40pm	BREAK	
8	5.00pm	Pyramid Valley Vineyards proposed development Steve Smith	To be circulated separately
9	5.20pm	Southern black-backed gull control in Hurunui River Kailash Willis and Mike Bell, Wildlife Management International	20
10	5.45pm	CWMS Fit for Future Project – targets for 2025 and 2030: what needs to be done, by who, to achieve the targets	21-46
11	6.15pm	Zone Facilitator's Report: <ul style="list-style-type: none"> <li>• Topics for 2018 Annual Report;</li> <li>• Update on BRIDGE (braided river) Project</li> <li>• Update on Omnibus Plan Change</li> <li>• "Clean, Check, Dry" campaign</li> </ul>	47-49 50-56 57-58
	6.30pm	Meeting concludes (approximate)	

## Register of Interests for the Hurunui-Waiau Zone Committee

Committee Member	Interests
James Costello	<ul style="list-style-type: none"> <li>• Farm owner – sheep in the Hurunui Catchment</li> <li>• Water Resource Consent to take water from the Waitohi River</li> <li>• Shareholder in Hurunui Water Project</li> <li>• Possibly an affected landowner by infrastructure of Hurunui Water Project</li> <li>• Dryland Farmers Committee member</li> </ul>
Ben Ensor	<ul style="list-style-type: none"> <li>• Land owner in the coastal hills, Jed and lower Waiau catchments.</li> <li>• Managing director of Seaward Stock Company Ltd, comprising sheep, beef and cropping enterprises.</li> <li>• Consent holder to take water for irrigation from a stream hydraulically connected to the Waiau River.</li> <li>• Member of the Hurunui Waiau Landcare Group (Dryland Farmers Group).</li> </ul>
John Faulkner	<ul style="list-style-type: none"> <li>• Dairy farm owner in the Amuri Basin.</li> <li>• Irrigation water supplied by Amuri Irrigation Company Ltd (Shareholder).</li> <li>• Dairy Support block owner, consent to take water from a gallery.</li> <li>• Member of the independent irrigators Group.</li> </ul>
Michele Hawke	Nil
Dan Shand	<ul style="list-style-type: none"> <li>• Land owner Hurunui and Waiau catchments</li> <li>• Dry land farmer</li> <li>• Member of the Hurunui/Waiau Landcare Group</li> </ul>
Mayor Winton Dalley	<ul style="list-style-type: none"> <li>• Register of Interests lies with the CEO of the Hurunui District Council.</li> </ul>
Ken Hughey	<ul style="list-style-type: none"> <li>• Professor of Environmental Management, Lincoln University (2 days per week)</li> <li>• Chief Science Advisor, Department of Conservation, Wellington (3 days per week)</li> <li>• Board member Waihora Ellesmere Trust</li> <li>• Board member Hanmer Springs Conservation Trust</li> <li>• Member Royal Forest and Bird Protection Society.</li> <li>• Member Royal Society of NZ</li> <li>• Member NZ Geographical Society.</li> <li>• Occasional contract water-related research work including for Environment Canterbury.</li> </ul>
Makarini Rupene	<ul style="list-style-type: none"> <li>• Cultural Land Management Advisor, Environment Canterbury</li> <li>• Tangata Kaitiaki</li> <li>• Ngāi Tūāhuriri Representative, Motanau Coastal Guardians</li> <li>• Member, Executive, Ngāi Tūāhuriri Runānga</li> </ul>
James McCone	<ul style="list-style-type: none"> <li>• Dry Creek Dairy Ltd- AIC Balmoral scheme</li> <li>• Kinloch Dairy Ltd- AIC Waiau Scheme</li> <li>• Amuri Irrigation Company Director</li> <li>• Committee Member Upper Waiau Independent Irrigators</li> <li>• Informal interest in potential emu plains irrigation</li> </ul>
Councillor Vince Daly	<ul style="list-style-type: none"> <li>• Farm owner - mixed cropping and livestock farm</li> <li>• Water resource consent to take water from unnamed lake in Jed catchment</li> </ul>
Cynthia Roberts	<ul style="list-style-type: none"> <li>• Register of Interests is held by Environment Canterbury.</li> </ul>
Nukuroa Tirikatene-Nash	<ul style="list-style-type: none"> <li>• Tangata Kaitiaki</li> <li>• Trustee, Te Kōhaka o Tūhaitara Trust</li> <li>• Member, Ngāi Tahu Farms Mana Whenua Working Party</li> <li>• President, Gore Bay Board Riders</li> <li>• Iwi/environmental management consultant</li> <li>• Director, Hui Ngaru o te Wai Pounamu</li> </ul>

# HURUNUI DISTRICT COUNCIL MINUTES



<b>Meeting</b>	Hurunui-Waiau Zone Committee
<b>Date and Time</b>	15 October 2018, 3.06pm
<b>Venue</b>	Hawarden Hall, Hawarden
<b>Agenda</b>	<a href="http://www.hurunui.govt.nz/assets/Uploads/15-October-2018-Hurunui-Waiau-Zone-Committee-Agenda.pdf">http://www.hurunui.govt.nz/assets/Uploads/15-October-2018-Hurunui-Waiau-Zone-Committee-Agenda.pdf</a>
<b>Members Present</b>	John Faulkner (Chair), Mayor Winton Dalley, Ben Ensor, Michele Hawke, Ken Hughey, James McCone, Cr Cynthia Roberts, Makarini Rupene, Dan Shand, Cr Vince Daly and Nukuroa Tirikatene-Nash.
<b>In Attendance</b>	<p><b><i>Environment Canterbury (ECan)</i></b> – Murray Griffin (Zone Facilitator), Lisa Jenkins, Ned Norton.</p> <p><b><i>Hurunui District Landcare Group (HDLG)</i></b> – Josh Brown</p> <p><b><i>Hurunui Water Project</i></b> – Chris Pile</p> <p><b><i>Amuri Irrigation Company (AIC)</i></b> – Andrew Barton and David Croft</p> <p><b><i>Hurunui District Council</i></b> – Cr Nicky Anderson and Judith Batchelor</p> <p><b><i>Dairy Farmer</i></b> – Shaun Lissington</p> <p><b><i>Committee Secretary</i></b> – Michelle Stanley</p>
<b>Recording Device</b>	A recording device was in use for the accuracy of the minutes.
<b>Karakia</b>	Nukuroa Tirikatene-Nash led the karakia.
<b>Apologies</b>	<p>Apologies were received from James Costello. Makarini Rupene for early departure.</p> <p>THAT THE APOLOGIES BE ACCEPTED.</p> <p>Faulkner/Shand <span style="float: right;">CARRIED</span></p>
<b>Conflict of Interest Declarations</b>	Nil.
<b>Urgent Business</b>	<p><i>The ECan Hill Country Erosion Fund Application and letter of support.</i></p> <p>The letter and application was taken as read. Copies were emailed to Zone Committee members prior to the meeting and hard copies handed out at the meeting.</p> <p>THAT THE ZONE COMMITTEE SUPPORTS THE ENVIRONMENT CANTERBURY HILL COUNTRY EROSION FUND APPLICATION AND LETTER OF SUPPORT.</p> <p>Dalley/McCone <span style="float: right;">CARRIED</span></p>

## Minutes

THAT THE MINUTES OF THE COMMITTEE MEETING HELD ON 17 SEPTEMBER 2018 ARE CONFIRMED, SUBJECT TO THE FOLLOWING AMENDMENTS:

- Page 5, In Attendance, Chris Pile and Christina Robb where not in attendance.
- Page 6, Matters arising, last paragraph, this paragraph to be changed as the signage is about the sewage not a swimming hole. Change to read, "Cr Vince Daly questioned Andrew on the signage for sewage on the Jed River sign that was erected in Cheviot. All discussions prior to this sign going up were indicative that it would be a hinged sign so that when it is safe, the warning sign could be folded down..."
- Page 7, Cultural Impact Assessment, second paragraph, change the word 'reduced' to 'increased'.
- Page 7, Cultural Impact Assessment, fourth paragraph, remove reference to the MKT and cultural advisors being present at the meeting.
- Page 7, Correspondence, reword to read "It was noted that it is preferred that Tony Hawker's name is used when discussing the previous Zone Committee memberships..."
- Page 7, Item 1, first bullet point, "...and they are seeing good results from the Broom control."
- Page 8, Item 2, second bullet point, fourth paragraph, "Jamie McFadden asked the Zone Committee to consider the effect **on** landowners..."
- Page 10, second bullet point, remove repeat of 'on the'.
- Page 11, first bullet point, add word to read, "A number of advertising **approaches** will be run including..."
- Page 11, first bullet point, second paragraph, change to read "it was noted that there is a trouble spot on the Hurunui River at State Highway 1 as there are no public toilets available, which can lead to other issues, such as contaminants in the water. Issues at the River Mouth were also discussed."
- Page 11, second bullet point, fourth paragraph, change paragraph to read, "The other issue raised was that the bird's main source of food is not being dealt with. It was asked if there is a way to limit the number of birds through farming activities. It was reiterated that the black-backed gulls have always been on the river but over the last 50 years numbers have increased. The gulls will fly a long way for food but seem to prefer this part of the river as their habitat."

Faulkner/Shand

CARRIED

### **Matters Arising:**

#### *Microbial and nutrient loads from birds (Page 6)*

Ned Norton prepared a paper that answered the issues and questions raised by a letter sent to Nukuroa Tirikatene-Nash in the 20 August 2018 meeting.

It was noted that none of the information presented in the paper changes the results and conclusions presented at the 20 August 2018 Zone Committee meeting. Those results and conclusions were based on the faecal source tracking method that directly confirmed birds as the dominant source of the *E. coli* contamination measured at the State Highway 7 Balmoral swimming site.

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Ned Norton asked the Zone Committee to consider and discuss whether to conduct further similar microbial monitoring downstream at the Hurunui River State Highway 1 site, some results are provided from 2017 data showing that ruminant animals contributed to *E. coli* at that site with negligible contribution from birds. The report outlined the merits of further work for the Zone Committee's consideration.

The Zone Committee took the report as read. Discussion was held and the following was noted:

- Some concern was expressed that while this information was helpful to clarify the difference between *E. coli* sources, it was questioned as to the relevance that this information has to fixing the swimmability of the Balmoral swimming hole.

Ned noted that the supplied data was to answer the question raised at a previous meeting and does not change the results of the original testing.

- Discussion was held around the variation of 10-50% in the ruminant source for the Lab results (page 24 of the agenda) with concern expressed that this is a significant variation.

Ned noted that the Lab was unable to identify where the other 10-50% comes from. Ned thought a possible explanation could be that when the *E. coli* sample is old, it could cause inconclusive results. These samples depend on where in the river they were before being collected. If they spent time on the banks of the river, the sun can deteriorate and age the *E. coli* more so than a sample that has spent its life in the dark, damp depths of the river. Ned will confirm this.

- It was discussed that there is currently a gap in the available literature on fresh manure characteristics of pigs. They produce pathogens such as *E. coli*, *Salmonella*, and *Campylobacter* but it is not known exactly how the relationship between *E. coli* and other pathogens look compared to other animals. Ned noted that it is not *E. coli* that they are interested in but the relationship between the number of *E. coli* and the illness causing organisms like *Campylobacter*. What this material is showing is that this relationship is different for each individual animal species. Ned noted that he would need to check to see if the faecal source tracking would specifically identify pigs but noted that that they did not see that in the last round of results.
- The table on page 23 of the agenda was queried as to why 'raw sewage' was a lower comparative risk to health. This data shows comparative risk for a given, one concentration of *E. coli*. If 100 *E. coli* samples were measured from the river and 100 measures from each of those sources mentioned, the chance that there would be a human illness causing organism in that water, is greater in the boxes on the left then the right.

Ned confirmed that the table is correct and the reason could be due to only a small amount of data for raw sewage, and that the data was of poor quality or that sewage treatment is more effective at knocking out *E. coli* then pathogens such as *Campylobacter*.

- It was noted that the most significant risk factor is the pathway to waterways for pathogens such as *E. coli*, irrespective of the source. The Zone Committee's focus is on fixing the cause of *E. coli* in the Hurunui
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River which is affecting the swimability of the Balmoral swimming spot. Ned agreed and noted that the literature numbers are not needed to validate the results of the State Highway 7 study as the results came back unmistakably with the *E. coli* contamination at that site being dominated by birds.

- Whilst the results of the State Highway 7 faecal source testing had the ruminant variation of 10-50%, it was agreed that the black-backed gull cull should continue as planned and the testing be redone after the cull to see if a positive change occurs.
- It was agreed that the Zone Committee would be interested in finding out more data around the faecal tracking of pigs.

John Faulkner introduced the letter written by Mathew Newton and the cull of the black-backed gulls on the Hurunui River. The consensus is that whilst some farming practices potentially encouraged the feeding and population increase of the black-backed gulls, there is still the overpopulation problem of the gulls to deal with.

A letter from Mathew Newton was tabled which referenced Ben Ensor's recent article in the North Canterbury News (11 October 2018) and expressed concern that no correlation has been drawn between the high *E. coli* readings on the Hurunui River, Balmoral, and farming practices. Discussion was held and the following was noted:

- Mr Newton noted that he agrees with the cull of the black-backed gulls, but wanted the Zone Committee to consider the effects of the large piggery, which is in close proximity to the gull colony. He feels that the piggery should shoulder some of the responsibility of the increase in numbers of the black-backed gulls.
- The Zone Committee noted that conversations have been held with the piggery in question. They are aware of the issue and are trialling methods for feeding out, such as remote feeders, to reduce access to food for the gulls. They want to work collaboratively to address the issue. It was also noted that the piggery is not the only farm to be contributing to the issue.
- While Mr Newton asked if a consent condition could be added to the piggery's consent to control the gull population, it was stated that as their consent does not include a discharge to water, ECan legally cannot enforce this. The Zone Committee noted that it encourages farmers to work with catchment groups and/or use Farm Environment Plans as a mechanism to encourage change.
- The Zone Committee thanked Mr Newton for his feedback and for attending the meeting to speak to his letter.

THAT THE HURUNUI-WAIAU ZONE COMMITTEE SUPPORTS THE RECOMMENDATION TO CONTINUE WITH THE NORMAL REGULAR WEEKLY SAMPLING FOR *E. COLI* AT THE SINGLE STATE HIGHWAY 1 SITE THIS SUMMER, AND, IN ADDITION, TAKE AND FREEZE A SINGLE ADDITIONAL BULK SAMPLE EACH WEEK FROM THAT SITE UNTIL THE END OF SUMMER.

McCone/Faulkner

CARRIED

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### 1. Update on Regional Committee

Michele Hawke updated the Zone Committee on the recent Regional Committee meeting held on the Tuesday, 9 October. The following was noted:

- Ian Brown gave a good presentation on the development of Good Management Practice.
- There was an introduction to the marae session.
- Members' workshopped the CWMS fit for future chart in groups. Those have been collected and collated for data.

### 2. Update from Zone Committee members on other activities and meetings attended that relate to the Committee's outcomes for the Zone.

The following updates from Zone Committee members were given:

- John Faulkner attended a workshop on collaboration at the Institute of Environmental Science and Research (ESR). This was a workshop to find out what collaboration is. John Faulkner provided a handout to the Committee asking if members can contribute to the government funded survey. They particularly want to learn about the practice of collaborative process in the public sphere from those doing it. The main focus is on land and water use and the Hurunui- Waiau Zone has been closely watched with this. The link to the survey is: <https://www.surveymonkey.com/r/colab2018>.
- Ken Hughey presented a paper at a recent Agricultural Research Forum on how collaborative processes work. He noted that there was robust discussion and he used, as one of three case studies, the Hurunui-Waiau Zone Committee as an example. Ken is happy to share his presentation slides if anyone is interested. He noted that the general feeling of the participants was that collaboration is a work in process and is hard work.
- Cr Cynthia Roberts attended a Climate Change in Business Conference in Auckland. Topics covered were the Emission Trading Scheme (ETS) and the latest report on climate change.

She noted that of particular interest was the workshop on the Emission Trading Scheme. Discussion on riparian planting opportunities was held at this workshop with those writing the rules for the Scheme. Riparian planting could be considered if the margins were made bigger and they were attached to an area of around 30 meters by 30 meters. Carbon emission offsets are currently being traded at \$25 a tonne and there is a lot of support from the government for planting, including native plants.

Bringing in methane to the ETS is on the agenda, it was put in terms of a just transition via farming methods, such as moving away from commodity and into high value products and spreading into different areas with the support of the government to do so financially. Cr Roberts noted that it was a good positive conference.

### 3. General Public Contribution

Chris Pile, HWP, informed the Zone Committee that HWP has received an offer from AIC for the purchase of its resource consents and intellectual property. HWP has considered and accepted the offer subject to approval by HWP Shareholders. There will be a shareholders meeting on the 23 October to put that resolution to the vote.

David Croft, AIC, noted that if this offer is accepted, it provides for the integrated storage solution. The staged solution provides an economic way of furthering

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irrigation that can be more environmentally tracked and therefore less risk to the community.

John Faulkner thanked Chris and acknowledged the work that has gone into HWP.

Chris appreciated that a lot of work has gone into it but does not feel it is wasted effort as they would have not got to this stage otherwise. AIC's piping project, and the re-plumbing that is now possible, makes this next stage achievable. HWP has been through a lengthy and convoluted process to get to where it has got over the last couple of years. It has been one knock after another and the reality is that the big grandiose scheme that the CWMS contemplated and promoted is clearly not the right way to go from the customer and ultimate water user perspective. He believes getting back to the way irrigation schemes previously evolved is a smart way to go.

David Croft noted that this will be a commercial standalone project and will not rely on other funding sources and will not be seeking outside funding.

David noted that they have approached all of the non-government organisations and provided them with an information pack of what AIC is planning.

John Faulkner asked what is happening to nutrients; will dryland farming still be able to be permitted? Chris noted the undertaking the three irrigators have made to work on offsetting the predicted increase in N load to permit dryland farming. AIC, Ngai Tahu Farms and HWP are in discussion with ECan to deal with the offset required to change the 10% rule and that commitment does not change. The holder of HWP's consents will still take that agreement and mechanism forward. The discussions should be simpler with two parties involved, rather than three.

