

KAIKŌURA WATER ZONE MANAGEMENT COMMITTEE

on

WEDNESDAY 05 DECEMBER 2018

TO BE HELD AT THE

DISTRICT COUNCIL CHAMBERS

2^{ND} FLOOR

96 WEST END, KAIKŌURA

AT 12:30PM





KAIKŌURA WATER ZONE COMMITTEE

MEETING

Date: Wednesday, 5 December 2018

Time: **12.30 – 4pm**

Venue: The District Council Chambers, 2nd Floor, 96 West End, Kaikōura

TIMETABLE & ORDER OF BUSINESS

	12pm	Lunch	
		Open – Karakia	
1	12.30	Committee check-in & Order of business	Chair – T Howard
		 Apologies Announced urgent business Confirmation of previous meeting minutes Te Reo practice 	
2	12.50pm	Opportunity for the public to speak	Chair – T Howard
3	1pm	Kaikōura Zone Delivery – quarterly update	C Armour / K Heays
		An update on the current priorities of the ECan Zone Delivery including the Lyell/Waikōau catchment recovery plan will be provided, along with the infographic developed in support of this project.	
4	1.30pm	Bridge Project – Update	I Whitehouse
		This update will focus on progress with the BRIDGE project	
5	2pm	Omnibus Plan Change – Update	M Griffin
		This update will focus 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.	
6	2.20pm	Fit for Future Project – Update	M Griffin
		The purpose of this update is to enable Zone Committees to provide input into the Fit for the Future Canterbury Water Management Strategy (CWMS) project.	
	3pm	Afternoon Tea	
7	3.15pm	Committee Updates	T Howard / M Griffin
		A series of short updates for the committee following on from previous meetings and briefings, including an opportunity for the committee to review their draft 2018 annual report.	
8	3.55	General Business	T Howard
	4pm	Close – Karakia	

KAIKŌURA WATER ZONE COMMITTEE

	Karakia	
OPENING KARAKIA (one)	E Te Atua Tiakina teora Manaakitia mai te oranui Homai he kakano kiatipu ake ai Tiakina teora E Te Atua Amene	O Lord Guard our wellbeing Bless us Give us a seed so that it may grow Guide and protect us O Lord Amen
OPENING KARAKIA (two)	E Te Atua Manaakitia mai mātou E kimi nei i tenei taonga mo te hapori o Kaikōura Amene	O Lord Bless us Seeking this treasure For the community of Kaikōura Amen
CLOSING KARAKIA	Kia a tau kia tatou katoa, te atawhai o to tatou Ariki a Ihu Karaiti Me te aroha o te Atua Me te whiwhinga tahitanga ki te wairua tapu Ake ake ake Amene	Let it be with us all The grace of our Lord Jesus Christ The love of God The fellowship Of the Holy Spirt Forever more Amen
KAI KARAKIA	E te Atua Whakapainga ēnei kai Hei oranga mō ō mātou tinana Whāngaia hoki ō mātou wairua ki te taro o te ora Ko Ihu Karaiti tō mātou Ariki Ake ake ake, Amene	Lord God Bless this food For the goodness of our bodies Feeding our spiritual needs also with the bread of life Jesus Christ, our Lord Forever and ever Amen

MINUTES OF THE KAIKŌURA ZONE WATER COMMITTEE MEETING HELD AT 12.30PM ON WEDNESDAY 7 NOVEMBER 2018 AT COUNCIL CHAMBERS, 96 WEST END, KAIKŌURA.

- **PRESENT:** T Howard (Chair), G Solomon, N McArthur, R Roche, Councillor S Lowndes, A Boyd, J Murray, T Blunt (late), Councillor C Harnett (late)
- **IN ATTENDANCE:** M Griffin, C Armour, K Heays, S Litchwark, A Moore (Kaikoura Star Reporter)
- APOLOGIES: N Dommisse, T Sonal, Councillor C Harnett (lateness).

Moved by R Roche, seconded by N McArthur and resolved that apologies be accepted.

KARAKIA

1. URGENT BUSINESS No urgent business.

CONFIRMATION OF MINUTES 3 OCTOBER 2018

Moved by G Solomon, seconded N McArthur and resolved that the minutes of the Kaikōura Zone Water Committee meeting held on 3 October 2018 be confirmed a true and accurate record.

TE REO PRACTICE

Te Reo practice was deferred. G Solomon to arrange a practice activity for the next meeting.

2. OPPORTUNITY FOR PUBLIC TO SPEAK

No members of the public took up this opportunity.

3. LYELL/WAIKŌAU CATCHMENT RECOVERY ACTION

C Armour and K Heays updated the committee on the progress with the current projects in the Lyell Creek Catchment including three wetlands and the lower Lyell enhancements. All projects are progressing with landowner discussions and engaging contractors.

The draft newsletter illustrating the Lyell/Waikōau catchment recovery programme was discussed. G Solomon requested "Ko au ko Waikōau" be included with the Love the Lyell logo, along with a bigger box on mahinga kai on the centre pages, and the Water Zone Committee banner. G Solomon would like these changes included in the draft newsletter before being taken to the Rūnanga.