John Faulkner noted that while it is a long way before water is pumped to the south side of the river, it has been the aim of the Zone Committee for a long time and to have it come to fruition would be good.

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**4. Update from Organisations wishing to speak**

Tania Harris updated the committee on publication of the draft flood lines maps on the ECan website. The Zone Committee will be informed when it is up.

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**REPORTS, SPEAKERS AND PRESENTATIONS**

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**5. Update from Zone Delivery including 2017/18 Compliance Report**  
Marco Cataloni,  
ECan

Marco Cataloni updated the Zone Committee on the recent activity of the Zone Team. He informed the Committee that they will be doing bimonthly updates rather than monthly from now on. The following was noted:

- The Zone Team will be undertaking a media campaign prior to the black-backed gull cull. With a primary focus on the threat to other native birds that the black-backed gulls present.
  - They are shifting towards a telemetry process that lets farmers know immediately if there is an issue with their water metering. This is resulting in better compliance.
  - He spoke to the Compliance Report tabled. At the request of a Zone Committee member, Marco will report on what sort of incidents require an infringement notice at a future meeting and how each incident is approached, whether it be an education approach or an infringement notice.
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- It was noted that in the Hurunui zone the dairy numbers are looking really good. A member of the public asked if this good news could be advertised to help raise the profile of dairy farming.
  - Marco will provide an annual report on the Hurunui zone and how it compares to the other zones.
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**6. Update on BRIDGE Project – defining and managing braided riverbeds.**

Tania Harris, ECan

Tania Harris spoke to her presentation that updated the Zone Committee on the BRIDGE Project that is defining and managing braided riverbeds in Canterbury. Tania thanked Zone Committee members and public who took part in the river reach groups, it was good to have the feedback.

The presentation and further discussion was held and the following was noted:

- The BRIDGE project is focused on defining and clarifying the rules around what a landowner can or cannot do inside or outside the 'river bed'. The Resource Management Act's definition of 'river bed' is difficult to apply in braided rivers and there is uncertainty over the extent of the 'river bed' due to the dynamic nature of braided rivers.

They wish to work with a wide range of people at the four river reaches (Waiau Uwha, Ashburton/Hakatere, Waihao and Ahuriri) to develop a Canterbury-wide approach to identify the extent of the 'river bed' on a braided river; and the values associated with the river bed including how to manage for these.

They will then provide input to changes (Omnibus) to the Land and Water Regional Plan in relation to managing braided river beds.

- So far, the Project has held River Reach meetings at the four riverbanks; commissioned values reports from Boffa Miskell and a cultural impact report (still to be received from MKT); reviewed the NIWA braid plain report; and held a second round of River Reach Group Meetings. It was noted that that work on people's property rights has not yet been looked at.
- The Project has found that braided rivers are characterised by active gravel channels that move across the 'river bed', which over time creates a mosaic of islands and river margins. This pattern of islands and channels is what we visually associate with braided rivers. Braided Rivers have three dimensions; springs, wetlands and small streams (often referred to as the 'Lungs' and 'Kidneys' of the river) that are hydraulically connected to the river. Some thought that more needed to be done to protect these dimensions whereas other feedback felt that the current rules were sufficient.
- They acknowledge that the extent of the flooding does not necessarily define the extent of the braided 'river bed'.
- They acknowledge that land ownership does not define the 'river bed'. The land title may reflect where the river was at some point in history. Land ownership does not determine what Resource Management Act rules apply. Consultation will need to be undertaken with landowners as to the alteration of lines or what it will look like.

It was noted that river control works constrain the extent of the river. The challenge is how to write a definition or design lines that are also

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going to take into account existing control works in place or needing to be done in the future.

It was asked how can people's property rights be ignored, if the control works need to be worked around. Tania noted that the control works are a physical constraint on managing the lines. Ownership of the land will not change regardless of whether the RMA defines it 'river bed' or not, but the rules around land use, such as stock exclusion, will change.

There will possibly be different rules for public versus private ownership. This decision will be made through consultation with the Zone Committees.

- It was noted that more needs to be done to control weeds (willows, broom, gorse, lupins etc.). The feedback received has noted that encroachment needs to stop. Need to think about urban land use and life-style blocks not just farming. There is an agreement that 'meaningful' consultation with landowners on any 'lines' is needed.
- NIWA have mapped the extent of the area that might be occupied by the active channels for Waiau using two approaches (This does not take into account river control works.):
  - A contemporary method: Identifying the terraces that contain the maximum area that active channels could potentially cover (digital contours); and
  - A historical method: Identifying the area that has been covered by active channels from historical imagery and maps. They look at where the river has been in the past to estimate where it could go in the future.

They have looked at a possible two-tiered approach where area that has been covered by active channels in historical imagery is adjusted for the impact of river protection and other structures. Within this, there may be specific areas, such as active channels, that will have specific rules. This will include writing rules around existing private river control works to protect land, the decision needs to be made if owners will be allowed to reinstate them if the river takes them out and it has been deemed 'river bed', or will it be prohibited. It was discussed that many landowners have different land use consent conditions for individual farms. Tania noted that most of the land use is already managed either with a FEPs or Farming Land Use consents. They had not foreseen having to call in any consents.

It was felt that the entire discussion has been around river protection and rights, if any parcel of land, irrespective of the land use, cannot be protected it puts the landowner at risk. What is the threshold for river protection? Tania noted that the biggest challenge is defining what is river bed and if a person has had the gift from the river of farming for 100 years should it remain a gift or should it be given back to the river.

There is still concern with the way the river is being viewed from the mountains to the sea as a single way to define the margins. Throughout the catchment there will be several definitions and each river will have its unique identification card at the end of that analysis. Culturally there are concerns that wāhi tapu and toanga needs to be identified to determine

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the extent of these margin areas and potential protection for the culturally significant areas. It was stressed that the Rūnanga are uncomfortable with deciding where the margins on every river should be as this is not its right to do so. The lines will cross many different feeding sites, urupā and culturally significant areas.

Tania noted this but also noted that clarity around the lines is the goal to help with certainty for landowners, and protection of the wetlands.

Concern was expressed that despite what this presentation has shown, the Regional Council is currently in the Courts defending a 50-year flood line instead of defending values associated with the properties.

- The Projects next steps are to continue considering options and the sufficiency of the current rules. They will consider options as they might apply on the seven alpine braided rivers.

The omnibus plan change discussions with all Zone Committees will commence in November with a return report in January/February with further considerations.

There is still a lot to work though. There is a clear message to hold extensive consultation on what lines might be drawn.

Further discussion was held and the following was noted:

- The Zone Committee are concerned that this project is following a top down approach. It was thought that more consultation would be undertaken before an omnibus plan change was begun. Tania noted that landowners in the four reaches were invited to comment on the proposal and at the Spotswood meeting a lot of discussion was held.
- It was asked how can this project be pushed through a plan change so quickly when the whole project proposal has not yet been finalised or consulted on. Tania noted that it is not vital that the plan change goes through this time around but noted that if they can push through and make it, then that would be worth trying for.
- The Zone Committee are concerned about the risk of a rushed decision that has not been well considered or thought out. Concern was also expressed that there was no report provided in the agenda thus the community is unaware of the discussion.

It was commented that this whole process is at risk of unintended consequences unless better community engagement is undertaken. This project runs the risk of a 'no support' vote from the Hurunui-Waiau Zone Committee unless the project comes up with a better Braided Rivers Strategy.

It was suggested that Makarini Rupene would be the best person to approach landowners and identify to discuss the values on their properties.

- Tania Harris thanked the Zone Committee for the feedback and will liaise with Mayor Winton Dalley regarding alternative options.

**Break**

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*The meeting adjourned for a break at 5.03pm and reconvened at 5.20pm.*

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**7. Update on proposed plan change to Hurunui Waiau Rivers Regional Plan**  
Lisa Jenkins, ECan

Lisa Jenkins updated the Zone Committee on the status of the proposed plan change to the Hurunui Waiau Rivers Regional Plan.

The Regional Council has received the Zone Committee's ZIP Addendum recommendations and have directed ECan staff to report back to the council on how those recommendations can be implemented.

The draft Plan Change to fix the 10% rule has not yet been presented to the Regional Councillors, this is scheduled for November.

The next step is to workshop the feedback received from the eight parties who submitted.

At the request of Mahaanui Kurataiao, the notification of the Plan Change will be postponed until the Rūnanga have had adequate time to understand the implications and the related pieces of work, including the enhancement package.

It was agreed that a workshop will be held before the November ordinary meeting on the feedback received.

**8. Committee Discussion on the proposed package for the implementation of minimum flows and environmental enhancement.**  
Ken Hughey, working group lead.

Ken Hughey spoke to his report on the proposed package for the implementation of minimum flows and environmental enhancement.

Included in the report was the minutes of the working party meeting held on 28 September 2018.

He noted that there has been a minor change to the wording of 'salmon passage area' to 'fish enhancement' in the enhancement package.

It was noted that there could be some internal alterations to the values depending on the results of the impact assessment work undertaken by Mahaanui Kurataiao.

If individual committee members support the matters outlined in the report, it is recommended that the Zone Committee ask AIC, as a sign of good faith, to voluntarily increase minimum flows in the Waiau Uwha River by 1 cumec in the 2018/2019 irrigation year as envisioned in the package.

Individual support for the package is being sought rather than a consensus of the Zone Committee as not all members were present. The following was noted:

- John Faulkner – As an attendee of the meeting, he noted that the focus of the meeting was on developing relationships. He noted that with the help from Nukuroa Tirikatene-Nash and Makarini Rupene, they were better able to understand the issues. If this is accepted, there is a big responsibility on the Zone Committee to follow this through.
- Ben Ensor – He agreed with John's comments. All parties are looking at commitments based on trust and the Zone Committee needs to make sure that trust is not misplaced.
- Cr Cynthia Roberts – Thanked the group that has worked hard on this. There is now a process in place, which gives hope that this is going to happen. It has her support.
- James McCone – He supports the recommendation and thanked the group for their work.
- Mayor Winton Dalley – Is interested in the comments about trust, which is the way forward. He supports the recommendation.
- Michele Hawke – Commented that this is uplifting and is in support.
- Cr Vince Daly – noted that it is good, and supports the recommendation.

- 
- Dan Shand – He fully supports this recommendation and thanked the group for their efforts.

David Croft, AIC, thanked the Zone Committee for empowering AIC to do this and he will take it to the shareholders meeting for their approval.

A member of the public, and an AIC shareholder, expressed his appreciation for the outline of how the enhancement package will be delivered (page 42 of the agenda).

John Faulkner, on behalf of the Zone Committee, thanked Ken Hughey for all his efforts, and working group members, Nukuroa Tirikatene-Nash, Makarini Rupene and Ben Ensor, for their time and efforts. It is a contentious project that will be debated by outside community members; they will have to prove to them that this is worthwhile.

After the AIC shareholder's full approval on 30 October a press release will be made.

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**Urgent Business**

Nil

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**Meeting concluded**

The meeting concluded at 5.48pm

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**Next meeting**

19 November 2018.

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# HURUNUI DISTRICT COUNCIL MEETING REPORT



**To:** Hurunui-Waiau Zone Committee

**Date:** 15 November 2018


## 2019 Hurunui-Waiau Zone Committee meeting dates

<b>Recommendation</b>	THAT THE COMMITTEE CONSIDERS AND CONFIRMS THE MEETING DATES, TIMES AND VENUES FOR 2019.
<b>Executive Summary</b>	The Committee is requested to consider its meeting and workshop dates, times and venues for 2019.
<b>Background</b>	<p>Historically the Hurunui-Waiau Zone Committee has met every four weeks throughout out the calendar year, commencing in February. The meetings have generally taken place on the third Monday on the month at different venues throughout the district.</p> <p>It has previously been discussed and agreed that in the winter months, and if there was no workshop held before the meeting, the meetings would be shifted to begin at 2.00 pm.</p> <p>The December meeting is recommended as the 9 December, which is not the third Monday but is earlier due to the proximity of Christmas.</p>
<b>Discussion</b>	<p>The proposed meeting dates and venues for the Hurunui-Waiau Zone Committee in 2018 are:</p> <ul style="list-style-type: none"> <li>• 18 February Culverden</li> <li>• 18 March Waikari Hall</li> <li>• 15 April Cheviot</li> <li>• 20 May Balcairn Hall</li> <li>• 17 June Amberley</li> <li>• 15 July Omihi/Greta Valley</li> <li>• 19 August Amberley</li> <li>• 16 September Rotherham</li> <li>• 21 October Hawarden</li> <li>• 18 November Waiau</li> <li>• 9 December Amberley</li> </ul> <p><u>Note:</u> The Committee can agree to change meeting arrangements and times throughout the year as the need arises.</p>

**Report Prepared by:**

  
Michelle Stanley  
Committee Secretary

**Report Reviewed by:**

  
Jason Beck  
Manager Finance and Secretarial Services



## Summary of CWMS Regional Committee 9 October 2018

### 1. Farm Environment Plan and Independent Audits Are they making a difference?

- The committee received an update on the numbers of farmers who have applied for landuse consents and as part of this process completed Farm Environment Plans that are independently audited (1200 audits completed last season).
- Audit grades are improving as farmers become aware of issues and invest in new infrastructure and systems/practices.
- Farmers attitudes are changing from suspicion to acceptance and there is pride in good audit grades. Grades are also starting to be used as part of the marketing profile of farms when they are sold.
- The committee discussed whether terrestrial biodiversity could be included in Farm Environment Plans given the different responsibilities of regional and district councils (ie. regional councils are responsible for wet biodiversity and district councils for dry biodiversity). Currently the trigger for Farm Environment Plan sits within the Regional Council's *Land and Water Regional Plan*. The advice from staff was to "walk first before trying to run".

### 2. CWMS Fit for Future Project

- The committee received a report on the progress to develop interim targets for 2025 and 2030.
- The committee provided feedback on the emerging issues such as climate change, urban issues, over allocation and the apparent inability to report on "real" progress. The committee then worked in pairs to test the targets to see whether they are challenging enough but still achievable.
- The draft targets will be discussed again by various groups and zone committees before a final set of draft targets are presented to the committee in December.

### 3. Updates from DOC, MPI and MFE

- MFE provided links to the government's "Freshwater Agenda – next 2 years" that was released the day before the meeting.  
<https://www.mfe.govt.nz/fresh-water/essential-freshwater-agenda>  
<https://www.mfe.govt.nz/fresh-water/we-all-have-role-play>
- As part of the governments "3 Waters Review" DIA released a report estimating a cost of \$2billion to upgrade waste water treatment plants to meet provisions of the National Policy Statement on Freshwater. The costs will fall on TAs  
[https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskel-Final-report-Oct-2018.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskel-Final-report-Oct-2018.pdf)

AGENDA ITEM NO: 3	SUBJECT MATTER: <b>Nutrient management requirements for certified organic units</b>
REPORT BY: Ian Henderson, Milmore Downs	DATE OF MEETING: 19 November, 2018

Thanks for the opportunity to speak here at the zone committee.

As you are well aware an exemption from the FEP requirements for dryland sheep and beef units under ECan will probably be gazetted in February 2019.

We contest that **certified organic units** even with irrigation are in a similar category due to their low level of intensity.

What are the reasons for this contention?

Organic units pose an insignificant risk of nutrient loss because:

1. They have high organic matter soils - even under a cropping regime around 5% OM compared to 1-2% in a conventional system. This is a very large contribution to carbon sequestration and points the way to effective climate change mitigation. These soils have the ability to hold nutrients.
2. The plants' roots penetrate deeper through the A horizon and into the B horizon since no water-soluble fertilisers are supplied to the soil surface (such a practice promotes shallow rooting). Soils with deep root penetration have more active soil to trap and hold nutrients and the structure is enhanced leading to other benefits as well.
3. No water-soluble Nitrogen from the bag e.g. urea, DAP etc is permitted in an organic system!
4. Stocking rates are limited so that effective N application rates from all sources (animals, green manure, compost etc.) must be less than 112kgN/ha/y.
5. Overseer modelling does not reflect the true situation on organic farms. The model is known to predict losses from cropping soils very inaccurately e.g. N losses to the atmosphere are a valid loss if you need to replace this (the model originated from the fertiliser industry), but it is not a contamination issue given the N content of the atmosphere.

The model makes assumptions about soils that are not accurate for soils in organic farming systems. They behave differently, they trap nutrients as I noted. The overseer number from the organic farm in a collective of other irrigators farming at a vastly higher level of intensity is of benefit to them as it lowers the collective average; It is a case of organic farming supporting the 'dirty' dairy industry (Sorry for the phrasing), and that is not so pleasant.

6. Since stocking rates are restricted through the measures mentioned above, and also the inability to trade stock, buy in supplements leading to systems tending to be more closed, the issues with overgrazing are minimised. When regenerative farming methods are employed, with high grazing densities, this occurs on pastures with huge dry matter volumes able can mop up the dung and urine. N loss is minimal.
7. Irrigation on an organic farm is subject to the same restraints I mentioned above. With no bag nitrogen, lower stocking rates, closed cycles, the effect is low intensity. It is a policy of ensuring sward survival in dry periods, ensuring germination of new sown crops, of guaranteeing a supplement crop i.e. an insurance not a production technology. Clearly such usage occurs when the soil moisture is far below field capacity and hence the irrigation poses no contamination issues with overwatering. The stable N content is not washed out under such an irrigation regime.

We request that consideration be given to this proposal

We request that active communication with BioGro NZ be followed up to confirm the information above and to devise a strategy to ease the compliance load and cost on organic farming.

We contend that this farming has immense benefits for the wider environment, for NZs image in the world, for the long term survival of agriculture, for the health of the people (and the waterways), as a contributor to climate change mitigation and it needs to be promoted. It must not be held accountable for the sins of 21<sup>st</sup> century intensive agricultural production.

Ian Henderson  
7 November 2018

## **HURUNUI WAI AU WATER ZONE COMMITTEE MEETING AGENDA ITEM 9**

### **Hurunui and Waiau Rivers braided river flagship biodiversity projects presentation**

**Mike Bell and Kailash Willis, Wildlife Management International Limited (WMIL)**

The Hurunui Waiau Water Zone Committee has initiated three braided river flagship biodiversity projects on the Hurunui and Waiau Rivers in Canterbury, New Zealand. These projects are to be undertaken over a five-year period in collaboration with the Department of Conservation(DOC) and ECan, and include:

- Annual bird surveys and monitoring;
- Southern Black-backed gull control; and
- Habitat enhancement: modification of islands and weed control.