S Lowndes asked if there were any plans for planting the area at the end of the foot bridge beside the beach to enhance the area, given it is so popular with visitors. N McArthur mentioned she recently saw a motorbike along the track. G Solomon noted Te Korowai is writing to KDC regarding the need for a beach access management plan. N McArthur suggested the Kaikoura Water Zone Committee also write a letter to KDC regarding the need for a beach management plan, M Griffin to draft copy to bring to the next meeting.

N McArthur asked for clarification on Environment Canterbury's jurisdiction. K Heays clarified ECan's jurisdiction goes out 12 nautical miles from the mean high tide.

The committee discussed using the Lyell Creek newsletter content in the zone committee's Spring newsletter.

Moved by S Lowndes, seconded J Murray and resolved that the Lyell Creek newsletter content be included in the KWZC Spring newsletter subject to G Solomon's suggestions and Rūnanga input.

T Blunt arrived 12.54pm.

4. IMMEDIATE STEPS KAIKOURA

Prior to reviewing the new application for consideration M Griffin noted the email voting which occurred since the November zone committee meeting to approve adjustments to two Immediate Steps projects already funded:

- a. Birchwood and Okarahia Downs QE11 covenant (revised project budget of 25,670), and
- b. Waiau Toa / Clarence River catchment weed control (revised project budget \$43,500).

The Zone Committee again confirmed its approval of the budget adjustments.

The Lynton Downs Gully Restoration Stage Two project was talked through. The first stage was approved by the Committee in 2014 for fencing a gully, weed control work and planting. Stage two of this project will provide funding for more weed control and planting in the gully. This project received positive comments from the committee and was suggested as a potential location for a committee field trip.

Moved by J Murray, seconded by R Roche and resolved that the funding be approved for the Lynton Downes Gully Restoration Stage Two Immediate Steps Project.

G Solomon is worried about not having a replacement Biodiversity Officer since J Hill left, K Heays outlined J Hill's role was not going to be replaced, however, there is going to be someone on a 12-month contract starting soon to assist with the Lyell/Waikōau catchment recovery programme.

S Litchwark outlined the braided river bird survey, which IMS helped fund. The survey was conducted the previous weekend and was very successful. M Griffin requested if a report on the survey findings could be made available for the committee. S Litchwark confirmed this would happen once the report was completed. He added, some of the

rivers had not been surveyed since 1990 and some have never been surveyed properly, so this survey is very valuable information.

5. ANNUAL REPORT

The committee were shown the template for the 2018 Water Zone Committee Annual Report and discussed what they would like to see included in the report. G Solomon would like to see positive stories on the community recovery after the earthquakes, a celebration of what has been achieved, giving an energised and positive start to the new year.

S Lowndes suggested a breakdown of the support the committee has had from different places.

T Blunt suggested one of the key articles should be on the MPI funded Kaikoura Plains Recovery Project. This project was started by ECan staff working with the local community, especially members of the zone committee's nutrient management working group. He added D Bedford originally advocated for ECan funding that would have been spent on writing plans be spent instead on actions on-the-ground in the zone, which is a new approach and breaking new ground. T Blunt also noted relationships between ECan and farmers are more positive now, with farmers appreciative of the supportive approach from ECan staff post the earthquakes. He concluded by noting KDC and ECan councillors met recently. The ECan councillors commented that Kaikōura WZC is doing things differently to the other zones and it is working well. T Butterfield thought this could be a feature story.

G Solomon also wanted to thank the ECan staff, especially the locals as they have worked hard while also facing their own earthquake issues.

Suggestions from the committee on the content:

• Chair Contribution – including a reference to the committee embracing te reo and cultural values

Key achievements:

- IMS project Lambs using MPI option 2 fund for ecological restoration plan
- Zone working with key partners the MPI funded Kaikoura Plains Recovery Project
- Zone on the ground story Lyell Clean-up day

6. COMMITTEE UPDATES

CWMS Regional Committee – T Howard outlined his report which was included in the agenda papers.

Councillor C Harnett arrived 1.50pm.

M Griffin confirmed the Zone Committee refresh has now been finalised with the reports to KDC and ECan now being prepared. He added the 'refreshed' zone committee will have its first meeting in February 2019.

M Griffin introduced the new 'Reporting back' feature of the ECan website, which provides a single location for updates on how ECan is doing on a range of targets. He added the intention is to develop this feature in a similar way to the LAWA website in providing a central location for ECan reporting against CWMS targets.

Zone Delivery – K Heays outlined the focus has been the Lyell Projects and a significant wetland on Old Beach Road working with QEII to enhance. Once these are more progressed K Heays would like to arrange field trips to these sites.

K Heays outlined the scheme Helping on Holiday which is being led by KDC and other organisations (ECan, I-site, DOC) co-ordinating volunteer opportunities for people here on holiday with time to spare and put towards various projects. R Roche noted they did something similar with Toms track. R Roche also noted there might be people interested in assisting with various projects from NCTIR.

Three Waters – J Murray questioned why the East Coast supply is on a boil water notice; how often the water is tested; where it is tested; what the criteria are; and how is the testing paid for? He noted that this scheme started off as stock water. The committee would like to have someone from KDC at the next meeting to answer some of these questions and provide more details. Even if someone can't attend perhaps additional written information can be provided. M Griffin will follow up on this.

G Solomon would like to have a zone committee work programme for 2019 so each meeting has a focus within the programme.

Moved by S Lowndes, seconded by R Roche and resolved the committee updates be accepted.

There being no further business the meeting closed at 2.37pm.