There are three overall objectives for the Hurunui and Waiau braided river flagship projects:

- Increased survival rates of braided river birds and therefore increased population numbers;
- To reduce the number of braided river bird predators within the targeted control areas; and
- Increased habitat availability (nesting and foraging) for braided river birds.

Wildlife Management International Limited (WMIL) has been contracted to undertake the on ground works, primarily involving surveys and monitoring of Black-fronted terns and Black-billed gulls as well as Southern Black-backed gull control on the Hurunui and Waiau Rivers.

WMIL commenced work in the 2017-2018 breeding season and is currently undertaking work for the 2018-2019 breeding season.

WMIL will be presenting an overview of the results from the first year of monitoring, followed by an update of the work undertaken so far this year.

<b>AGENDA ITEM NO:</b> 10	<b>SUBJECT MATTER:</b> CWMS Fit for the Future Project
<b>REPORT BY:</b> Chris Wikstrom, Environment Canterbury	<b>DATE OF MEETING:</b> 19 November, 2018

### Purpose of the Paper

1. The purpose of this paper is to enable Zone Committees to provide input into the Fit for the Future Canterbury Water Management Strategy (CWMS) project. This is through:
  - Giving their views on what is needed to support delivery of the targets: are there gaps in the "Proposed Work Programmes (Appendix 2 attached) and who needs to do more (and what do they need to do)?"
  - Providing feedback, if time permits, on the draft CWMS goals for 2025 and 2030.

### Key input requested

Looking at the proposed Work Programmes (Appendix 2), identify:

- key actions needed (to achieve the targets);
- who needs to do more and what is it?
- any gaps in the proposed work programme for this Zone?

*Use the column in the table to identify key actions needed, who needs to do more (and what), and any gaps.*

If time permits (unlikely), we would also like feedback on the 2025 and 2030 targets.

If you want to provide further input, than you were able to in the zone committee meeting, email them to [cwmstargets@ecan.govt.nz](mailto:cwmstargets@ecan.govt.nz) by 28 November (although earlier comments would be appreciated).

### Background

See attached PowerPoint slides for background and update on progress.

1. The Goals Working Group has discussed the draft goals and considered at a high level the activities that should be undertaken to support the delivery of the draft goals and the Strategy.
2. The Goals Working Group noted the following issues were important in thinking about the draft goals and delivery of the Strategy:
  - The social capital that has been built up during the CWMS process is reliant on continued confidence that the CWMS targets and goals will be met. The goals need to be achievable and meet all the CWMS values, and implementation needs to be co-designed with communities. Getting greater certainty is important, including for investment confidence.
  - There are concerns by iwi that cultural outcomes (for example, mahinga kai) are not being met fast enough.

- The contribution of water and its use to the vibrancy and financial health of small communities needs to be explored.
- We need to be smarter about the way that we collect information and report on CWMS progress.
- There are significant resourcing and capacity issues.
- Urban waterway quality needs greater focus.
- There is a need to address over-allocation and the implications of doing so.

### **Draft Goals and Implementation**

3. Attached as Appendix 1 is the detailed table “Draft goals for 2025 and 2030”. The table sets the draft goals out by CWMS target area. For ease of reading:
  - i. A “Theme” column has been added to the table to help describe the objective of each goal.
  - ii. All the existing targets for 2020 and 2040 are underlined.
  - iii. Percentage increases, or reductions for the 2025 and 2030 goals are yet to be determined so are denoted with ‘X%’ for further analysis.
4. Appendix 2, “Targets and Proposed Work Programmes”, is a table that sets out the targets and suggested work programmes that might be needed to support the delivery of the Strategy.
5. The two appendices are still ‘work in progress’. In particular:
  - There is a need to integrate the goals in Appendix 1 between the different target areas – there is some overlap and lack of clarity between the target areas.
  - Several the draft goals in Appendix 1 look like elements of a work programme. Further analysis on how those proposals can be incorporated into advice to the Mayoral Forum will be carried out. That analysis will need to make sure that the proposals carry sufficient weight so that there is confidence that the mix of goals and work programmes lead to the outcomes being sought.
  - The Appendices do not yet address the Regional and National Economies target area. This Task Group has only had one meeting and is exploring whether the use of a framework that reflects economic, social and natural capital would be useful for the CWMS and this target area.
  - The detailed work programmes have yet to be fully developed. We are seeking views on whether the work programmes that have been identified are broadly correct, or whether they need adding to or modifying.

### **Future Process**

6. This paper is part of the round of engagement on the Fit for the Future project that is scheduled from 12 November to 3 December. Following that, there will be an opportunity for Te Rōpū Tuia, the Regional Committee and the Goals Working Group to consider the results of the engagement. The Chief Executives’ Forum and Mayoral Forum will consider the outcome of this process in February and May 2019.

**CWMS Fit for Future project**  
**Update to Zone Committees**  
**November 2018**

## CWMS Targets & Reporting



The Canterbury Water Management Strategy has been in place since 2009.

There are Ten Target Areas which provide direction for water management in Canterbury... 147 targets across 4 timeframes out to 2040

Targets were set for 2010 and 2015 – many of which were focused on holding the line. Some are quite difficult to measure and show progress.

Even so... we have reported on them with a Progress Report produced every two years. The next report is due in 2019

The reporting at this stage will be focused on progress towards the 2020 targets

In June 2017 the regional committee suggested that it was time to look at 2025 and 2030 targets given we were fast approaching the 2020 timeframe.



## This project - Context

- Canterbury Mayoral Forum project
- Two key tasks:
  - Draft Goals: Develop 2025 and 2030 goals for the CWMS
  - What's required: Identify what is required to support implementation
- Not about revisiting the CWMS strategic framework

Project commissioned by the Canterbury Mayoral Forum

- Response to advice from Regional Committee on need to bridge the gap between 2020 and 2040 goals
- Plus desire to see stronger focus on implementation

Two key tasks are:

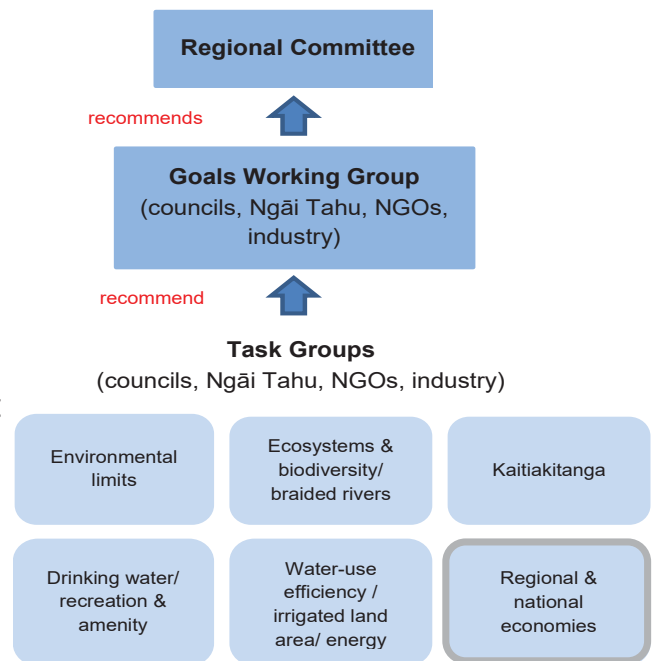
- Develop 2025 and 2030 goals for each of the 10 CWMS target areas – to provide focus and direction for next 10 years
- Identify what is required to support implementation –

Revisiting the strategic framework is out of scope

- Mayoral Forum agreed that the current framework – the vision, principles, priorities, the collaborative approach – continues to provide a good foundation for freshwater management in Canterbury.

## Roles

- **Regional Committee**
  - Lead development of advice for Mayoral Forum
- **Goals Working Group**
  - Provide integrated advice to Regional Committee across the CWMS targets, drawing on work of Task Groups & support from Project Team
- **Six Task Groups**



For this project, the Regional Committee has been tasked with leading the development of advice on 2025 and 2030 goals and associated implementation issues

Task Groups were set up to provide a focus on one or more target area, and to develop draft goals for those areas.

Members of the Task Groups and Goals Working Group were chosen because of their particular knowledge and water management backgrounds. They contribute from their own mixed range of perspectives but are not representing particular interests

The Goals Working Group plays an important role in ensuring coordinated advice to the Regional Committee through:

- An integrated set of goals across the ten target areas
- And advice on what mechanisms are needed to support delivery of the goals, and strategy implementation.

To ensure continuity of advice:

- Each Task Group is convened by a member of the Goals Working Group
- The Goals Working Group is convened by the Chair of the Regional Committee
- There are also several Regional Committee members on the Goals Working Group and/or a Task Group

Environment Canterbury's Project Team is here to ensure all groups are well-supported:

- Organising meetings
- Facilitating workshop discussions
- Providing analytical support and information
- Drafting out puts and advice from each workshop
- Managing engagement with others

## Process

- Two 'rounds' of workshops:
  - 1<sup>st</sup> Round: Develop draft goals
  - 2<sup>nd</sup> Round: Refine goals & measures, and identify actions and resources
- Final advice to Mayoral Forum – May 2019



This is a simplified view of the process – essentially each round of workshops involves:

- Development (or refining) of draft goals by the Task Groups, then the Goals Working Group
- Engagement with Ngāi Tahu, Zone Committees, sector groups and community groups, DHBs, territorial authorities and central government agencies (we're also looking at possible workshops with young people)
- Advice to the Regional Committee.

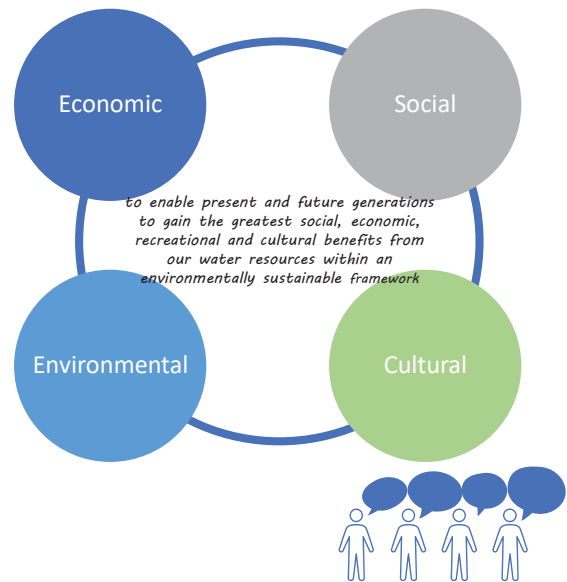
This meetings is part of the 2<sup>nd</sup> round of this process.

Environment Canterbury is due to report to the Mayoral Forum in May 2019 (working

with the TAs and Ngāi Tahu) – which **means we actually need final Regional Committee advice by February.**

### Reminder of ten CWMS Targets

1. Environmental Limits
2. Ecosystem Health and Biodiversity
3. Natural Character of Braided Rivers
4. Recreational and Amenity Opportunities
5. Drinking Water
6. Water Use Efficiency
7. Kaitiakitanga
8. Energy Security and Efficiency
9. Irrigated Land Area
10. Regional and National Economies



Just a reminder that these are the ten CWMS target areas that this project is focussing on.

## Strategic context

- Goals need to be achievable and meet all values
- Concern by iwi that mahinga kai objectives not being met
- Contribution of water to vibrant communities
- Data collection and analysis needs to be smarter
- Resourcing and capacity
- Urban waterways
- Over-allocation

The Goals Working Group thought that there some important strategic issues that helped when thinking about the goals:

- the social capital that has been built up during the CWMS process is reliant on continued confidence that the CWMS targets and goals will be met. The goals need to be achievable and meet all of the CWMS values, and implementation needs to be co-designed with communities. Getting greater certainty is important, including for investment confidence.
- There are particular concerns by iwi that cultural outcomes (for example, mahinga kai) are not being met fast enough.
- The contribution of water and its use to the vibrancy and financial health of small communities needs to be explored.
- We need to be smarter about the way that we collect information and report on CWMS progress.
- There are significant resourcing and capacity issues.
- Urban waterway quality needs greater focus.
- There is a need to address over-allocation and assess what the implications are of doing so.

## Draft Goals and Implementation

We are asking for feedback on the set of draft goals (see A3 sheets), and the activities that need to happen to achieve the goals BUT

- The goals are a 'work in progress' – there is some overlap and more clarity is needed
- There are no goals for the Regional and National Economies target area
- Detailed work programmes have yet to be developed

We are seeking your feedback on the draft goals that have been developed and the activities that need to happen for the goals to be achieved.

There are some things about the papers that you have in front of you that are important to recognize:

- There is a need to integrate the goals in Appendix 1 between the different target areas – there is some overlap and lack of clarity between the target areas.
- A number of the draft goals in Appendix 1 look like elements of a work programme. Further analysis on how those proposals can be incorporated into advice to the Mayoral Forum will be carried out. That analysis will need to make sure that the proposals carry sufficient weight so that there is confidence that the mix of goals and work programmes lead to the outcomes being sought.
- The Appendices do not as yet address the Regional and National Economies target area. This Task Group has only had one meeting, and is exploring whether the use of a framework that reflects economic, social and natural capital would be useful for the CWMS and this target area.
- The detailed work programmes have yet to be fully developed. We are seeking views on whether the themes for work programmes that have been identified are broadly correct, or whether they need adding to or modifying.

## Key questions on the work programme

- Are there any specific actions needed (to achieve the targets);
- Who needs to do more and what is it?
- Are there any particular gaps in the proposed work programme for this Zone?

*Use the column in the table to identify specific actions needed, who needs to do more (and what), and any gaps.*

Here are the set of questions that the Goals Working Group would like you to focus on.

We are after your views on any changes that would be needed in your Zone to implement the work programmes – for example:

- what are the particular actions needed
- who would need to take the lead and be involved
- what the size of the costs might be and who should pay

The paper on the proposed work programmes sets out some of the high level suggestions made by Task Groups and the Goals Working Group. Feel free to add to or modify them.

## If time allows- additional questions on the draft Goals

- Are the draft 2025 and 2030 goals realistic, challenging and achievable?
- Are there any draft goals where change is necessary, and why?

If you have time

We also want to know whether any of the draft goals need changing – are they unrealistic, or unclear, or too easy??

Please provide some comments on the draft 2025 and 2030 goals for those targets



Appendix 1: Draft Goals for 2025 and 2030

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A1	DRI	Drinking Water								
A17	DRI	Source water quality targets	Protect Existing Untreated Supplies	For those communities that currently have access to untreated and safe drinking water, implement actions to ensure the source water quality remains high enough to meet the current Drinking Water Standards for New Zealand without treatment						
A21	DRI	Source water quality targets	Reduce the Need for Additional Treatment	Prevent further decline in source water quality for those communities that currently have to treat drinking-water, such that this requires increased level of treatment or monitoring requirements			Protection zones in place and enforced by rules and compliance to improve protection of drinking water at source, with priority given to drinking water over other uses in LWRP and District Plans.	All source drinking water is protected from land use activities, with priority given to drinking water over other uses in LWRP and District Plans.		Protection zones by themselves do not protect - need to inform and enforce.
A10.3	DRI	Source <u>quantity</u>	Protect Water Volumes	No new activities in a drinking water catchment that reduce access to sufficient quantities of drinking water supplies			Priority is given to drinking water over other uses in the Land and Water Regional Plan and territorial authorities' district plans.	Ensure drinking water supply (community use and stockwater) is maintained as a first order priority when reviewing regional policies and planning		
A11	DRI	Source water quality -Nitrates	Reduce Nitrates Levels in Groundwater			<del>83) A demonstrable decrease in nitrate concentrations in shallow groundwater in priority areas is achieved.</del>	<del>Nitrate concentration levels remain stable or reduce where required by plans. Report on changes to nitrate concentrations for monitored shallow and groundwater sites, recognising trends and zone variation to inform risk factors. Average annual nitrate levels in x% of groundwater wells in Canterbury are below 50% of the maximum allowable value for drinking water.</del>	<del>Nitrate concentration levels reducing where required by plans. Report on changes to nitrate concentrations for monitored shallow and groundwater sites, recognising trends and zone variation to inform risk factors. Average annual nitrate levels in x% of groundwater wells in Canterbury are below 50% of the maximum allowable value for drinking water.</del>	<del>86) Average annual nitrate levels in all groundwater wells in Canterbury are below 50% of the maximum allowable value for drinking water</del>	Key indicator for CWMS; linked to Environmental Limits target. Taskgroup 2 re-wrote goal so natural progression. Work needed to determine what the x% will be.
A13	DRI	Source water quality targets	Improve Drinking Water Supplies			<del>84) There is an increase in the percentage of the population supplied with water that meets the New Zealand Drinking Water Standards for health-based determinants.</del>	<del>There is an increase in the percentage of the population supplied with potable water from community supplies that consistently meets Drinking Water Standards of New Zealand. 100% of all community drinking water supplies meet the New Zealand Drinking Water Standards for health-based determinants.</del>	<del>There is an increase in the percentage of the population supplied with potable water from community supplies that consistently meets Drinking Water Standards of New Zealand. 100% of all drinking water supplies meet the New Zealand Drinking Water Standards for health-based determinants.</del>	<del>87) Nitrate levels in community drinking water wells are below the maximum allowable values of drinking water</del>	Feedback focused on: Source water quality remains high enough to meet DWSNZ without treatment: Source water quality does not decline further for water supplies that currently have to treat drinking-water: Distribution systems supply water that meet DWSNZ. Taskgroup 2 re-wrote goal as not deemed measurable.
A18	DRI	<b>New*</b>	Improve Groundwater Modelling				<del>Improve monitoring and model to help anticipate and prepare for future shocks. Develop detailed dynamic groundwater modelling to provide data that ensures policy recognises impact of contaminants, land use and climate change.</del>	<del>Improve monitoring and model to help anticipate and prepare for future shocks.</del>		Monitoring and modelling need to be done in time to help anticipate future shocks.
A19	DRI	Catchment nutrient loads (Drinking Water)	Set Catchment Nutrient Loads		Demonstrated, and included in implementation programmes, how land within the zone will be managed to achieve catchment load limits		Implementation programmes and their goals and objectives are adjusted as monitoring signals rate of progress towards meeting catchment load limits	Catchment load limits are met (timeframes set in implementation programmes)		
A20	DRI	Catchment nutrient loads (Drinking Water)	Set and Meet Good Management Practice		Set catchment load limits for nitrate consistent with drinking water quality targets for each zone, identified priority areas where targets are not met and implemented actions to ensure there is no further enrichment	<del>82) Achieved 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 those targets (and of properties within urban boundaries that apply nutrients over significant areas).</del>	Achieved nutrient efficiency targets for all zones as set out in plans.	Achieved nutrient efficiency targets for all zones as set out in plans.	<del>88) Achieved nutrient efficiency targets for the zone on all new irrigated land and 100% of other rural properties (and of properties within urban boundaries that apply nutrients over significant areas).</del>	Feedback - link to targets in plans and ZIPAs.
A16	DRI	Emerging contaminant risks	Understand Emerging Contaminant Risks		Emerging contaminant risks are understood and any at risk areas identified for targeted management, and a remedial programme underway	<del>85) Understood any emerging contaminant risks and identified any at risk areas for targeted management and a remedial programme underway.</del>	Emerging contaminant risks are understood and at risk areas are managed with targeted remedial programme in place	Emerging contaminant risks are understood and at risk areas are managed with targeted remedial programme in place	<del>89) Understood any emerging contaminant risks and identified any at risk areas for targeted management and a remedial programme underway.</del>	Need to consider a fuller range of potential contaminants and their impact on microflora.

Key: (Strikethrough - old content) (Underline - cannot be changed)

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A23	REC	Recreation and Amenity								
		Water based recreational opportunities	Improve Recreational Opportunities	Maintain existing diversity and quality of water based recreation sites, opportunities and experiences.	A positive trend in the availability and/or quality of recreational opportunities in each zone.	<u>96) A positive trend in the availability and/or quality of recreational opportunities in each zone.</u>	A continuing and measurable positive trend, against baseline information, in the diversity, availability and quality of recreational opportunities in each zone. A work plan in place in each zone to implement improvement.	A continuing and measurable positive trend, against baseline information, in the diversity, availability and quality of recreational opportunities in each zone. Plans are enacted that protect recreation and amenity		Establish baseline information to understand trends. Note: No target set for 2040
A32	REC									
A33	REC	Water based recreational opportunities	Restore Recreational Opportunities				Identify the restoration of a freshwater recreational opportunity in each zone, developing plans to achieve and show measurable progress.	Restoration and protection of freshwater recreational opportunities in each zone, achieving and showing measurable progress.	<u>100) Restored at least one major fresh water recreational opportunity in each zone that was not currently available in 2010.</u>	Some feedback as that one major restoration in each zone by 2040 was unambitious
A34	REC	Water based recreational opportunities	Understand Emerging Contaminant Risks				Understand threats and act to reduce risk to freshwater recreational opportunities.	Identify potential threats to freshwater recreational opportunities and act to reduce risk.		Groups considered the concept of emerging contaminant risk was not well understood - we don't know what we don't know. This target was specifically to identify contaminants related to recreation including didymo and cyanobacteria. No targets set for 2020 or 2040.
A35	REC	Freshwater Angling	Protect Fishing Opportunities		A positive trend in the availability and/or quality of freshwater angling opportunities. An increase in freshwater angler numbers (or catch rate) assessed over a five year average.	Note: No targets set for 2020	Advocate for and support measures to effectively restore and protect fishing opportunities in each water management zone.	Restoration and protection of fishing opportunities in each water management zone.	<u>99) Restored fishing opportunities in most lowland streams in each water management zone</u>	Groups generally considered 2040 to be too far away for recreational opportunities to be restored. Need to quantify this target for 2025 and 2030 to stretch for 2040
A36	REC	Freshwater Angling	Improve Lowland Stream Health				Health of lowland streams, rivers and lakes in Canterbury show improving habitat and an increase in fishing opportunities.	Substantial improvement in health of lowland streams, rivers and lakes in Canterbury.		Suggested a specific focus on Lowland streams given their importance and recent decline in health and in recreational opportunities
A39	REC	Recreational water flows	Set and Meet Recreational Flows		Identify where environmental flows are not met or require change to meet recreational outcomes and implemented actions to rectify.	<u>97) Made progress toward achieving environmental flows</u>	Environmental flows, which include recreation and amenities, are set as part of the rule setting process in new plans and included in existing plans when up for review to support recreational flow requirements.	Environmental flows, which include recreation and amenities, are set as part of the rule setting process in new plans and included in existing plans when up for review to support recreational flow requirements. All new and existing consents in review are linked to environmental flows.	<u>98) Achieved all environmental flows.</u>	Environmental flows support recreational flows?
A41	REC	Recreational water quality	Improve Recreational Quality		At least 80% of river bathing sites graded as suitable for contact recreation.	<u>95) Of the lake and river sites used for contact recreation, an increase in the percentage that meet recreational water quality guidelines.</u>	Improve on percentage of rivers and lakes being swimmable since 2020 due to consistent water quality monitoring and real-time results.	Achieve the National Policy Statement for Freshwater Management target of 92 percent of rivers and 81 percent of lakes in Canterbury being swimmable by 2030.		ECan set and is committed to NPS-FM regional targets.
A42	REC	New: Cyanobacteria	Reduce Cyanobacteria				Develop and implement monitoring protocols to manage cyanobacteria risk for priority contact recreation sites in Canterbury rivers and lakes	Achieve 10% reduction of incidents where cyanobacteria have exceeded the nationally adopted approach to managing risk in water used for contact recreational purposes.		Only national guidelines currently exist, guidelines are not mandatory, govt is working towards adopting a nationally unified approach to managing cyanobacteria
A53	ECO	Ecosystem Health and Biodiversity								
A63	ECO	Freshwater species and their habitat	Freshwater species and habitat	Implement actions to correct the decline in freshwater species, habitat quality or ecosystems.						Broad target for 2010. This target should carry through for all species should not just be measured through progress in exotic and native fish species.
A63.1			Protect Fisheries		No further reduction in the number and areas of existing salmon spawning sites.  Increasing annual trout spawning counts in identified important areas (based on a 5-year average) as an indicator of habitat availability for salmonid and	<u>19) An upward trend in diversity and abundance of native fish populations.</u>	<del>Fewer freshwater fish classified as threatened in Canterbury, compared to 20xx.</del>  Reword to: Increase in abundance of all threatened/at-risk fish species compared to 2020	<del>Fewer freshwater fish classified as threatened in Canterbury, compared to 2025.</del>  Reword to: Increase in abundance of all threatened/at-risk fish species compared to 2025		Rewording to make targets positive.  NEW 2040 Target proposed: Increase in abundance of all threatened/at-risk fish species compared to 2030 by 50%  Feedback suggests separation of targets for native fish and for exotics
A64	ECO	Lowland streams	Increase Riparian Planting			<u>22) Increased the length of waterway with riparian management appropriate to aquatic ecosystem protection by 50% from 2010 figures.</u>	Increase area of riparian management appropriate to aquatic ecosystem protection by x% from 2020 figures over time. Reword to: Increase area of riparian planting and management to protect aquatic ecosystems by x% from 2020 figures over time.	New: Increase area of riparian planting and management to protect aquatic ecosystems by x% from 2025 figures over time.		Riparian protection Carry over language of riparian management <u>appropriate</u> to aquatic ecosystem protection

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A66	ECO	Wetlands	Protect Wetlands	Prevent further loss of area of naturally occurring wetlands.	Protected all and restored at least two significant wetlands in each zone.	<u>20) Protected all existing wetlands.</u>		X% of wetlands physically protected and/or are in the process of being restored to a self-sustaining system. Reword to:All existing 2020 wetlands physically protected and/or are in the process of being restored to a self-sustaining system. 10% of former or new wetland sites being restored.	<u>27) (Protected all wetlands.) New wording proposed: 100% of 2020 wetlands protected and/or in the process of being restored to a self-sustaining system and 25% of former or new wetland sites restored.</u>	100% not realistic Round 2: We've already lost 90% of existing wetlands.  Need to differentiate between existing wetlands of which there is very little left (so even if 100% of these are protected it is still very little) and new wetlands/restored wetlands.  New 2040 Target proposed: Land use activities do not compromise the ecosystem health of wetlands.
A69	ECO	Hapua, lagoons, estuaries	Lagoons and Hapua Health	Implement actions to prevent further loss of ecosystem health in river mouths and coastal lagoons.	Accelerate the current riparian restoration and management programme for Te Waihora/Lake Ellesmere and tributary streams.	<u>21) A significant protection and restoration programme is in place on the most ecologically significant river mouth or coastal lagoon in each management zone.</u>	A significant protection and restoration programme is in place on the most ecologically significant river mouths or coastal lagoons in the region	Progress has been made towards achieving the goals of each significant protection and restoration programme	<u>26) Examples of thriving coastal lagoons, and lowland or spring-fed ecosystems in each water management zone.</u>	
A70	ECO	Lowland streams	Improve Lowland Stream Health	Identify and prioritise protection for lowland streams ecosystems in each zone.	Protect and enhance the ecological health of the best examples of lowland streams ecosystems in each zone. Improve ecosystem condition in at least another 10% of lowland streams in each zone.	<u>17) Improved condition and water quality in at least 60% of lowland streams and 60% of lowland lakes in each zone.</u>	Improve condition and water quality in at least 70% of lowland streams and lowland lakes.	Improve condition and water quality in at least 80% of lowland streams and lowland lakes.	<u>28) 100% of lowland and spring-fed streams with at least good aquatic ecosystem health or showing an upward trend.</u>	Consistency of wording with A73, A76 100% not realistic Round 2: 2025 and 2030 goals don't link with 2040 goals  Proposed new 2040 Target : New: Land use activities do not compromise the ecosystem health of lowland streams and lakes.
A73	ECO	High country and foothill streams	Improve Foothill River Health		Highlighted any high country spring-fed or foothill streams where ecosystem health is declining, and identified the cause with an action plan in place.	<u>18) All foothill rivers and high country rivers and/or lakes either in good ecological health or better, or showing upward trend.</u>	Maintain or improve condition and water quality of all foothill and high country rivers and high country lakes.	Maintain or improve condition and water quality of all foothill and high country rivers and high country lakes.	<u>30) Maintained upland spring-fed streams and lakes in very good aquatic ecosystem health (no decline from 2010).</u>	Round 2: 2025 and 2030 goals don't link with 2040 goals
A74	ECO	High country and foothill streams	Improve Foothill River Health						<u>29) 80% of other rivers/streams and lakes with very good aquatic ecosystem health.</u>	This 2040 target is directly related to A73  Analysts task to do: Need to develop appropriate interim targets for 2025 and 2030 and set appropriate % with reference to current trend and expectations Carry 2010 target through; model wording of A73
A76	ECO	None yet defined	Protect Dryland Ecosystems	Maintain existing high quality indigenous aquatic and dryland ecosystems in intermontane basins and on the plains			No further loss of remaining dryland ecosystems in intermontane basins and on the plains	No further loss of remaining dryland ecosystems in intermontane basins and on the plains		No further loss of dryland remnants:  No 2040 target. New Target suggested was: Land use activities do not compromise the ecosystem health of drylands
A80	ECO	Catchment nutrient loads (Ecosystem Health/Biodiversity)	Set and Meet Good Management Practice			<u>23) Achieved nutrient efficiency targets for the zone on all new irrigated land and 80% of other land in major rural uses (pasture, major arable and major horticulture crops) and have 100% of rural properties working towards those targets (and of properties within urban boundaries that apply nutrients over significant areas).</u>	<i>Also covered in Environmental Limits</i>	<i>Also covered in Environmental Limits</i>	<u>31) Achieved nutrient efficiency targets for the zone on all new irrigated land and 100% of other rural properties (and of properties within urban boundaries that apply nutrients over significant areas).</u>	Even though these are reported in ENV LIMITS its important that they stay reported here also. This target reinforces the need to set limits "for Ecosystems"
A81	ECO	Environmental flows (Ecosystem Health/Biodiversity)	Set and Meet Good Management Practice			<u>24) Made progress towards achieving environmental flow and catchment load limits.</u>	<i>Also covered in Environmental Limits</i>	<i>Also covered in Environmental Limits</i>	<u>25) Achieved all environmental flow and catchment load limits.</u>	Even though these are reported in ENV LIMITS its important that they stay reported here also. This target reinforces the need to set limits "for Ecosystems"
A82	ECO	Emerging contaminant risks	Understand Emerging Contaminant Risks		Understood any emerging contaminant risks and identified any at-risk areas for targeted management.	Round 2: Understood any emerging contaminant risks and identified any at-risk areas for targeted management	Round 2 Review and target	Round 2 Review and target	<u>32) Understood any emerging contaminant risks and identified any at-risk areas for targeted management.</u>	Even though these are reported in ENV LIMITS its important that they stay reported here also. This target reinforces the need to set limits "for Ecosystems"
A84	BRA	Natural Character of Braided Rivers								
A85	BRA	Ecosystems, habitats and species	Protect Braided River Habitats			<u>42) Protected significant habitat for a full range of indigenous braided river flora and fauna.</u>	Identify significant habitat for indigenous braided river flora and fauna	Protect significant habitat for indigenous braided river flora and fauna		Round 2: Protection includes pest control? Significant habitat should include abundance, range What does significant habitat as a measure mean? How is it measured?
A86	BRA	Riparian wetlands, springs and lagoons	Protect Braided River Habitats	Implement actions to correct the decline in usable braided river bird habitat.	Enhance and protect breeding populations of indigenous braided river birds.	<u>43) Protected and enhanced the habitats in riparian wetlands, springs and the lagoons associated with braided rivers.</u>	Programmes in place to address threats to improve the naturally uncommon ecosystems from endangered to vulnerable.	Status of naturally uncommon ecosystems has shifted from endangered to vulnerable; programmes in place to shift vulnerable ecosystems to non-threatened	<u>47) All indigenous braided river-dependent species are showing positive trends in abundance and health.</u>	Groups commented on the number of programmes other than those run by Environment Canterbury. Round 2: 2025 goal is broader than just wetlands. Goal 2030 is too technical. Suggested new goal: Any ecosystem listed as uncommon that their status improve2025 20% increase from 2020. 2030 40% increase from 2025.
A87	BRA	Environmental flows (Braided River)	Set and Meet Ecological Flows			<u>44) Made progress towards achieving environmental flows.</u>	<i>Also covered in Environmental Limits</i>	<i>Also covered in Environmental Limits</i>	<u>45) Achieved all environmental flows.</u>	Even though these are reported in ENV LIMITS its important that they stay reported here also. This target reinforces the need to set limits "for Ecosystems" Round 2: Confusion around wording; are we meaning ecological or environmental flows? Suggested change to 2020- Environmental Flows are intact and consents are reviewed.
A88	BRA	None yet defined	Protect Braided River Habitats				Increased community knowledge, awareness and guardianship of the importance of mauri within braided river systems.			Support for 2025 target; clarify BRIDGE; flow, room to meander/move, deal with invasive weeds/predation, 4WDs