AGENDA ITEM NO: 3	SUBJECT: Zone Delivery Team – Quarterly Update	
REPORT TO: Kaikōura Water Zone Committee DATE OF MEETING: 5 December 201		DATE OF MEETING: 5 December 2018
REPORT BY: Kevin Heays, Zone Delivery Manager – Kaikōura		

UPDATE

The Kaikōura Zone Delivery Team, which has now been operating since April 2015, was the first Zone Delivery Teams to be established in Canterbury to support the region's 10 zone committees.

The Kaikoura Zone Delivery Team are:

- Kevin Heays Kaikoura Zone Delivery Manager
- Chloe Armour Land Management Advisor, Kaikoura
- Makarini Rupene Cultural Land Management Advisor, Kaikoura
- **Robin Hubbard**, Resource Management Officer Monitoring and Compliance, Kaikōura and Hurunui/Waiau
- Introducing ... Heath Melville, Zone Delivery Officer

Kaikōura 5 Year Outcomes 2015 - 2020

The Kaikōura Water Zone Committee adopted a set of 5 year outcomes and milestones at its April 2015 meeting. These outcomes and milestones are used as the primary focus of the work programme for the Zone Delivery Team.

The Zone Committee 'refreshed' these outcomes from May-June 2018, with the Zone Delivery Team adapting its priority setting accordingly.

Progress against the committee's 5 Year Outcomes and Milestones

- The Zone Delivery Team will provide an overview of their priorities and achievements over the last quarter of 2018.

RECOMMENDATION

That the Water Zone Committee receive this Zone Delivery Team update for their information, and with consideration to the committee's 2019 work programme priorities and refreshed 5year outcomes 2015 – 2020.

AGENDA ITEM NO: 4	SUBJECT: BRIDGE Project Update	
REPORT TO: Kaikoura Water Zone Committee		DATE OF MEETING: 5 December 2018
REPORT BY: BRIDGE project team led by Tania Harris, Environment Canterbury		

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. During the discussions, 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 st 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 st 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 nd quarter 2019
Public notification of Omnibus 2019 plan change	June 2019



AGENDA ITEM NO: 5	SUBJECT: Omnibus Plan Change 2019	
REPORT TO: Kaikōura Water Zone Committee DATE OF MEETING: 5 Decem		DATE OF MEETING: 5 December 2018
REPORT BY: 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.

Торіс	Progress Update
 Braided Rivers 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. In order to ensure braided rivers are appropriately managed we are seeking to: Provide clarity on the spatial extent of the "river bed" in braided rivers; and 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. 	A detailed progress update on the braided rivers topic is outlined in a separate Zone Committee paper. 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.
Improvements to rules to address Tangata Whenua values 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.	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.
Increased protection of indigenous freshwater species and habitats 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 Canterbury is working with Department of Conservation on the development of the technical report to

Торіс	Progress Update
environment. The Omnibus 2019 plan change seeks to increase protection of indigenous freshwater species and their habitats, including critically endangered species and valuable but declining makinga kai	support this topic. We are at the stage of assessing the potential planning mechanisms.
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.	Environment Canterbury staff have met with Mahaanui Kurataiao (iwi entity) to discuss the commissioning of a cultural report for this topic.
Salmon Spawning Sites This topic assesses the addition of potential new salmon spawning sites in addition to those already listed in Schedule 17 of the LWRP.	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).
National Policy Statement for Freshwater Management updates 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.	Technical work is underway by Environment Canterbury's Science team to incorporate these changes into the LWRP. A report on defining Freshwater Management Units at a region- wide scale has been commissioned to inform the scope of any changes.
Commercial Horticultural operations 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.	Environment Canterbury is working with HortNZ and a 'commercial horticultural grower' working group to quantify the issue and develop potential planning solutions.

Торіс	Progress Update
National Environmental Standards for Plantation Forestry 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.	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. 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.
 Hinds Drains Working Party Recommendations 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: Setting a minimum flow and allocation regime for Eiffelton Irrigation Scheme Drains. Reducing the Hinds River allocation limit for environmental benefit Changing well interference criteria to better enable switching to deep groundwater New provisions for groundwater takes in a defined 'coastal strip' due to difficulties accessing deep groundwater Applying stock exclusion provisions to Main and Secondary Hinds Drains, regardless of whether there is water in these drains. 	Environment Canterbury is engaging with the Hinds Drains Working Party and the Ashburton Zone Committee on this topic. 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.
Managed Aquifer Recharge This topic will assess the environmental benefits of Managed Aquifer Recharge to assist with improvements to water quality and quantity.	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.