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A89	BRA	None yet defined	Increase Braided River Bird Habitats				Halt...?	Double the area...(of BR bird species)	<u>48) Increase habitat area usable by all species of braided river</u> indigenous birds.	Some mapping of these ecosystems has begun
A90	BRA	None yet defined								
A91	BRA	None yet defined	Protect Braided River Habitats			<u>Canterbury's braided rivers show the dynamic, braided nature typical of such rivers.</u>	All resource management decisions concerning braided river systems recognise and provide for ki uta ki tai.		<u>46) Canterbury's braided rivers show the dynamic, braided nature typical of such rivers.</u>	There are a number of characteristics of Braided rivers that are under threat from land use and abstraction. Feed Round 2: target 2025 should include prioritise or support and include an additional target no barriers to fish passage from source to sea. 2030 target should include one around "no river mouth sedimentation/clogging due to water abstraction? 2010 targets are excellent- pull back in and in to 2040. Show up again as interim
A96	ENV	Environmental Limits								
A104	ENV	Environmental flows and catchment load limits	Set and Meet Environmental Flows		Set environmental flows for surface streams, rivers and groundwater that are consistent with the fundamental principals of the CWMS. Set catchment load limits for nutrients for each water management zone that are consistent with the fundamental principles of the CWMS.	<u>156) Review of environmental flows and catchment load limits in response to changing monitoring information, new understanding and technologies, and if requested by regional and zone committees</u>	Review environmental flows and catchment load limits in response to changing monitoring information, new understanding and technologies, and if requested by regional and zone committees	Review environmental flows and catchment load limits in response to changing monitoring information, new understanding and technologies, and if requested by regional and zone committees	<u>158) Review of environmental flows and catchment load limits in response to changing monitoring information, new understanding and technologies, and if requested by regional and zone committees.</u>	- There is large variability between catchments across the region, in the extent to which targets are met, the knowledge of the water systems and the complexity of the hydrology and infrastructure. Can this be reflected somehow in the targets? - Consent was expressed that constant reviews can be seen as constantly shifting the goal posts, leading to lack of community buy-in to achieving the targets. If reviews are to be done regularly, it is important that the community understand and support the reasons for any changes.
A105	ENV	None yet defined	Set Urban Catchment Loads				<del>Establish catchment loads for urban contaminants and other rural contaminants.</del>	Water quantity allocation limits are achieved.		- Support for an increased focus on urban waterways, but is this something that is covered by A104? That is, we now have information that suggests urban waterways are lagging behind rural communities and that reviews should address this. Should this target be deleted?
A106	ENV	Environmental flows and catchment load limits	Set and Meet Environmental Flows and Load Limits		Established and begun to implement a programme to apply environmental flows to existing consents.	<u>157) Established and begun to implement a programme to review existing consents where such review is necessary in order to achieve catchment load limits</u>		Progress against implementation plans is reported annually and implementation plans are reviewed alongside reviews of environmental flows and catchment load limits.	<u>159) Environmental flow and catchment load limits achieved in all waterbodies.</u>	- Is it realistic to set targets for 100% achievement of environmental limits if the limits are in a constant cycle of review? - General comments were made in relation to A106 and A106.1 that these should be what Ecan is doing as part of its core business. Why do they need to be recorded in targets?
A106.1	ENV	None yet defined	Establish Implementation Plans for Flows and Limits				Implementation plans are in place for all catchments to outline how environmental limits flows and catchment load limits will be managed and achieved			- Groups questioned how achievement against these will be measured. They would like to see community groups empowered to do more.
A107	ENV	None yet defined	Monitor Effectiveness - measuring and reporting against environmental limits				Developed and implemented an effective monitoring and reporting framework for freshwater health.	Increasing use of the monitoring and reporting framework for freshwater health by a wide range of the community.		- There was support for the developing a real time monitoring and reporting framework but this is not a target to deliver change. They recommended it be deleted and recorded as an implementation method. - Focusing on real time monitoring may not reflect future technological advances - best to keep this open and delete. - the difference between knowledge and reporting varies significantly between schemes and individual farmers outside of schemes
A108	ENV	None yet defined					Developed and implemented a method for annual reporting on progress toward achieving environmental flow and catchment load limits.	Reporting annually on progress toward achieving environmental flow and catchment load limits.		- There was support for this but, similar to A107, this is too detailed for a target. It should be deleted from the targets. Too much detail detracts from the main outcomes being sought. - this will need to be communicated to urban and rural communities. - this is detailed implementation and should be deleted
A109	ENV	None yet defined	New: Adopting new technology				Plan provisions enable rather than restrict the uptake of new technology that contributes to achieving environmental limits. <i>[Note 3]</i>	Technological innovations are widely communicated and support is available for their uptake and ongoing use.		- similar to above, this shouldn't be a target as plans should be doing this anyway and communication should be a no-brainer. - A general target was suggested by several groups that focusses on communicating and disseminating information.
A119	KAI	Kaitiakitanga								
A128	KAI	Marae Water supply								
A129	KAI	Marae water supply	Assure Marae Drinking Water Supply	Prevent further decline in the quality or quantity of water bodies used as a drinking water supply to marae and associated papakāinga.		<u>71) All marae and associated papakāinga have access to high quality drinking water</u>	Prevent further decline in the quality or quantity of water bodies used as a drinking water supply to marae and associated papakāinga	All marae and associated papakāinga have access to high quality drinking water (repeat of 2020 targets)		Maintain a focus on protecting source water quality
A130	KAI	None yet defined	Assure Marae Drinking Water Supply				New: Supply to marae from Community and private wells provide healthy drinking water			Although this says "supply" the intent here is for "source" as it is referring to potable water, not supplied/networked water
A131	KAI	None yet defined					New: Drinking water from community and private wells are XX % below 11.3 mg/l			This may be covered in Drinking Water Targets. Percentage to be worked on. Drinking Water Standards for New Zealand set a Maximum Acceptable Level (MAV) of 50mg/L for nitrate, which is equivalent to 11.3mg/l nitrate-nitrogen.
A132	KAI	Working together in partnership								
A133	KAI	None yet defined	Integrate kaitiakitanga	Formally recognise Te Rūnanga o Ngāi Tahu Freshwater Policy and, in each zone, work towards resolving issues related to Ngāi Tahu policies.	Protocols for the recognition and exercise of mana, including kaitiakitanga within the Ngāi Tahu rohe, are implemented.		An integrated Te Rūnanga O Ngai Tahu/papatipu rūnanga reporting mechanism is developed.		<u>75) Kaitiakitanga is a normalised and an integrated practice of water management</u>	



Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A134	KAI	Working together in partnership	Planning Regime Reflects Ki uta ki tai		Iwi Management Plans are in place for north and mid Canterbury. A separate Waitaki IMP has been drafted but is still waiting sign off from the iwi authority before it can be lodged with the Councils. No formal IMP for area between Ashburton and Waitaki.	<u>70) Integrated Ki Uta Ki Tai environmental management philosophies into zonal and regional management planning</u>	An integrated ki uta ki tai strategic plan is developed for identified catchments that sets out the agreed actions for all participants	New: Iwi Management Plans are refreshed and responded to.		An integrated Ki uta ki tai plan has been proposed. How does this add to exiting Iwi Management plan and the need to integrate philosophies into planning frameworks?  Iwi management plans are used by iwi/hapū to express kaitiakitanga and must be taken into account when preparing or changing regional policy statements and regional and district plans.
A135	KAI	None yet defined	Improve Succession Planning		Institutional capability within local government to adequately recognise and provide for the principle of kaitiakitanga in water management.		Succession plans and rangatahi forums are in place to enable the next generation to participate in zone committees and other water management processes	Succession planning needed [to continue to exercise mana and manage demands]		This concept needs development - there are a number of leadership programmes that could be borrowed from.
A136	KAI	Working together in partnership	Establish New co-Governance Arrangements		A formal co-governance arrangement for the active management of Te Waihora (Lake Ellesmere) and its catchment.	<u>69) Further co-governance arrangements (developed in partnership by Ngāi Tahu, the Crown and Canterbury local government) for the active management of nominated waterbodies in North and South Canterbury.</u>	Staged implementation of arrangements agreed by 2020	Staged implementation of arrangements agreed by 2020		Because the 2020 target already outlines further co-Governance arrangements GWG determined that 2025 and 2030 targets should focus on staged implementation of the 2020 arrangements
A137	KAI	Working together in partnership	Establish Tangata Tiakiwai		A system for appointing Ngāi Tahu tangata tiakiwai (water guardians) who have formal recognition and support from local government is established.	<u>72) At least one Ngāi Tahu tangata tiakiwai is appointed in each zone. [Note 2]</u>	Papatipu Rūnanga are decision-makers for the allocation of “Ngāi Tahu” water in catchments	At least one Ngāi Tahu tangata tiakiwai is appointed in each zone		There is a clear 2020 target for the role of tangata tiaki to be established. There is work to do to ensure there is a shared understanding of role, the appropriate resourcing and ensure sufficient mana is attached to the position.
A138	KAI	Wāhi Taonga and mahinga kai								
A139	KAI	None yet defined	Protect Waterways for Mahinga Kai	Prevent further loss or degradation of Ngāi Tahu nominated wāhi taonga.	All degraded wāhi taonga and mahinga kai waterways nominated by Ngāi Tahu have an active restoration programme in place that responds to cultural priorities.		X % of crown and council owned lands foster & support Ngāi Tahu cultural practices.	X (+10) % of crown and council owned lands foster & support Ngāi Tahu cultural practices. Monitoring is in place to demonstrate the effectiveness of restoration programmes and refreshed limit setting/planning provisions	<u>74) Protection, in accordance with Ngāi Tahu values and practices, of wāhi taonga and mahinga kai waterways</u>	The 2025 and 2030 targets draw on the already established 2040 target.
A140	KAI	None yet defined	Establish Mātauranga Maori Reporting		A report on the health of all Ngāi Tahu nominated water-bodies using the Ngāi Tahu Cultural Health Monitoring Tool.	New: Mātauranga Maori. Probably sits best in "Working Together in Partnership"	An annual mātauranga informed report is provided for rūnanga on the health of waterways to inform water management decision-making (by councils and Ngāi Tahu)	Outcomes reporting is being informed by Mātauranga Maori Report		Need to established the practices/methodology of mātauranga maori, the standards and also regular repeatable monitoring and reporting to be able to show trend and inform action
A141	KAI	Please input Reporting Theme from 2017 Report	Protect Waterways for Mahinga Kai		Identified customary uses (current and potentially restored) for all waterways.		A/some Freshwater taonga species (e.g. wai kākahi or wai tuna) are identified and protection zones are identified and put in place	All freshwater mātaitai are healthy places to gather kai.		(Feasibility of "all" in 2030 was questioned by the GWG 06 Sep 2018)
A142	KAI	Please input Reporting Theme from 2017 Report			A programme for identifying cultural preferences for river and stream flow agreed in each zone.		Flows are returned to sustain 50% of Fenton reserves and fishing easements	Flows are returned to sustain 100% of Fenton reserves and fishing easements		Fenton Reserves were awarded by Judge Fenton following the 1868; over time there has been degradation of the 'Fenton' fisheries easements. Fenton Reserves means the Taerutu, Waimaiaia, Torotoroa, Te Aka Aka, Pukatahi and TeHouriri reserves (claims 3 to 6, and 10 as set out in the Ngai Tahu Ancillary Claims Report 1995);
A143	KAI	Please input Reporting Theme from 2017 Report	Improve Decision Making for Allocations				Papatipu Rūnanga are decision makers for allocations of Ngai Tahu water in each catchment			Feedback suggested that there are governance and resourcing issues that need to be discussed along with capability and capacity are issues
A144	KAI	Wāhi taonga and mahinga kai	Increase Opportunities for Mahinga Kai			<u>68) Increased the abundance of, access to and use of mahinga kai</u>	Mahinga kai is a first order priority	A region-wide mahinga kai plan is developed and implemented, that informs and influences statutory and non-statutory plans)		Feedback: Need to ensure customary use is affirmed as a first order priority Suggested the region wide plan for Mahinga Kai be a 2025 target.  <a href="https://ngaitahu.iwi.nz/ngai-tahu/the-settlement/settlement-offer/cultural-redress/ownership-and-control/mahinga-kai/">https://ngaitahu.iwi.nz/ngai-tahu/the-settlement/settlement-offer/cultural-redress/ownership-and-control/mahinga-kai/</a>
A145	KAI	Wāhi taonga and mahinga kai	Protect Specific Reaches for Mahinga Kai		Work and research has commenced on establishing a mahinga kai food gathering standard.	<u>73) A mahinga kai food gathering standard is confirmed and implemented as a water quality monitoring tool</u>	Specific reaches of rivers and lakes are prioritised by Papatipu Rūnanga for the protection and use of mahinga kai and/or other cultural practices [Note1]	Mahinga kai is available in abundance and quality		<a href="https://ngaitahu.iwi.nz/ngai-tahu/the-settlement/settlement-offer/cultural-redress/ownership-and-control/mahinga-kai/">https://ngaitahu.iwi.nz/ngai-tahu/the-settlement/settlement-offer/cultural-redress/ownership-and-control/mahinga-kai/</a>
A146	KAI	Please input Reporting Theme from 2017 Report	Protect Waterways for Mahinga Kai (Specific species)				Protection Zones are identified for longfin and short fin tuna throughout the region.	Protection Zones are identified for longfin and short fin tuna throughout the region.		New Targets for Tikanga Maori and Mātauranga Maori - are recognised and integrated into the monitoring systems
A147	KAI	Please input Reporting Theme from 2017 Report	Establish Mātauranga Maori			New: Tikanga Maori and Mātauranga Maori and Te Ao Māori	Need targets that run through all time periods on education of values and Te Ao Maori	Need targets that run through all time periods on education of values and Te Ao Maori		New Targets for Tikanga Maori and Mātauranga Maori - are recognised and integrated into planning frameworks, workplans and monitoring systems

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A148	KAI	Please input Reporting Theme from 2017 Report				New Targets Theme: Monitoring Native Fish	Monitoring to demonstrate the effectiveness of restoration programmes.	100% of all waterbodies are regularly or 2 yearly monitored for native fish species.		Feedback was this target was more about monitoring effectiveness. A separate target for monitoring native fish species should be kept in - Not merged with Ecosystem Health or Recreation Targets
A149	KAI	Please input Reporting Theme from 2017 Report	Stop Loss of Intergenerational Knowledge			New Targets Theme: intergenerational knowledge		No loss of intergenerational cultural knowledge		Intergeneration loss due to decline in opportunity
A152	IRR	Irrigated Land Area Infrastructure								
A162	IRR			Analysts suggest having distinct targets for 1) Land Area and 2) Reliability						
A168	IRR	Infrastructure	Build Agreed Integrated Infrastructure		A system of regionally distributed rural water infrastructure for the storage and distribution of water that provides reliable water to all irrigated land has been designed, timetabled, costed and staged.  The system has been demonstrated to align with the principles and targets of this strategy	<del>119) Started construction of regional storage and [improved reliability of supply for at least 50% of irrigated land]</del>	Construction of regional <del>centralised</del> infrastructure for storage and distribution of water that provides reliable water to all irrigated land and <del>[improved reliability of supply for at least 80% of irrigated land]</del>	Construction of regional <del>centralised</del> infrastructure for storage and distribution of water that provides reliable water to all irrigated land and <del>[improved reliability of supply for at least 80% of irrigated land]</del>	The 2040 targets are included below and are focused on <u>reliability</u> and include the indicative target of 850,000 ha irrigation	The suggested 2025 and 2030 targets extend the existing 2015 target which anticipated a (fully) integrated regional solution to water infrastructure. We do have a regional model for infrastructure, based on a approach to facilitate thinking around nodes of activity that deliver on all elements of the strategy. And, there is a significant emerging environmental infrastructure component.  This target should remain as task groups' feedback was that we still need to pursue strategic integrated solutions, particularly given that significant proposals are struggling for various reasons to reach viability and the uncertainly surrounding the impact of climate change.  Task groups disussed the need to have a integrated regional approach.
A166	IRR	Funding Challenges	Funding Integrated Infrastructure Solutions		Decided mechanisms for funding infrastructure and the ongoing operation of the strategy		Continue work to overcome the funding challenges remain for integrated infrastructure – that integrates all targets of the CWMS	Continue work to overcome the funding challenges remain for integrated infrastructure – that integrates all targets of the CWMS		This continues the 2015 target - which recognises the challenges of raising capital from users to funding infrastructure that provides intergenerational benefits and serve multiple uses.  Support from Central Govt has been key in overcoming the collective investments funding issues and ensuring multiple use options are considered. Nitrogen limits have also impact on viability of schemes.  Feedback suggests that funding is still a strategic issue that needs to be resolved. The difficulties in securing investment for new water in particular are well-known. Investment in water storage is an intergenerational challenge but is often decided upon based on shorter term horizons.
A169	IRR	Consent Reconfiguration	Undertake Consents Reconfiguration		Started on the infrastructure (or reconfiguration of existing consents) that facilitates efficiency improvements and is linked into the regional storage plan		‘Consent reconfiguration’ options identified across region considering existing regulatory environment and any modifications that may be required to meet community desired outcomes in a timely manner.	Complete 80% of ‘consent configuration’ activity		These targets extend the existing 2015 target. "....infrastructure or consent reconfiguration that facilitates efficiency improvements...". Need to be considered in the context of reliable water to meet all targets.  The figure of 80% in 2030 consent reconfiguration needs to be checked  This is best aligned to Strategic Option C (CSWS III) - " <i>reconfigure consents and infrastructure for protection and repair of the environment, improved reliability of supply and for development</i> "
A170	IRR	Zone Infrastructure Plans	Build Agreed Integrated Infrastructure		Specified, for each zone, their infrastructure requirements consistent with the regional storage plan, and the principles and targets of the strategy	<del>120) Started construction of infrastructure identified in zonal implementation programmes.</del>	Progress in construction of integrated infrastructure identified in zone implementation programmes (Integrated - both irrigation and environmental)	Progress in construction of integrated infrastructure identified in zone implementation programmes (Integrated - both irrigation and environmental)	The 2040 targets are included below are focused on <u>reliability</u> and include the indicative target of 850,000 ha irrigation	Focus of feedback has been in integrated infrastructure concepts that serve all targets, consider climate change impacts, and regional in approach. The limitation of current funding mechanisms was also an issue.
A171	IRR	Reliability								
A172	IRR	Irrigated Land Area	Improve Reliability	No reduction in irrigated land area in Canterbury or in overall reliability with each zone.	Increased the area of irrigated land and/or reliability of irrigation.	Improved reliability of supply for at least 50% of irrigated land ( <i>Part of A168 and A164 above</i> )	<i>Should indicative targets be set for irrigated land area for 2025 and 2030 that step towards this 2040 target?</i>	<i>Should indicative targets be set for irrigated land area for 2025 and 2030 that step towards this 2040 target?</i>	<del>121) A substantial increase in the reliability of supply and the area of land irrigated in Canterbury all of which has demonstrated high standards of riparian, nutrient and water use management, and has been shown to be consistent with the principles of the strategy. An indicative target is 850,000 hectares of irrigated land with at least 95% reliability</del>	Groups and feedback suggests targets for irrigated area while contentious are needed for balance across the strategy. And that we need a better understanding of the current % reliability across % area of land. before committing to % targets in 2025 and 2030 Improvement of reliability is considered fundamental ("more important that irrigated area").  Reliability depends on supply, demand and efficient use and timing of availability. Efficient water use improves options for nutrient management.  The indicative target of 850,000 hectares seems ambitious given recent challenges in securing commitment to irrigation schemes and withdrawal of funding support from Central Government.