Stakeholder	Additional topic requested for Omnibus 2019	Councilor Feedback
Lower Waitaki South Coastal Canterbury Zone Committee	Protection of Grey Scrub (small-leaved, highly branched shrubs such as matagouri, mingimingi and olearias)	 Opportunity for Environment Canterbury to raise biodiversity concerns with TAs 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
Lower Waitaki South Coastal Canterbury Zone Committee	Water Conservation Order for Wainono Lagoon	 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
Lower Waitaki South Coastal Canterbury Zone Committee	Control of the whitebait fishery to halt declining population	 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 LWRP currently has policies and rules to protect inanga spawning habitat. 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.
Ashburton Zone Committee	Region-wide definition of 'good management practice'	 Significant resource, budget, implementation and communications implications make this a medium to long term planning goal, but not suitable for Omnibus 2019 plan change. 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
Kaikoura Zone Committee	Sediment control/management in braided river catchments in Hurunui/Waiau and Kaikōura Zones due to Kaikoura earthquakes	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

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Attachment 2: Councillor Feedback on Additional Topics Sought

Provide increased predator control

Kaikoura Zone

Committee

Implementation of the Canterbury Regional Pest Management

Plan is the most effective tool to deliver on this objective

Stakeholder	Additional topic requested for Omnibus 2019	Councilor Feedback
		 Not possible to include in Omnibus 2019 plan change (not legislated by RMA)
Regional Committee	Farm Environment Plans (LWRP Schedule 7) to include the management of indigenous biodiversity, ecosystems and habitats.	 LWRP Schedule 7: Farm Environment Plan already requires landowners to identify sites of "significant indigenous biodiversity" in their FEPs. 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
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	 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 Risk that amending Rule 5.62 so soon after Plan Change 5 LWRP is settled will distract from its implementation
Fish & Game (Central South Island and North Canterbury)	Identification of 'outstanding freshwater bodies' in LWRP.	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.
Canterbury District Health Board	Priority for water permits to take groundwater for community drinking water supplies	Any amendments to LWRP drinking water supply provisions should await the outcome of the Three Waters Review. Therefore, do not include in Omnibus 2019.
Canterbury District Health Board	Adverse effects of district heating and cooling systems on drinking water quality	Do not include in Omnibus 2019 plan change due to lack of information to support this concern (or otherwise)

AGENDA ITEM NO: 6	GENDA ITEM NO: 6 SUBJECT: CWMS Fit for the Future Project					
REPORT TO: Kaikōura V	Vater Zone Committee	DATE OF MEETING: 5 December 2018				
REPORT BY: Chris Wikstrom, Environment Canterbury						

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 <u>cwmstargets@ecan.govt.nz</u> 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 Ropū 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.

Appendix 1: Draft Goals for 2025 and 2030

Counter	ТА	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
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.	r	Protection zones
		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		
A10.3	DRI	Source water quality -Nitrates	Reduce Nitrates Levels in Groundwater			83) A demonstrable decrease in nitrate concentrations in shallow groundwater in priority areas is achieved.	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.	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.	86) Average annual nitrate levels in all groundwater wells in Canterbury are below 50% of the maximum allowable value for drinking water	Key indicator for Taskgroup 2 re-w
<u>A11</u>	DRI	Source water quality targets	Improve Drinking Water Supplies			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.	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.	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.	87) Nitrate levels in community drinking water wells are below the maximum allowable values of drinking water	Feedback focused treatment: Sourd treat drinking-wa Taskgroup 2 re-w
A13	DRI	New*	Improve Groundwater Modelling				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.	Improve monitoring and model to help anticipate and prepare for- future shocks.		Monitoring and n
		Catchment nutrient loads (Drinking Water)	Set Catchment Nutrien 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)		
A19	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	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).	Achieved nutrient efficiency targets for all zones as set out in plans.	Achieved nutrient efficiency targets for all zones as set out in plans.	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).	Feedback - link to
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	85) Understood any emerging contaminant risks and identified any at risk areas for targeted management and a remedial programme underway	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	89) Understood any emerging contaminant risks and identified any at risk areas for targeted management and a remedial programme underview	Need to consider

Some of the Feedback from Consultation
ones by themselves do not protect - need to inform and enforce.
for CWMS: linked to Environmental Limits target.
re-wrote goal so natural progression. Work needed to determine what the x% will be.
used on: Source water quality remains high enough to meet DWSNZ without ource water quality does not decline further for water supplies that currently have to
g-water: Distribution systems supply water that meet DWSNZ.
g-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable.
z-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable.
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g-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable. Ind modelling need to be done in time to help anticipate future shocks. nk to targets in plans and ZIPAs.
s-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable. nd modelling need to be done in time to help anticipate future shocks.
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e-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable. Ind modelling need to be done in time to help anticipate future shocks. nk to targets in plans and ZIPAs. ider a fuller range of potential contaminants and their impact on microflora.
e-water: Distribution systems supply water that meet DWSNZ. re-wrote goal as not deemed measurable. Ind modelling need to be done in time to help anticipate future shocks. Ind modelling need to be done in time to help anticipate future shocks. Ind modelling need to be done in time to help anticipate future shocks.