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A173	IRR	Reliability	Develop Storage for Irrigation Reliability				Integrated Infrastructure system provides <del>×95%</del> reliability to <del>×25%</del> of irrigated land area while also ensuring all target area water uses (environmental (incl. MAR, drinking water, kaitiakitanga) are met as per CWMS priorities.	Integrated Infrastructure system provides <del>×95%</del> reliability to <del>×75%</del> of irrigated land area while also ensuring all target area water uses (environmental (incl. MAR, drinking water, kaitiakitanga) are met as per CWMS priorities.	<u>122) Improved reliability of supply for all irrigated land.</u>	<p>Before agreeing to 95% reliability need to know what this means across Canterbury – how much of that comes from additional supply, scheduling, efficiency gains and storage/capacity.</p> <p>Related to A168 - Infrastructure is focused on providing reliability. The targets for % reliability on % land are at odds within A168 and need to be agreed with reference to current understanding of reliability.</p> <p>Current understanding of reliability needs to be qualified by our understanding of the impact of climate change in terms of reliable flows (supply) and evapotranspiration (demand).</p> <p>No Infrastructure targets were set for 2040. A new target was suggested for 2040: that infrastructure system provides 95% reliability to 100% of irrigated land area while also ensuring all target area water uses (environmental (incl. MAR, drinking water, kaitiakitanga) are met as per CWMS priorities.</p>
A175	IRR	New* High Value Production	Ensure Water Use for High Value Output			New: Sustainable high value primary production and increasingly diversified sustainable land use	Identify metrics that provide information on irrigation enabled innovative, high value, sustainable primary production. (May be better situated under Economies Targets)	Metrics give objective information on diversified land use using irrigation enabled innovative, high value, sustainable primary production.		<p>Struck out the 2020 targets as we are focused only on 2025 and 2030.</p> <p>High Value Production was discussed as an option to consider given 1) the challenge faced in gaining farmer commitment to new irrigation schemes and 2) a desire to steer away from an irrigated area target to a target and set a target with a focus on higher value production from the application of water.</p> <p>Feedback suggests limited support for High Value and Sustainable Land Use Targets here or in the CWMS - was suggested by Task Group that "By 2030, access to reliable water is a foundational element in driving increasingly higher value production options for the primary sector; Primary Sector brand recognition is tied to suitable production – especially in the use of water</p>
A177	IRR	New: Promote Sustainable Land Use Options					Strong interaction and links established with initiatives (commercial, research) into alternative markets and options for sustainable land use options	2030 Target inserted: Diversified Land Use: Land use change with smaller environmental footprint may need to be considered in the future. alternative high value land uses are required. may sit better as an economics target.		Again feedback suggests limited support for High Value and Sustainable Land Use Targets here or in the CWMS
A178	WUE	Water Use Efficiency								
A179	WUE	Benchmarks	Establish Benchmarks for Water Use	Initiate the development of models/benchmarks of reasonable and efficient use of water in irrigation.	"Established and reported against a benchmark of current water use efficiency for irrigation" (from target A184 below)		Established and reported against a benchmarks of current water use	Established and reported against a benchmark of current water use		<p>The Industry-agreed GMPs do include practices relating to irrigation and water use. The FEP and FEP Audit process only reports grade levels A through D. Specific metrics for water use will require access to better information on farm type and actual use.</p> <p>Feedback from groups was that benchmarks are important to allow peers to compare progress.</p>
A182	WUE	General (Water Use Efficiency)	Establish Best Practice Standards for Water Use	No decline in the efficiency of water use	60% of water used for irrigation is operating according to best practice water use	<u>106) 80% of water used for irrigation and stockwater is operating according to best practice water use</u>	<del>Best</del> <u>Good Management</u> Practice: 100% of water used for irrigation and stockwater is operating according to best practice water use	<del>Best</del> <u>Good Management</u> Practice: 100% of water used for irrigation and stockwater is operating according to water use Good Management Practices.	<u>109) Implemented best practice water use on all irrigation, stockwater and industrial/commercial use in Canterbury</u>	<p>This target extends on the 2015 target of "... 60% of water used for irrigation is at best practice" and the 2020 target which continues this theme on best practice. Some concern about this 100% target and the need to refer to GMP not 'Best Practice'.</p> <p>Because the FEP Audit process only reports a summary grade; level A through D, access to specific data best or good practices in water use will be required to adequately report on this goal.</p>
A184	WUE	General (Water Use Efficiency)	Implement Demand Management in Urban Water Use		Established and reported against a benchmark of current water use efficiency for irrigation, community (potable, industrial and commercial) and stockwater	<u>107) Reduced water used for community water supply by 10% (measured in litres per person per day) compared to that used in 2010</u>	Urban: Drinking water suppliers have demand management programmes in place as part of good infrastructure practices.	Urban: Drinking water suppliers implementing demand management programmes as part of good infrastructure practices.	<u>112) Reduced water used for community water supply by 20% (measured in litres per person per day) compared to that used in 2010.</u>	<p>Benchmarks for irrigation are covered in A179. Territorial Authorities need to set appropriate benchmarks for this target. Feedback is that this level of benchmarking should already be in place for urban water management.</p> <p>Need to check that these percentage reductions are feasible and that it is possible to report the 2010 baseline</p>
A185	WUE	General (Water Use Efficiency)	Increase Value Benefits from Water Use			<u>108) Increased the benefits gained per unit of water so that the volume of water beneficially used (used in production of crops, electricity, or commercial uses) in each zone as a proportion of the volume of water take is, on average, 5% greater than that achieved in 2010.</u>	Developed and reported on metrics for water use efficiency, incorporating the benefits gained from use of the water.	Increased the benefits gained per unit of water so that the volume of water beneficially used (used in production of crops, electricity, or commercial uses) in each zone as a proportion of the volume of water take is, on average, 5% greater than that achieved in 2020.	<u>110) Increased the benefits gained per unit of water so that the volume of water beneficially used (used in production of crops, electricity, or commercial uses) in each zone as a proportion of the volume of water take is, on average, 25% greater than that achieved in 2010.</u>	<p>This target requires a detailed level of analysis across both consumptive and non-consumptive use. Access to basic level <i>use by farm type or use by industry</i> is not easy to find. In addition, beneficial use requires access to data related to production.</p> <p>Need to check that these percentage gains are feasible and that it is possible to report the 2010 baseline.</p>
A188	ENE	Energy Security and Efficiency								
A196	ENE	Efficiency	Optimise Energy Use via Improved Scheduling			<u>127) Increased the productivity per unit of electricity – per hectare consumption for irrigation sector and equivalent measures in other sectors.</u>	Measured and reported on productivity per unit of energy.	Increased the productivity per unit of energy by X from 2025 (downward trend in energy use per hectare).		<p>Difficult to measure productivity per unit of electricity. More work needed to resolve how this would be measured.</p> <p>Feedback from stakeholders focused on the summer demand for irrigation. Energy demand for electivity in 2016-17 for Cantebrury peaked in mid-summer</p> <p>Feedback from schemes that they are already focused on this especially lines changes. Task Group suggested taking that a step further with scheduling demand using new technology.</p>

Counter	TA	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	Some of the Feedback from Consultation
A197	ENE	Energy Use in Irrigation	Measure Productivity of Energy Use		Identified and implemented opportunities to reduce electricity used in the use of water		Scheduling: Programme available to encourage Integrated water and energy use with industry through technology especially around scheduling and management.	Scheduling: Optimised line use charges through new scheduling technology.	<u>129) Reduced the energy used per hectare for irrigation in Canterbury compared to that used in the 2010/11 season</u>	<p>Energy use per hectare could only be done through sampling/surveying - could be doen as part of an ongoing EECA project.</p> <p>Schemes have invested in some cases (piping) to supply water at pressure to reduce electricity demand.</p> <p>Feedback from the groups was focused on the options that <u>scheduling</u> technology could provide. Scheduling and therfire the levfeling of electicity load can only be anabled through improved reliability and coopertaion across users.</p> <p>There are many ways of achieving this also on-farm - adoption of hardware and technology; Solar PV becoming cheaper.</p> <p>Need to check that energy used per hectare is measureable and that reductions for 2040 are</p>
A199	ENE	Multi-Use Infrastructure	Ensure Efficient Energy Use in irrigation	Seek opportunities, as part of design and planning for new infrastructure, to reduce electricity used in the use of water, to provide for multiple use, and to factor generation into existing irrigation infrastructure.	Started projects to generate electricity from existing irrigation infrastructure.	<u>130) Generate at least 40-45% of the power used by irrigation in Canterbury from irrigation infrastructure (including multi-use hydro and irrigation systems) within Canterbury and other renewable on-farm sources</u>	<p>Develop an understanding of the electricity demand of irrigation to determine options to reduce both energy and water usage</p> <p>Electricity distribution companies work engage with major water users to increase understanding and coordination of opportunities for mutual benefit (load management, capacity availability, generation options).</p>	Collaborate between irrigators to reduce transmission demand and cost through better use of technology.	<u>128) Factored efficient use of electricity in all irrigation infrastructure</u>	<p>Feedback from task group was that it was difficult to see how the 40-45% target could be achived by 2020 given the changing market conditions for investment in electicity generation and whether it was appropriate for this to focus on the irrigation sector alone.</p> <p>Does the 2015 target still stand, is it realistic?</p> <p>How do we measure the demand from irrigation?</p> <p>Multi use options - are they still viable? We have co-use through CPW and Rakaia 'Scheme', Montalto Highbank. What are the realistic options or future scenarios?</p>
A201	ENE	Maintain Canterbury's Contribution to Energy Supply	Maintain Contribution to National Energy Objectives	Maintain Canterbury's existing contribution to New Zealand's security of electricity supply		<u>131) Maintain or increase Canterbury's contribution to New Zealand's security of electricity supply.</u>	<p><del>Electricity distribution companies work engage with major water users to increase understanding and coordination of opportunities for mutual benefit (load management, capacity availability, generation options).</del></p> <p>Continue to maintain or increase Canterbury's contribution to New Zealand's security of electricity supply.</p>	<p><del>Electricity use practices in water infrastructure applications represent good practice</del></p> <p>Continue to maintain or increase Canterbury's contribution to New Zealand's security of electricity supply.</p>		<p>Canterbuy's contribution to the natrional energy picture is important. External factors and uncertainty about future supply and demand have influenced thinking from stakeholder groups. Task and sector groups have questioned - how realistic this is.</p> <p>To meet GHG objectives and Central Government objectives for renewable energy, the hydro lake system provides important virtual storage for wind energy where wind operates as “must run” generation with hydro responding to natural fluctuations and vice versa. The degree of hydro energy spillage and/or use for irrigation is needs to balance these broader national objectives and is an important design objective when considering new infrastructure.</p>



## Appendix 2 - Targets and Proposed Work Programmes

Target	Proposed work programmes	Key actions needed Who needs to do more (and what is it)? Any gaps (for this zone)?
<i>Drinking water</i>	<p><b>Alignment of regional and district plans</b> – identify areas in plans that are barriers to CWMS targets</p> <p><b>Drinking water standards</b> – a programme to focus on private supplies; improvement programme for community supplies, including better compliance</p> <p><b>Comms/education</b> – develop guidance documents aimed at consistent regional application; turn data and monitoring into information that the community can use</p> <p><b>Measuring and monitoring</b> – develop a comprehensive groundwater monitoring programme</p> <p><b>Possible contaminants</b> - develop a watchlist</p>	
<i>Recreation and amenity</i>	<p><b>Measuring and monitoring</b> – develop recreational base data (flow, quality, site) and model future trends in recreation; review science behind flow regimes and flow limits</p> <p><b>Protection</b> – identify options and priorities by zone for protection and enhancement; review consents to ensure flows are met</p>	
<i>Ecosystem health and biodiversity</i> <i>Braided rivers</i>	<p><b>Comms/education</b> – use social science to develop tools for behaviour change</p> <p><b>Funding</b> – provide funding for landowners to make changes, including for land retirement</p> <p><b>Regulation</b> – review flow regimes, including considering use of Cawthron methodology</p> <p><b>At risk ecosystems and restoration targets</b> – identify the ecosystems at risk and critical source areas (including groundwater); identify restoration areas</p> <p><b>Measuring and monitoring</b> – improve monitoring so success against goals can be measured</p>	
<i>Environmental Limits</i>	<p><b>Measuring and monitoring</b> – measure and review progress on meeting limits, and report to the community, sector groups, Ngai Tahu etc.</p> <p><b>Regulation and adaptation</b> – review limits in plans and the on-ground actions being taken to meet limits to assess their effectiveness.</p>	
<i>Kaitiakitanga</i>	<b>Marae</b> – ensure marae drinking water quality and availability (led by rūnanga)	

Target	Proposed work programmes	Key actions needed Who needs to do more (and what is it)? Any gaps (for this zone)?
	<p><b>Measuring and monitoring</b>- identify Mātauranga indicators</p> <p><b>Protection zones</b> - develop actions plans for protection zones (led by Papatipu).</p> <p><b>Identify and use a generic process</b> for actions towards goals (e.g. improved mahinga kai) with year by year action plans, lead agencies, funders, communications</p> <p><b>Align work programmes</b> with existing Tuia/Ngāi Tahu programmes</p> <p><b>Comms/education</b> – develop programme for community understanding of kaitiakitanga</p>	
<b>Irrigated land area and reliability</b>	<p><b>Infrastructure</b>- need to develop regional strategic storage to improve reliability.</p> <p><b>Innovation</b> – innovation support and technology needed to allow exploration of new farm systems and alternative land use</p> <p><b>Comms/education</b> – improve irrigation scheme collaboration; develop education programme for the public, schools etc</p> <p>Funding – need to explore new options for infrastructure</p> <p>Measuring and monitoring – improve data and information collection and analysis</p>	
<b>Water use efficiency</b>	<p><b>Innovation</b> – increase use of new technology, such as automated control systems</p> <p><b>Benchmarking</b> – allocation and efficiency measurement to drive better water use.</p> <p>Measuring and monitoring – develop better methods for collecting and analysing water use efficiency data.</p> <p><b>Regulation</b> - new allocation models are needed.</p>	
<b>Energy security and efficiency</b>	<p><b>Benchmarking</b> – better measurement to allow benchmarking of energy efficiency</p> <p><b>Innovation</b> – develop understanding of new technology</p>	

# Hurunui Waiau Water Zone Committee

## 2017 Annual Report

### Delivering water management priorities through key work programmes

The Hurunui Waiau Water Zone Committee's vision is to deliver economic growth and healthy communities in the zone through the efficient use of water, while ensuring environmental, rūnanga, and recreational values are maintained and, where possible, enhanced.

The committee has informed and supported work programmes by Environment Canterbury and a wide range of other organisations to deliver this vision.

#### Good management practice (GMP)

The Amuri Irrigation Company (AIC), Cheviot Irrigators and Hurunui District Landcare Group are leading the implementation of GMP to help improve water quality in the zone. More than 350 farms in the zone have Farm Environment Plans (FEPs), including all dairy farms and all irrigated farms. More than 100 AIC FEPs were audited in 2017.

#### Integrated irrigation development

AIC, Hurunui Water Project (HWP) and Ngāi Tahu Forest Estates Limited (NTFE) are working on complementary irrigation infrastructure projects to ensure water is being used efficiently. AIC has replaced its open water races with pipe. HWP is investigating on-plains storage on the north bank of Hurunui River and has lodged a nutrient discharge consent for development in Waipara catchment. NTFE has commenced irrigation development with centre-pivots on about 1,100 ha by the end of 2017.

#### Maintaining or improving the natural environment

Immediate Steps biodiversity funding is being targeted to a flagship project on predator and weed control in braided riverbeds of Hurunui and Waiau rivers. The success of Immediate Steps funding can be seen in the before (2013) and after (2017) photos on the right, showing willow control at Woodlands Pond, a wetland at Hanmer Springs.

A willow control project at Woodlands Pond received Immediate Steps funding



The wetland before willow control



The wetland after willow control

#### Key achievements 2017

The committee has helped to drive on-the-ground actions that deliver sustainable benefits for water. Notably:

- More than \$300,000 of Immediate Steps biodiversity funding was allocated to a braided river flagship project to control predators and weeds on the Hurunui and Waiau rivers.
- AIC upgraded its irrigation infrastructure, replacing 106 km of open water races with 131km of pipe and so greatly increasing water-use efficiency.
- Emu Plains irrigators made an application for resource consents for a 7,000ha piped irrigation scheme, with 3,500ha of new irrigation in the Waiau catchment.
- Earthquake Recovery Funding of \$1.8 million through the Ministry for Primary Industries (MPI) has been granted to support the recovery of hill and high-country farms affected by the North Canterbury earthquakes.
- Pahau River received the River of the Year award for the New Zealand river showing the most improvement in E. coli levels.



Hāpua (river-mouth lagoons) are significant for mahinga kai. The health of the hāpua reflects the state of the river. Water quality monitoring sites were established on the Waipara and Waiau hāpua in 2017



## Amuri Irrigation Company strives for efficient irrigation



AIC has completed an \$85 million project replacing 106km of open water races with 131 km of pipe.

The pipe upgrade will eliminate loss from open races (estimated at about 30 per cent) and drive more efficient spray irrigation. One per cent of the scheme remains in border dyke under traditional sheep farming.

More efficient water use will allow AIC to increase its irrigation area by almost 6,000ha using the same amount of water from the rivers. This brings the overall scheme area to 28,000ha.

Elimination of the by-wash from the open races into streams in the lower Amuri Basin will reduce flows during the irrigation season, but still maintain an environmental flow.

## Working together – Cheviot Irrigators Group

The Cheviot Irrigators Group, established in 2016, continues to grow with great farmer engagement and progress to good management practice. The group now has just under 30 members, and includes most irrigators in the lower Waiau, lower Hurunui and Scargill Valley.

The group is founded on a philosophy of continuous improvement in irrigation practice. This philosophy is supported by audited Farm Environment Plans (FEP) which specify how each farm will be managed and developed over time in response to identified issues.

It is up to each farmer to work out how they are going to address issues and achieve good management. All the farms will be audited by the end of 2018.

FEPs and audits are key to delivering the community's goal of delivering economic growth and healthy communities in the zone through the efficient use of water.

The group has an active programme of events, including opportunities for networking, with irrigation and FEP audit training events taking place every six months. Michael Bennett, Land Management Advisor from Environment Canterbury, has supported the group closely and has made one-on-one advisory visits to about half of the Cheviot Irrigators farms.

Cheviot Irrigators is a group of independent irrigators who administer FEPs under an Environment Canterbury-approved framework rather than through consent conditions. It is the first group of its kind in New Zealand.



*The ngutu pare/wrybill, the only bird in the world with a bill that's curved to the side. This New Zealand endemic species is nationally vulnerable*

## Braided river birds

Canterbury's braided rivers are unique. The birds that depend on the rivers are declining. Threats to these birds include predators – black-backed gulls, cats, stoats and hedgehogs – and habitat destruction through water abstraction or weed invasion.

Bird surveys have been done in the Hurunui and Waiau rivers since 2008, typically in three-year blocks repeated every five years. A survey of river birds of the Waiau River was carried out in October 2017. Numbers were slightly lower than in 2016 for wrybill, banded dotterel and black-fronted tern, although black-billed gull numbers were higher than they had been since 2008.

The zone committee has allocated funding to help the rare bird species living in the Hurunui and Waiau riverbeds. This funding will be directed towards black-backed gull control and habitat enhancement – weed control and constructing an 'island' (which will reduce the threat of stoats, cats and hedgehogs).

## Progress Towards Achieving CWMS Targets

Ecosystem health and biodiversity	The new Hurunui District Plan introduces regulations to protect biodiversity and manage vegetation clearance. More than \$300,000 of Immediate Steps funding was allocated by the committee this year to projects that protect and enhance biodiversity.
Natural character of braided rivers	Hurunui and Waiau River Regional Plan (HWRRP) protects flushing flows for Hurunui and Waiau rivers. HWRRP prohibits major water storage in upper parts of Hurunui and Waiau rivers.
Kaitiakitanga	Mana whenua participation in the zone committee has significantly increased local understanding of cultural values, though there remains a slow pace of improvement in terms of mahinga kai. A Kaikōura rūnanga representative joined the committee in December 2017. HWRRP protects the mauri of waterbodies.
Drinking water	Hurunui District Council continues to manage risks to community drinking water. Earthquake and drought led to difficulties in security of supply.
Recreational and amenity opportunities	New minimum flows in HWRRP provide more flow for recreational uses, though these new flows will only be implemented as consents are renewed.
Water use efficiency	AIC has completed piping of its irrigation distribution system, reducing losses (estimated at 30%) from open races and allowing more efficient spray irrigation.
Irrigated land area	Hurunui Water Project consent has been granted, which provides for additional irrigation development, mainly on the south side of Hurunui River.
Energy security and efficiency	AIC's piped distribution system provides water under pressure to irrigators, reducing the need for pumping. The pipe system has been designed to accommodate hydro generation in future.
Regional and national economies	Economic growth has occurred through land use intensification on irrigated farms and will continue as new irrigation development occurs. This development is taking place within the water quality limits of the HWRRP.
Environmental limits	Water quality and quantity limits are set in HWRRP. The reduction in border dyke irrigation has led to improvements in <i>E. coli</i> and phosphorus levels in some Amuri Basin tributaries though nitrate levels are increasing.



## Opportunities and challenges

### Natural disasters

The aftermath of drought and earthquakes made 2017 a challenging year and the impact of these events will be ongoing. Exacerbated erosion (and sediment input) associated with earthquake-damaged land in the Mason, Leader and Tūtaeputaputa/Conway catchments is expected to be an issue for years, if not decades.

Beef and Lamb NZ Farm is leading a Land and Business Recovery Project with MPI funding and support from other organisations to support the recovery of hill and high-country farms affected by the 'Kaikōura earthquakes'. This project will support farmer-appropriate decisions (farm system, land use or other) to achieve sustainable management of natural resources over the next generation.

### Getting good science

Fixes to water management issues need to be based on good science with widespread buy-in. The zone committee wants information from all sources, not just Environment Canterbury, to be used in decision making.

A Hurunui Science Stakeholder Group was established with over 35 participants from a wide range of interests. The group met eight times in 2017, sharing and reviewing information and agreeing the key messages on the current state of water quality in Waiau and Hurunui rivers. These messages were presented to community meetings at Waikari and Cheviot.

### Braided riverbed management

The zone committee is a strong advocate for braided river protection. It has allocated Immediate Steps funding to a flagship project to control weeds and predators to protect braided riverbed-nesting birds.

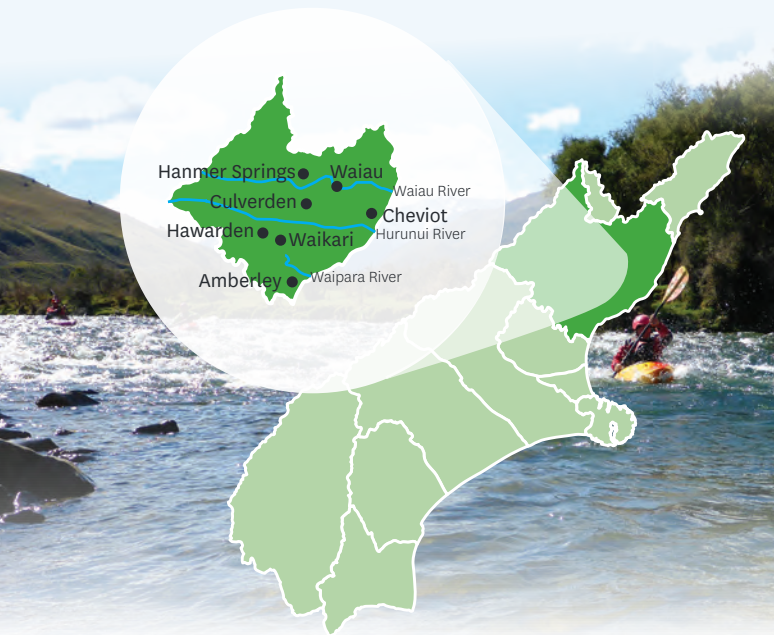
The committee is concerned, however, about how draft riverbed lines are being used to define the extent of braided rivers and the impact this is having on individual farmers in the zone. The committee will work with Environment Canterbury on the region-wide resolution of this issue.



## Hurunui Waiau Zone

The Hurunui Waiau Zone Committee was formed in 2010 to work with the community, rūnanga and councils to develop and implement water management recommendations that deliver the vision of the CWMS.

Our zone features Lake Sumner, the alpine Hurunui and Waiau rivers, the hill-fed Waipara and Tūtaeputaputa/Conway rivers and the north Pegasus Bay coastal wetlands and coastal hills.



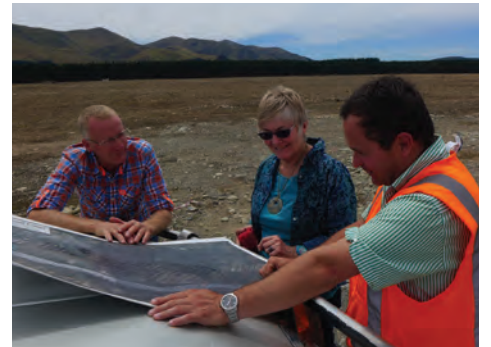
## Key events 2018

Changes to the HWRRP will be notified in July 2018. By the end of March, the committee will need to have consensus recommendations on:

- Addressing the 10%-rule issue.
- Considering further delays to reviewing water take consents (in relation to HWRRP minimum flows) to lever further improvement in water quality and biodiversity.
- Considering strengthening water-quality limits for Waiau catchment.

### Canterbury Water Management Strategy vision:

“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.”



## Zone committee membership 2017

Each of the region's 10 zone committees includes four to seven community members and this membership is regularly refreshed to ensure a wide range of perspectives are reflected.

James Costello, Community Member

Ken Hughey, Community Member

James McCone, Community Member

Dan Shand, Community Member

John Faulkner,  
Community Member; Chair

Ben Ensor, Community Member;  
Deputy Chair

Michele Hawke, Community  
Member; Regional Committee

Nukuroa Tirikatene-Nash,  
Rūnanga Rep-Kaikōura

Makarini Rupene,  
Rūnanga Rep-Tūāhuriri

Cynthia Roberts,  
Council-Environment Canterbury

Vincent Daly, Council-Hurunui District

Winton Dalley,  
Council-Hurunui District Mayor

**Hurunui Waiau Water Zone Committee Facilitator - Ian Whitehouse**

email: [Ian.Whitehouse@ecan.govt.nz](mailto:Ian.Whitehouse@ecan.govt.nz) | phone: 027 500 1833



<b>AGENDA ITEM NO: 11</b>	<b>SUBJECT MATTER: BRIDGE PROJECT UPDATE</b>
<b>REPORT:</b> Hurunui Waiau Water Management Committee	<b>DATE OF MEETING:</b> 19 November 2019
<b>REPORT BY:</b> BRIDGE project team led by Tania Harris	

## PURPOSE

1. To update the Zone Committee on progress with the BRIDGE project.

## PROJECT HISTORY

2. A defining feature of braided rivers is that the active gravel channels migrate over time across a wide area. Canterbury's braided rivers have been constrained and reduced in width by agricultural land development and river protection works, with resulting loss of natural character, ecosystem health and biodiversity values.
3. Environment Canterbury has been working through a process (the BRIDGE project) in collaboration with zone committees, adjacent land owners, local Rūnanga and river users to define the location in which river bed rules apply with more certainty than the current indicative river bank lines. The intention is to progress any changes to the Canterbury Land and Water Regional Plan in the Omnibus plan change, which will be publicly notified in June 2019. The key issues with the current situation are that:
  - The rules about what you can or cannot do are different inside or outside the 'river bed' and clarity is therefore needed;
  - The Resource Management Act definition is difficult to apply in braided rivers; and
  - There is uncertainty over the extent of the 'river bed' due to the dynamic nature of braided rivers.

## THE PROCESS TO DATE

4. The BRIDGE project team has worked with a wide range of people across four river reaches (Waiau Uwha, Ashburton / Hakatere, Waihao and Ahuriri) to develop a Canterbury-wide approach. These four river reaches were identified as being representative of the region. The primary focus has been to identify:
  - The extent of the 'river bed' on a braided river; and
  - The values associated with the river bed and how to manage for these.
5. The process will ultimately provide input to proposed changes (Omnibus 2019 plan change) to the Land and Water Regional Plan in relation to managing braided river beds. The process has been supported by:
  - Two sets of meetings at the four river reaches;

- The commissioning of values reports prepared by Boffa Miskell, covering terrestrial ecology, aquatic ecology, natural character, landscape and recreational values; and
- The commissioning of a cultural impact report.

## WHAT WE HAVE LEARNT

6. Braided rivers are characterized by active gravel channels that move across the 'river bed'. Over time, this creates a mosaic of islands and river margins; this pattern of islands and channels is what we visually associate with braided rivers. There are springs, wetland and small streams that are hydraulically connected to the river. The extent of flooding does not necessarily define the extent of the braided river bed. Nor does land ownership.
7. During the discussions, the consensus was that braided rivers are dynamic and move across a wide area. The debate is about how far they should be allowed to move. The answer may be different in reaches with high natural character values than in reaches where intensive land use and/or river protection has constrained the river, and natural character is lower.
8. Many people favour a 'two-tiered' approach to defining and managing braided rivers – the active gravel channel and a wider 'braid plain' outside this. The Land and Water Regional Plan already has rules about activities in the active channels, including for stock access. Infestation of willows, broom and other weeds are an issue in many reaches and this needs to be addressed, but a plan change will not resolve this.
9. Two approaches have been used to determine the extent of the braid plain:
  - The "geomorphic" braid plain which is the maximum area that active channels could potentially cover. This can be mapped by identifying terraces using digital elevation models, where available from LIDAR imagery.
  - The "historical" braid plain which is the area that has been covered by active channels over the last century or so, as visible on historical maps and aerial photos.
10. Both approaches have been mapped by NIWA for the Waiau Uwha and Ashley / Rakahuri rivers, and the four river reaches used in the BRIDGE Project. Environment Canterbury considers the historical braid plain provides a pragmatic, easy-to-understand start-point in the methodology for defining the extent of a braided river. The methodology will also consider the location of significant stop banks.

## WHAT HAPPENS NEXT

11. Environment Canterbury are commissioning work to map the historical braid plains for the main stems of the Clarence/Waiau Toa, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki Rivers. It is intended that the first of these will be available in the first quarter of 2019.
12. Environment Canterbury is committed to providing maps showing the historical braid plain lines to property owners and land managers. Consultation will be scheduled as the proposed braid plain lines become available.



13. This consultation process will include presentation of options for provisions that might be included in the Omnibus 2019 plan change to the Land and Water Regional Plan. These options will address the challenging questions put to the second River Reach workshops relating to land use intensification in the bed and margins, and river protection in braided rivers:

- should “undeveloped” land be able to be developed?
- where development has occurred should a farmer be able to put in river control works to protect their land and associated infrastructure?
- If the river establishes a new active (gravel) channel should we allow the river to be put back into its old channels? Does the answer differ if there is river control in place or not (and whether there is a town at risk)?

14. It is anticipated that the high-level timeframes for the remainder of the BRIDGE Project as it feeds into the Omnibus 2019 plan change will be as follows:

Meetings presenting options for managing development and river protection within the river lines	1 <sup>st</sup> quarter 2019
Consultation with landowners adjacent to the braided reaches of Rangitata, Waitaki, Waiau Uwha, Rakaia, Waimakariri, Hurunui and Clarence/Waiau Toa Rivers (i.e. the ‘Alpine Rivers’ as defined in the Land and Water Regional Plan).	1 <sup>st</sup> quarter 2019
Formal (“Schedule 1”) consultation on Omnibus 2019 plan change (including braided rivers) with iwi authorities, local government, Ministry for the Environment, etc	2 <sup>nd</sup> quarter 2019
Public notification of Omnibus 2019 plan change	June 2019

<b>AGENDA ITEM NO: 11</b>	<b>SUBJECT MATTER: OMNIBUS PLAN CHANGE 2019</b>
<b>REPORT to Hurunui Waiau Zone Committee</b>	<b>DATE OF MEETING: 19 November 2018</b>
<b>REPORT BY:</b> Andrea Richardson, Senior Planner – Environment Canterbury	

## PURPOSE

1. To update the Zone Committee on progress with the Omnibus 2019 plan change to the Canterbury Land and Water Regional Plan (*LWRP*), which will be publicly notified in mid-2019.

## BACKGROUND

2. The Omnibus 2019 plan change covers a range of issues to ensure the *LWRP* responds appropriately to new directives from central government, emerging environmental issues, and changes in matters that are strategic priorities for Environment Canterbury. The region-wide topics include defining and managing braided river environments, indigenous freshwater fish and macroinvertebrates, National Policy Statement for Freshwater Management amendments, better provision for tangata whenua values in rules, and farming land use provisions for commercial vegetable growers. The plan change also includes Hinds Drains Working Party recommendations for the Ashburton sub-region.
3. Key milestones for the Omnibus 2019 plan change include consultation on the draft plan in early April 2019 (i.e. Schedule 1 consultation), public notification of the proposed plan change in mid-2019, a public hearing on submissions on the plan change in the second quarter of 2020 and a decision to be notified by mid-2021.

## A NEW TOPIC – MANAGED AQUIFER RECHARGE

4. Council has recently added a new topic, Managed Aquifer Recharge, to the Omnibus 2019 plan change. This topic will assess the environmental benefits of Managed Aquifer Recharge to assist with improvements to water quality and quantity and appropriate plan provisions (such as water filtering through soils and no mixing of waters) to manage the activity.

## UPDATE ON PROGRESS

5. Research into each plan change topic and development of potential planning solutions is occurring at slightly different paces as each topic is generally distinct from the others (as is the nature of ‘omnibus’ plan changes). Attachment 1 of this report provides a brief overview of each plan change topic and an update on progress.
6. Environment Canterbury will provide the Zone Committee with another progress update on Omnibus 2019 in the first quarter of 2019.

**COUNCILLOR FEEDBACK ON ADDITIONAL TOPICS**

7. Earlier this year, we sought feedback from all CWMS Zone Committees, Ngā Runanga, and some key stakeholders on the proposed topics for Omnibus 2019, and whether there were any other regionally significant topics that should be included in this plan change. Based on this feedback, Environment Canterbury's Councillors have evaluated which regionally significant topics should be included in the plan change.
8. Although the Councillors recognised the resource management importance of the additional topics sought, none were added to the Omnibus 2019 work programme. The reasons for this include, some topics are being addressed through more appropriate non-statutory measures; and some topics are recommended for inclusion in a future Environment Canterbury work programme but not in Omnibus 2019 plan change. The additional topics sought and the reasons for their non-inclusion in Omnibus 2019 in outlined in Attachment 2.