Counter	ТА	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
A23	REC	Recreation	on and Amer	nity						
A32	REC	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.	96) A positive trend in the availability and/or quality of recreational opportunities in each zone.	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 baseli
		Water based recreational opportunities	Restore Recreational Opportunities				Identify the restoration of a freshwater recreational opportunity in each zone, developing plans to achieve and	Restoration and protection of freshwater recreational opportunities in each zone, achieving and showing measurable	100) Restored at least one major fresh water recreational opportunity in each zone that was not currently available in 2010.	Some feedback
A33	REC	Water based recreational opportunities	Understand Emerging Contaminant Risks				show measurable progress Understand threats and act to reduce risk to freshwater recreational opportunities.	orogress Identify potential threats to freshwater recreational opportunities and act to reduce		Groups conside know what we recreation inclu
		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.	risk. Restoration and protection of fishing opportunities in each water management zone.	99) Restored fishing opportunities in most lowland streams in each water management zone	Groups general Need to quanti
A35	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 sp and in recreation
<u>A36</u>	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.	97) Made progress toward achieving environmental flows	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	98) Achieved all environmental flows	Environmental
A39	REC	Recreational water quality	Improve Recreational Quality		At least 80% of river bathing sites graded as suitable for contact recreation.	95) Of the lake and river sites used for contact recreation, an increase in the percentage that meet recreational water quality guidelines.	Improve on percentage of rivers and lakes being swimmable since 2020 due to consistent water quality monitoring and real-time results.	flows. Achieve the National Policy Statement for Freshwater Management target of 92 percent of rivers and 81 percent of lakes in Canterbury being swimmable by		ECan set and is
A41	REC	New: Cyanobacteria	Reduce Cyanobacteria				Develop and implement monitoring protocols to manage cyanobacteria risk for priority contact recreation sites in Canterbury rivers and lakes	2030 Achieve 10% reduction of incidents where cyanobacteria have exceeded the nationally adopted approach to managing risk in water used for contact recreational		Only national g adopting a nati
A52	FCO	Ecosyste	m Health and	d Biodiversity				nurnoses		
100		Freshwater species and their habitat	Freshwater species and habitat	Implement actions to correct the decline in freshwater species, habitat quality or ecosystems.						Broad target fo through progre
A63	ECO		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	19) An upward trend in diversity and abundance of native fish populations.	Fewer freshwater fish classified as- threatened in Canterbury, compared to [20xx] Reword to: Increase in abundance of all threatened/at-risk fish species compared to 2020	Fewer freshwater fish classified as- threatened in Canterbury, compared to 2025 Reword to: Increase in abundance of all threatened/at-risk fish species compared to 2025		Rewording to n NEW 2040 Targ to 2030 by 50% Feedback sugge
A64	ECO	Lowland streams	Increase Riparian Planting			22) Increased the length of waterway with riparian management appropriate to aquatic ecosystem protection by 50% from 2010 figures.	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 6 protect aquatic ecosystems by x% from 2025 figures over time.		Riparian protec Carry over lang

Some of the Feedback from Consultation
e information to understand trends. Note: No target set for 2040
-
as that one major restoration in each zone by 2040 was unambitious
ed the concept of emerging contaminant risk was not well understood - we don't
lon't know. This target was specifically to identify contaminants related to
ding didymo and cyanobacteria. No targets set for 2020 or 2040.
y considered 2040 to be too far away for recreational opportunities to be restored.
y this target for 2025 and 2030 to stretch for 2040
cific focus on Lowland streams given their importance and recent decline in health
nal opportunities
lows support recreational flows?
committed to NPS-FM regional targets.
idelines currently exist, guidelines are not mandatory, govt is working towards nally unified approach to managing cyanobacteria
,
2010. This target should carry through for all species should not just be measured
s in exolic and harve fish species.
ake targets positive
et proposed: Increase in abundance of all threatened/at-risk fish species compared
sts separation of targets for native fish and for exotics
age or riparian management <u>appropriate</u> to aquatic ecosystem protection

Counter	ТА	π	Intent							
		(Themes from 2017 & 2015 Targets Reports)	(The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
		Wetlands	Protect Wetlands	Prevent further loss of area of naturally occurring wetlands.	Protected all and restored at least two significant wetlands in each zone.	20) Protected all existing wetlands.		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	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	100% not realistic Need to different these are protect
A66	ECO							and/or are in the process of being restored to a self-sustaining system. 10% of former or new wetland sites being restored.	former or new wetland sites restored.	New 2040 Target wetlands.
460	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.	21) A significant protection and restoration programme is in place on the most ecologically significant river mouth or coastal lagoon in each management zone.	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	26) Examples of thriving coastal lagoons, and lowland or spring-fed ecosystems in each water management zone.	
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.	17) Improved condition and water guality in at least 60% of lowland streams and 60% of lowland lakes in each zone.	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.	28) 100% of lowland and spring-fed streams with at least good aquatic ecosystem health or showing an upward trend.	Consistency of wo 100% not realistic Proposed new 20 lowland streams a
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.	18) All foothill rivers and high country rivers and/or lakes either in good ecological health or better, or showing upward trend.	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.	30) Maintained upland spring-fed streams and lakes in very good aquatic ecosystem health (no decline from 2010).	Round 2: 2025 an
A74	ECO	High country and foothill streams	Improve Foothill River Health						29) 80% of other rivers/streams and lakes with very good aquatic ecosystem health.	This 2040 target is Analysts task to d
A74		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		ADDITION THE AND THE ADDITION T
A/6	ECO	Catchment nutrient loads (Ecosystem Health/Biodivers ity)	Set and Meet Good Management Practice			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).	Also covered in Environmental Limits	Also covered in Environmental Limits	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).	health of drvlands Even though these target reinforces t
		Environmental flows (Ecosystem Health/Biodivers	Set and Meet Good Management Practice			24) Made progress towards achieving environmental flow and catchment load limits.	Also covered in Environmental Limits	Also covered in Environmental Limits	25) Achieved all environmental flow and catchment load limits.	Even though these target reinforces
A81 A82	ECO	ity) 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	32) Understood any emerging contaminant risks and identified any at-risk areas for targeted management.	Even though these target reinforces
A84	BRA	Natural C	Character of	Braided Rivers						
A85	RPA	Ecosystems, habitats and species	Protect Braided River Habitats			42) Protected significant habitat for a full range of indigenous braided river flora and fauna.	Identify significant habitat for indigenous braided river flora and fauna	Protect significant habitat for indigenous braided river flora and fauna		Round 2: Protecti What does signifie
A85	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.	43) Protected and enhanced the habitats in riparian wetlands, springs and the lagoons associated with braided rivers.	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	47) All indigenous braided river- dependent species are showing positive trends in abundance and health.	Groups comment Canterbury. Roun new goal: Any ecc 2020. 2030 40% ir
A87	BRA	Environmental flows (Braided River)	Set and Meet Ecological Flows			44) Made progress towards achieving environmental flows.	Also covered in Environmental Limits	Also covered in Environmental Limits	45) Achieved all environmental flows.	Even though these target reinforces we meaning ecolo are incacted and o
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 weeds/predation,