## Attachment 1: Update on Omnibus 2019 topics

Topic	Progress Update
<p><b>Braided Rivers</b></p> <p>Environment Canterbury is working on a project to understand the various values in braided rivers, and to address issues for braided rivers, including uncertainty over the spatial extent of the river bed due to their dynamic nature, and increasing constriction of braided rivers due to activities such as land use intensification and flood control infrastructure. Braided river values include cultural values, terrestrial and aquatic ecology values, landscape values, recreational values and natural character values.</p> <p>In order to ensure braided rivers are appropriately managed we are seeking to:</p> <ul style="list-style-type: none"> <li>• Provide clarity on the spatial extent of the “river bed” in braided rivers; and</li> <li>• Review and potentially amend the current plan provisions to better manage the adverse effects of activities that may impact on the multiple values in braided rivers.</li> </ul>	<p>A detailed progress update on the braided rivers topic is outlined in a separate Zone Committee paper.</p> <p>In brief, Environment Canterbury met with a wide range of people at four river reaches across Canterbury to listen to views on determining the spatial extent of braided rivers and the values needing to be managed. We are now working on mapping the spatial extent of braided rivers and developing options for provisions to ensure the values are appropriately to be managed. Mahaanui Kurataiao (iwi entity) is commissioned to write a report on the cultural values of Canterbury’s braided rivers. Reports on terrestrial and aquatic ecology values, recreational values and riverscape/natural character values at four river reaches have also been commissioned.</p>
<p><b>Improvements to rules to address Tangata Whenua values</b></p> <p>A number of controlled and restricted discretionary rules in the Canterbury Land and Water Regional Plan (LWRP) do not include specific recognition of Māori cultural and customary activities and associated values in their matters of control or restricted discretion. The purpose of this topic is to identify which controlled and restricted discretionary rules in the plan inappropriately constrain the ability of decision-makers on resource consent applications to consider the effects on tangata whenua values.</p>	<p>Environment Canterbury has commissioned Mahaanui Kurataiao (iwi entity) to review the proposed rule amendments, to identify the tangata whenua value(s) that cannot be considered but may be affected by the activity covered by the rule, and to advise whether the phrase ‘effects on tangata whenua values’ as a matter for discretion or control could be further refined to give more guidance to plan users.</p>
<p><b>Increased protection of indigenous freshwater species and habitats</b></p> <p>This topic is associated with Environment Canterbury’s strategic priority for a step change in indigenous biodiversity to meet community aspirations in managing our environment. The Omnibus 2019 plan change seeks to increase protection of indigenous freshwater</p>	<p>Environment Canterbury is working with Department of Conservation on the development of the technical report to support this topic. We are at the stage of assessing the potential planning mechanisms.</p>

Topic	Progress Update
<p>species and their habitats, including critically endangered species and valuable but declining mahinga kai.</p> <p>In addition, proposed amendments will seek to address the incremental loss of instream habitat quality and quantity that may occur through diversion, re-alignment, piping and reclamation of wetlands and streams.</p>	<p>Environment Canterbury staff have met with Mahaanui Kurataiao (iwi entity) to discuss the commissioning of a cultural report for this topic.</p>
<p><b>Salmon Spawning Sites</b></p> <p>This topic assesses the addition of potential new salmon spawning sites in addition to those already listed in Schedule 17 of the LWRP.</p>	<p>Environment Canterbury is working with Fish and Game to identify new salmon spawning sites, along with a technical report to outline the reasoning for their proposed inclusion (or otherwise).</p>
<p><b>National Policy Statement for Freshwater Management updates</b></p> <p>The LWRP was developed under the 2011 version of the National Policy Statement for Freshwater Management. Recent amendments to the NPS-FM in 2014 and 2017 have introduced new requirements for Councils including establishment of freshwater management units and limits to achieve freshwater outcomes in accordance with a National Objectives Framework. The Omnibus 2019 plan change will give effect, as far as practicable, to these amendments.</p>	<p>Technical work is underway by Environment Canterbury's Science team to incorporate these changes into the LWRP.</p> <p>A report on defining Freshwater Management Units at a region-wide scale has been commissioned to inform the scope of any changes.</p>
<p><b>Commercial Horticultural operations</b></p> <p>This plan change investigates options to better provide for the management of nutrient discharges from commercial vegetable operations. Crop rotation and lease-hold arrangements are typically undertaken by commercial horticultural growers to avoid soil-borne diseases. Compliance with the LWRP farming rules and access to lease land with sufficient nitrogen load is challenging for growers as the nitrogen loss limit that applies to the land is restricted by the crop type grown (or other land use) during the nitrogen baseline period.</p>	<p>Environment Canterbury is working with HortNZ and a 'commercial horticultural grower' working group to quantify the issue and develop potential planning solutions.</p>

Topic	Progress Update
<p><b>National Environmental Standards for Plantation Forestry</b></p> <p>The National Environmental Standards for Plantation Forestry (NES-PF) came into effect on 1 May 2018 and prevails over LWRP rules except where the NES-PF specifically allows more stringent regional plan rules. The NES-PF objective is to have a single set of regulations that apply to plantation forestry operators.</p>	<p>Environment Canterbury staff have had a workshop with members of the forestry industry to discuss the application of the NES-PF in relation to the Land and Water Regional Plan.</p> <p>Environment Canterbury is engaging with Ministry for Primary Industries on potential amendments to the LWRP provisions to remove duplication/conflict and to ensure the more stringent requirements in the plan (for example suspended sediment discharges) continue to apply to plantation forestry industry activities.</p>
<p><b>Hinds Drains Working Party Recommendations</b></p> <p>This plan change will amend provisions in Section 13 (Ashburton) to give effect to the Hinds Drains Working Party's recommendations to manage water quantity in Hinds. The recommendations were provided to Environment Canterbury in 2016, endorsed by the Ashburton Zone Committee. The topics include:</p> <ul style="list-style-type: none"> <li>- Setting a minimum flow and allocation regime for Eiffelton Irrigation Scheme Drains.</li> <li>- Reducing the Hinds River allocation limit for environmental benefit</li> <li>- Changing well interference criteria to better enable switching to deep groundwater</li> <li>- New provisions for groundwater takes in a defined 'coastal strip' due to difficulties accessing deep groundwater</li> <li>- Applying stock exclusion provisions to Main and Secondary Hinds Drains, regardless of whether there is water in these drains.</li> </ul>	<p>Environment Canterbury is engaging with the Hinds Drains Working Party and the Ashburton Zone Committee on this topic.</p> <p>The technical work to support the Hinds Drains Working Party's recommendations is nearing completion. As cultural assessments were undertaken during the development of the recommendations, no additional cultural assessment is sought.</p>
<p><b>Managed Aquifer Recharge</b></p> <p>This topic will assess the environmental benefits of Managed Aquifer Recharge to assist with improvements to water quality and quantity.</p>	<p>Environment Canterbury has commissioned a report to assess the current provisions in the Land and Water Plan and provide high-level region-wide planning options. The requirement of further science and planning assessments will be considered when the planning options report is finalised.</p>

## Attachment 2: Councillor Feedback on Additional Topics Sought

Stakeholder	Additional topic requested for Omnibus 2019	Councillor Feedback
Lower Waitaki South Coastal Canterbury Zone Committee	Protection of Grey Scrub (small-leaved, highly branched shrubs such as matagouri, mingimingi and olearias)	<ul style="list-style-type: none"> <li>• Opportunity for Environment Canterbury to raise biodiversity concerns with TAs</li> <li>• Biodiversity project in the Lower Waitaki with focus on protecting grey scrub communities could be expanded to other areas of Canterbury. This is considered a more appropriate mechanism than Omnibus 2019 plan change</li> </ul>
Lower Waitaki South Coastal Canterbury Zone Committee	Water Conservation Order for Wainono Lagoon	<ul style="list-style-type: none"> <li>• An application for a water conservation order must be made to the Minister for the Environment rather than the Regional Council, and therefore cannot be progressed through Omnibus 2019 plan change</li> </ul>
Lower Waitaki South Coastal Canterbury Zone Committee	Control of the whitebait fishery to halt declining population	<ul style="list-style-type: none"> <li>• The functions of regional councils under the Resource Management Act do not include regulation of fisheries resources. However, the LWRP does have provisions in place and in development (through Omnibus 2019) to protect fishery habitat</li> <li>• LWRP currently has policies and rules to protect inanga spawning habitat.</li> <li>• Protection of habitat of other whitebait species (banded kokopu, giant kokopu, shortjaw kokopu and koaro) may be delivered through the Omnibus 2019 topic which seeks to increase habitat protection of indigenous freshwater species.</li> </ul>
Ashburton Zone Committee	Region-wide definition of 'good management practice'	<ul style="list-style-type: none"> <li>• Significant resource, budget, implementation and communications implications make this a medium to long term planning goal, but not suitable for Omnibus 2019 plan change.</li> <li>• There are environmental benefits that could be achieved through supporting stakeholder implementation of the existing framework in Selwyn and Hinds sub-regional sections of LWRP</li> </ul>
Kaikoura Zone Committee	Sediment control/management in braided river catchments in Hurunui/Waiau and Kaikōura Zones due to Kaikoura earthquakes	<ul style="list-style-type: none"> <li>• Environment Canterbury will continue to work with Kaikoura District Council to support recovery efforts. This is a more appropriate mechanism rather than Omnibus 2019 plan change</li> </ul>

Stakeholder	Additional topic requested for Omnibus 2019	Councilor Feedback
Kaikoura Zone Committee	Provide increased predator control	<ul style="list-style-type: none"> <li>Implementation of the Canterbury Regional Pest Management Plan is the most effective tool to deliver on this objective</li> <li>Not possible to include in Omnibus 2019 plan change (not legislated by RMA)</li> </ul>
Regional Committee	Farm Environment Plans (LWRP Schedule 7) to include the management of indigenous biodiversity, ecosystems and habitats.	<ul style="list-style-type: none"> <li>LWRP Schedule 7: Farm Environment Plan already requires landowners to identify sites of “significant indigenous biodiversity” in their FEPs.</li> <li>Environment Canterbury will continue to work with district councils to identify ‘significant indigenous biodiversity’ in their district plans and develop appropriate controls to preserve these sites. This is a more appropriate mechanism rather than Omnibus 2019 plan change</li> </ul>
Fish & Game (Central South Island and North Canterbury)	Rule 5.62 LWRP (nutrient discharges for irrigation schemes and principal water suppliers) - Notification restrictions and nutrient loss conditions	<ul style="list-style-type: none"> <li>Risk that removal of notification restrictions may deter schemes from applying for global discharge consents or may encourage schemes to apply for a higher nutrient load</li> <li>Risk that amending Rule 5.62 so soon after Plan Change 5 LWRP is settled will distract from its implementation</li> </ul>
Fish & Game (Central South Island and North Canterbury)	Identification of ‘outstanding freshwater bodies’ in LWRP.	<ul style="list-style-type: none"> <li>Due to resourcing requirements to undertake this work, it is recommended for inclusion in a future Environment Canterbury work programme but not in Omnibus 2019 plan change.</li> </ul>
Canterbury District Health Board	Priority for water permits to take groundwater for community drinking water supplies	<ul style="list-style-type: none"> <li>Any amendments to LWRP drinking water supply provisions should await the outcome of the Three Waters Review. Therefore, do not include in Omnibus 2019.</li> </ul>
Canterbury District Health Board	Adverse effects of district heating and cooling systems on drinking water quality	<ul style="list-style-type: none"> <li>Do not include in Omnibus 2019 plan change due to lack of information to support this concern (or otherwise)</li> </ul>



<b>AGENDA ITEM NO: 10</b> <i>(attachment to Facilitator's Report)</i>	<b>SUBJECT MATTER:</b> Check Clean Dry Behaviour Change Campaign Update
<b>REPORT BY:</b> Gemma Livingstone (Biosecurity Officer)	<b>DATE OF MEETING:</b> 19 November 2018

### **Purpose**

To seek support and input from the zone committee on the Clean Dry Behaviour Change Campaign.

### **Background**

Freshwater plant and animal pests can have significant negative impacts on ecosystem health by reducing indigenous biodiversity through predation and competition, and destabilising aquatic habitats. Freshwater plant pests can cause economic losses through blocking water intakes for hydroelectricity generation, impeded drainage or irrigation. In addition, pests can affect the suitability for recreational activities and discredit our “clean green” branding.

Once freshwater pests become established, they are difficult and costly to control. Unlike many terrestrial and marine systems, freshwater systems do not form spatially interconnected habitats and can be viewed as ‘islands in a terrestrial sea’. Transfer of pest species between water bodies is predominantly human-mediated. This means we have a real opportunity to stop the spread of freshwater pests into our lakes and rivers, and therefore the impacts.

### **Check Clean Dry Behaviour Change Campaign**

- A social marketing campaign established in 2005 in response to didymo incursion in 2004.
- Original purpose of the campaign was to limit the spread of didymo while further research on the organism could be undertaken.
- Later recognised that many initiatives in the Check Clean Dry campaign would be effective for other invasive freshwater pests – focus of campaign extended to include other freshwater pests in 2011. E.g., Egeria, lagarosiphon, hornwort, pest fish
- Relies heavily on communications and marketing initiatives including signage and face to face advocacy in peak season at waterways.
- The goal - for public and industry to actively implement Check Clean Dry when moving between waterways to prevent freshwater pests spreading

### **Recommendations**

The zone committee members:

- adopt Check Clean Dry behaviour when moving gear, stock and equipment between waterways and encourage others to do the same – particularly contractors who may not be aware of the requirement.
- let Environment Canterbury know if any unusual freshwater animals or plants are spotted.

The zone committee provides to Environment Canterbury, through the Zone Facilitator:

- Suggestions for appropriate locals that might be willing to become Check Clean Dry champions or advocates (voluntary or paid)
- Ideas of what Environment Canterbury could do better locally with the Check Clean Dry Behaviour Change campaign, so we can progress forward.

# Hurunui Waiau Zone Water Management Committee

## Terms of Reference

The area of the Hurunui Waiau Water Management Zone is shown on the attached map.

### Establishment

The Committee is established under the auspices of the Local Government Act 2002 in accordance with the Canterbury Water Management Strategy 2009.

The Committee is a joint Committee of Environment Canterbury (the Regional Council) and Hurunui District Council (the Territorial Authority).

### Purpose and Functions

The purpose and function of the Committee is to:

- Facilitate community involvement in the development, implementation, review and updating of a Zone Implementation Programme that gives effect to the Canterbury Water Management Strategy in the Hurunui Waiau area; and
- Monitor progress of the implementation of the Zone Implementation Programme.

### Objectives

- 1) Develop a Zone Implementation Programme that seeks to advance the CWMS vision, principles, and targets in the Hurunui Waiau Zone.
- 2) Oversee the delivery of the Zone Implementation Programme.
- 3) Support other Zone Implementation Programmes and the Regional Implementation Programme to the extent they have common areas of interest or interface.
- 4) Ensure that the community of the Zone are informed, have opportunity for input, and are involved in the development and delivery of the Hurunui Waiau Implementation Programme.
- 5) Consult with other Zone Water Management Committees throughout the development and implementation of the Hurunui Waiau Implementation Programme on matters impacting on other zone areas.
- 6) Engage with relevant stakeholders throughout the development of the Hurunui Waiau Implementation Programme.
- 7) Recommend the Hurunui Waiau Implementation Programme to their respective Councils.
- 8) Review the Implementation Programme on a three yearly cycle and recommend any changes to the respective Councils.
- 9) Monitor the performance of Environment Canterbury, Hurunui District Council, and other agencies in relation to the implementation of the Hurunui Waiau Implementation Programme.
- 10) Provide Environment Canterbury and Hurunui District Council with updates on progress against the Zone Implementation Programme.

### **Limitation of Powers**

The Committee does not have the authority to commit any Council to any path or expenditure and its recommendations do not compromise the Councils' freedom to deliberate and make decisions.

The Committee does not have the authority to submit on proposed Resource Management or Local Government Plans.

The Committee does not have the authority to submit on resource consent matters.

### **Committee Membership**

The Zone Committee will comprise:

- 1) One elected member or Commissioner appointed by Environment Canterbury;
- 2) One elected member appointed by each Territorial Authority operating within the Zone Boundary;
- 3) One member from each of Tūāhuriri and Kaikōura Rūnanga;
- 4) Between 4-7 members appointed from the community and who come from a range of backgrounds and interests within the community;
- 5) Environment Canterbury and Hurunui District Council will appoint their own representatives on the Committee. Tūāhuriri and Kaikōura Rūnanga will nominate their representatives and the appointments will be confirmed by Environment Canterbury and Hurunui District Council.

### **Selection of Community Members**

To be eligible for appointment to a Zone Committee the candidate must either live in or have a significant relationship with the zone. Recommendations on Community Members for the Hurunui Waiau Zone Committee will be made to Environment Canterbury and Hurunui District Council by a working group of representatives from Environment Canterbury, Hurunui District Council, Tūāhuriri and Kaikōura Rūnanga. The recommendations will take into account the balance of interests required for Hurunui Waiau, geographic spread of members and the ability of the applicants to work in a collaborative, consensus-seeking manner. Environment Canterbury and Hurunui District Council will receive the recommendations and make the appointments.

### **Quorum**

The quorum at a meeting consists of:

- (i) Half of the members if the number of members (including vacancies) is even; or
- (ii) A majority of members if the number of members (including vacancies) is odd.

### **Chair and Deputy Chair**

Each year, the Committee shall appoint the Chair and Deputy Chair from the membership by simple majority. There is no limit on how long a person can be in either of these positions.

### **Term of Appointment**

Members of Committees are appointed for a term of three years. To coincide with Local Government Election processes terms shall commence from January each year, with each Committee requiring confirmation of membership by the incoming Council. The term for community members will be staggered so that one third of the community members is appointed (or reappointed) each year. There is no limit on the number of consecutive terms.

## Financial Delegations

None

## Operating Philosophy

The Committees will at all times operate in accordance with the requirements of the Local Government Official Information and Meetings Act 1987, and will observe the following principles:

- 1) Give effect to the Fundamental Principles, Targets and goals of the CWMS;
- 2) Be culturally sensitive observing tikanga Maori;
- 3) Apply a Ki uta ki tai (from the mountains to the sea) approach;
- 4) Work with the CWMS Regional Committee to support the implementation of the CWMS across the region as a whole;
- 5) Give consideration to and balance the interests of all water interests in the region in debate and decision-making;
- 6) Work in a collaborative and co-operative manner using best endeavours to reach solutions that take account of the interests of all sectors of the community;
- 7) Contribute their knowledge and perspective but not promote the views or positions of any particular interest or stakeholder group;
- 8) Promote a philosophy of integrated water management to achieve the multiple objectives of the range of interests in water;
- 9) Seek consensus in decision-making where at all possible. In the event that neither unanimous agreement is able to be reached nor a significant majority view formed, in the first instance seek assistance from an external facilitator to further Committee discussions and deliberations. Where the Committee encounters fundamental disagreements, despite having sought assistance and exhausted all avenues to resolve matters, recommend that the respective Councils disband them and appoint a new Committee.

## Meeting and Remuneration Guidelines

- 1) The Committee will meet at least eight times per annum and with workshops and additional meetings as required. At times, the workload will be substantially higher. Proxies or alternates are not permitted.
- 2) Any Committee may co-opt such other expert or advisory members as it deems necessary to ensure it is able to achieve its purpose. Any such co-option will be on a non-voting basis.
- 3) Remuneration for members will be paid in the form of an honorarium currently set at the following levels:
  - a. Appointed members - \$4,000 pa
  - b. Deputy Chair - \$5,000 pa
  - c. Chair - \$6,000 pa.

Staff or elected members of Territorial Authorities or the Environment Canterbury shall not be eligible for remuneration.

Mileage will be reimbursed.

## Committee Support

The Committee shall be supported staff from the Territorial Councils and Environment Canterbury, primarily through the Committee Secretary and the Zone Facilitator.

**Canterbury Water Management Zones: Hurunui - Waiau Zone**

This map illustrates the Hurunui and Waiau water management zones in Canterbury, New Zealand. The zones are defined by their respective water catchment areas, which are shown in different colors (green for Hurunui, yellow for Waiau). The map includes major towns, rivers, lakes, and infrastructure. Key features include:

- Towns:** Hanmer Springs, Waiau, Oltverden, Hawarden, Waikari, Waipara, and Amberley.
- Rivers:** Hurunui River, Waiau River, Waipara River, and Ashley River.
- Lakes:** Lake Sumner and Lake Hurunui.
- Infrastructure:** State Highways & Major Roads (red lines), Railways (black lines), and Lakes (blue areas).

An inset map in the top left corner shows the location of the Hurunui and Waiau zones within the Canterbury region. The map scale is 1:670,000 at A4, and the scale bar indicates distances up to 20 km. The map is sourced from the Environment Canterbury Regional District.