istic Round 2: We've already lost 90% of existing wetlands.

rentiate between existing wetlands of which there is very little left (so even if 100% of tected it is still very little) and new wetlands/restored wetlands.

get prposed: Land use activities do not compromise the ecosystem health of

of wording with A73, A76 listic Round 2: 2025 and 2030 goals don't link with 2040 goals

v 2040 Target : New: Land use activities do not compromise the ecosystem health of ms and lakes.

and 2030 goals don't link with 2040 goals

get is directly related to A73

to do: Need to develop appropriate interim targets for 2025 and 2030 and set <u>% with referecne to current trend and expectations</u> arget through; model wording of A73

s of dryland remnants:

t. New Target suggested was: Land use activities do not compromise the ecosystem

these are reported in ENV LIMITS its important that they stay reported here also. This rces the need to set limits "for Ecosystems"

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ection includes pest control? Significant habitat should include abundance, range nificant habitat as a measure mean? How is it measured?

nented on the number of programmes other than those run by Environment Round 2: 2025 goal is broader than just wetlands. Goal 2030 is too technical. Suggested y ecosystem listed as uncommon that their status improve2025 20% increase from 0% increase from 2025.

these are reported in ENV LIMITS its important that they stay reported here also. This ces the need to set limits "for Ecosystems" Round 2: Confusion around wording; are ecological or environmental flows? Suggested change to 2020- Environmental Flows and consents are reviewed. 025 target; clarify BRIDGE; flow, room to meander/move, deal with invasive

J25 target; clarify BRIDGE; flow, room to meander/move, deal with invasive tion, 4WDs

Counter	ТА	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
489	BRA	None yet defined	Increase Braided River Bird Habitats				Halt?	Double the area(of BR bird species)	48) Increase habitat area usable by all species of braided river	Some mapping
A90	BRA	None yet defined							indigenous biras.	
A91	BRA	None yet defined	Protect Braided River Habitats			Canterbury's braided rivers show the dynamic, braided nature typical of such rivers.	All resource management decisions concerning braided river systems recognise and provide for ki uta ki tai.		46) Canterbury's braided rivers show the dynamic, braided nature typical of such rivers.	There are a nu abstraction. Fo additional targ around "no riv excellent- pull
A06		Environn	nental Limits							
<u>A96</u>	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.	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	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	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.	- There is large met, the know Can this be ref - Consent was leading to lack is important th
A104	ENV	None yet defined	Set Urban Catchment Loads				Establish catchment loads for urban contaminants and other rural contaminants.	Water quantity allocation limits are achieved.		- Support for a A104? That is, communities a
A105	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.	157) Established and begun to implement a programme to review existing consents where such review is necessary in order to achieve catchment load limits		Progress against implementation plans is reported annually and implementation plans are reviewed alongside reviews of environmental flows and catchment load limits.	159) Environmental flow and catchment load limits achieved in all waterbodies.	 - Is it realistic t constant cycle - General comr doing as part o
A106	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 quest community gro
A100.1		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 sup not a target to implementatio - Focusing on r open and delet - the difference
A107	ENV	None yet defined					Developed and implemented a method for annual reporting on progress toward achieving environmental flow and catchment	Reporting annually on progress toward achieving environmental flow and catchment load limits.		- There was su deleted from t - this will need - this is detaile
A108 A109	ENV	None yet defined	New: Adopting new technology				Inad limits Plan provisions enable rather than restrict the uptake of new technology that contributes to achieving environmental limits. [Note 3]	Technological innovations are widely communicated and support is available for their uptake and ongoing use.		 similar to abc communication A general targ disseminating
A119	KAI	Kaitiakita	anga							
A128	KAI	Marae Water su	pply	Drovont further dealing in the		71) All marge and associated	Drovont further dealing in the	All margo and accordents d		Maintain - f.
A129	KAI	supply	Water Supply	quality or quantity of water bodies used as a drinking water supply to marae and associated papakāinga.		papakäinga have access to high guality drinking water	quality or quantity of water bodies used as a drinking water supply to marae and associated papakäinga	papakäinga have access to high quality drinking water (repeat of 2020 targets)		iviairitain a toci
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 s supplied/netw
A131	KAI	None yet defined					New: Drinking water from community and private wells are XX % below 11.3 mg/l			This may be co Standards for I equivalent to 1
A132	KAI	Working togethe None yet defined	er in partnership Integrate kaitiakitanga	Formally recognise Te Rūnanga o Ngāi Tahu Freshwater Policy and, in each zone, work towards resolving issues related to Ngāi	Protocols for the recognition and exercise of mana, including kaitiakitanga within the Ngãi Tahu rohe, are implemented.		An integrated Te Rūnanga O Ngai Tahu/papatipu rūnanga reporting mechanism is developed.		75) Kaitiakitanga is a normalised and an integrated practice of water management	

g of these ecosystems has begun

umber of characteristics of Braided rivers that are under threat from land use and eed Round 2: target 2025 should include prioritise or support and include an get no barriers to fish passage from source to sea. 2030 target should include one ver mouth sedimentation/clogging due to water abstraction? 2010 targets are back in and in to 2040. Show up again as interim

e variability between catchments across the region, in the extent to which targets are vledge of the water systems and the complexity of the hydrology and infrastructure. flected somehow in the targets?

expressed that constant reviews can be seen as constantly shifting the goal posts, s of community buy-in to achieving the targets. If reviews are to be done regularly, it hat the community understand and support the reasons for any changes.

In increased focus on urban waterways, but is this something that is covered by we now have information that suggests urban waterways are lagging behind rural and that reviews should address this. Should this target be deleted?

to set targets for 100% achievement of environmental limits if the limits are in a of review?

ments were made in relation to A106 and A106.1 that these should be what Ecan is of its core business. Why do they need to be recorded in targets?

tioned how achievement against these will be measured. They would like to see oups empowered to do more.

pport for the developing a real time monitoring and reporting framework but this is deliver change. They recommended it be deleted and recorded as an on method.

real time monitoring may not reflect future technological advances - best to keep this te

e between knowledge and reporting varies significantly between schemes and

pport for this but, similar to A107, this is too detailed for a target. It should be he targets. Too much detail detracts from the main outcomes being sought. It o be communicated to urban and rural communities.

d implementation and should be deleted

ove, this shouldn't be a target as plans should be doing this anyway and n should be a no-brainer.

get was suggested by several groups that focusses on communicating and information.

us on protecting source water quality

says "supply" the intent here is for "source" as it is referring to potable water, not orked water

overed in Drinking Water Targets. Percentage to be worked on. Drinking Water New Zealand set a Maximum Acceptable Level (MAV) of 50mg/L for nitrate, which is 11.3mg/l nitrate-nitrogen.

Counte	ТА	(Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
		Working together in	Planning Regime Reflects Ki uta ki tai		Iwi Management Plans are in place for north and mid Canterbury. A	e 70) Integrated Ki Uta Ki Tai environmental management philosophics into sonal and coriona	An integrated ki uta ki tai strategic plan is developed for identified	New: Iwi Management Plans are refreshed and responded to.		An integrated plan and the n
A134	KΔI	partnership			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.	management planning	agreed actions for all participants			lwi manageme account when
Δ135	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 ne borrowed from
		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.	69) Further co-governance arrangements (developed in partnership by Ngãi Tahu, the Crown and Canterbury local government) for the active management of nominated waterbodies in North and South	Staged implementation of arrangements agreed by 2020	Staged implementation of arrangements agreed by 2020		Because the 20 that 2025 and 2
A136	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	Castachust 72) At least one Ngãi Tahu tangata tiakiwai is appointed in each zone [Note 2]	Papatipu Rūnanga are decision- makers for the allocation of "Ngāi Tahu" water in catchments	At least one Ngãi Tahu tangata tiakiwai is appointed in each zone		There is a clear ensure there is mana is attach
A137	KAI KAI	Wāhi Taonga an	d mahinga kai		established.					
A130		None yet defined	Protect Waterways for Mahinga Kai	Prevent further loss or degradation of Ngãi Tahu nominated wāhi taonga.	All degraded wähi 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 Ngãi Tahu cultural practices.	X (+10) % of crown and council owned lands foster & support Ngãi Tahu cultural practices. Monitoring is in place to demonstrate the effectiveness of restoration programmes and refreshed limit	74) Protection, in accordance with Ngãi Tahu values and practices, of wāhi taonga and mahinga kai waterways	The 2025 and 2
A139	KAI							setting/planning provisions		
		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 mätauranga informed report is provided for rünanga on the health of waterways to inform water management decision- making (by coupcils and Msäi Tabu)	Outcomes reporting is being informed by Mātauranga Maori Report		Need to establ regular repeata
A140	KAI									
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	Ail freshwater mataitai are healthy places to gather kai.		(Feasibility of "
A142	KAL	Please input Reporting Theme from			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 Reserve degradation of Torotoroa, Te Tahu Ancillary
A142	KAI	Please input Reporting Theme from 2017 Report	Improve Decision Making for Allocations				Papatipu Rünanga are decision makers for allocations of Ngai Tahu water in each catchment			Feedback sugg along with cap
		Wāhi taonga and mahinga kai	Increase Opportunities for Mahinga Kai			68) Increased the abundance of, access to and use of mahinga kai	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: Nee wide plan for M https://ngaitah
A144	KAI					72) A. L. L. C. L. I	C 10 1 C 1 11			control/mahing
A145	KAI	Wahi taonga and mahinga kai	Reaches for Mahinga Kai		Work and research has commenced on establishing a mahinga kai food gathering standard.	<u>I A maninga kai tood gathering</u> standard is confirmed and implemented as a water quality monitoring tool	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]	Maninga kai is available in abundance and quality		https://ngaitah control/mahing
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 monitoring sys
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 fo planning frame

Some of the Feedback from Consultation
Ki uta ki tai plan has been proposed. How does this add to exiting Iwi Management eed to integrate philosophies into planning frameworks?
ent plans are used by iwi/hapū to express kaitiakitanga and must be taken into preparing or changing regional policy statements and regional and district plans.
needs development - there are a number of leadership programmes that could be n.
020 target already outlines further co-Governance arrangements GWG determined 2030 targets should focus on staged implementation of the 2020 arrangements
r 2020 target for the role of tangata tiaki to be established. There is work to do to s a shared understanding of role, the appropriate resourcing and ensure sufficient to the position.
2030 targets draw on the already established 2040 target.
lished the practices/methodology of matauranga maori, the standards and also able monitoring and reporting to be able to show trend and inform action
"all" in 2030 was questioned by the GWG 06 Sep 2018)
res were awarded by Judge Fenton following the 1868; over time there has been f the 'Fenton' fisheries easements. Fenton Reserves means the Taerutu, Waimaiaia, Aka Aka, Pukatahi and TeHouriri reserves (claims 3 to 6, and 10 as set out in the Ngai Claims Report 1995);
gested that there are governance and resourcing issues that need to be discussed vability and capacity are issues
ed to ensure customary use is affirmed as a first order priority Suggested the region Mahinga Kai be a 2025 target.
hu.iwi.nz/ngai-tahu/the-settlement/settlement-offer/cultural-redress/ownership-and ga-kai/
ina.iwi.i.z/ngai-tanu/the-settlement/settlement-oner/cultural-redress/ownership-and iga-kai/
or Tikanga Maori and Mātauranga Maori - are recognised and integrated into the stems

or Tikanga Maori and Mātauranga Maori - are recognised and integrated into eworks, workplans and monitoring systems

C	Counter	ТА	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
A	148	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 t monitoring nati Targets
A	149	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
	152	IRR	Irrigated	Land Area							
4	162	IRR	Infrastructu	ıre	Analysts suggest having distinct targets for 1) Land Area and 2) Reliability						
			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	119) Started construction of regional storage and [improved reliability of supply for at least 50% of irrigated land]	Construction of regional <u>centralised</u> infrastructure for storage and distribution of water that provides reliable water to all irrigated land and [improved reliability of supply for at least 80% of irrigated land]	Construction of regional <u>centralised</u> infrastructure for storage and distribution of water that provides reliable water to all irrigated land and [improved reliability of supply- for at least 80% of irrigated land]	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 integrated region infrastructure, lelements of the component. This target shou integrated solut to reach viabilit Task groups dis
4	168	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 t funding infrastr Support from C and ensuring m schemes. Feedback sugge securing invest intergeneration
	1166	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 e facilitates effici meet all targets The figure of 80 This is best align protection and
A	170	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	120) Started construction of infrastructure identified in zonal implementation programmes.	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 feedba climate change was also an issu
A	171	IRR	Reliability								
A	172	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 (Part of A168 and A164 above)	Should indicative targets be set for irrigated land area for 2025 and 2030 that step towards this 2040 target?	Should indicative targets be set for irrigated land area for 2025 and 2030 that step towards this 2040 target?	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	Groups and fee across the strat area of land. be considered fund Reliability depe use improves of The indicative t commitment to

this target was more about monitoring effectiveness. A separate target for tive fish species should be kept in - Not merged with Ecosystem Health or Recreation

loss due to decline in opportunity

2025 and 2030 targets extend the existing 2015 target which anticipated a (fully) ional solution to water infrastructure. We do have a regional model for based on a approach to facilitate thinking around nodes of activity that deliver on all e strategy. And, there is a significant emerging environmental infrastructure

buld remain as task groups' feedback was that we still need to pursue strategic utions, particularly given that significant proposals are struggling for various reasons ity and the uncertainly surrounding the impact of climate change.

sussed the need to have a integrated regional approach.

the 2015 target - which recognises the challenges of raising capital from users to cructure that provides intergenerational benefits and serve multiple uses.

Central Govt has been key in overcoming the collective investments funding issues nultiple use options are considered. Nitrogen limits have also impact on viability of

sests that funding is still a strategic issue that needs to be resolved. The difficulties in tment for new water in particular are well-known. Investment in water storage is an nal challenge but is often decided upon based on shorter term horizons.

extend the existing 2015 target. "....infrastructure or consent reconfiguration that ciency improvements...". Need to be considered in the context of reliable water to ts.

0% in 2030 consent reconfiguration needs to be checked

gned to Strategic Option C (CSWS III) - "reconfigure consents and infrastructure for I repair of the environment, improved reliability of supply and for development "

back has been in integrated infrastructure concepts that serve all targets, consider e impacts, and regional in approach. The limitation of current funding mechanisms sue.

edback suggests targets for irrigated area while contentious are needed for balance stegy. And that we need a better understanding of the current % reliability across % lefore commiting to % targets in 2025 and 2030 Improvement of reliability is indamental ("more important that irrigated area").

ends on supply, demand and efficient use and timing of availability. Efficient water options for nutrient management.

target of 850,000 hectares seems ambitious given recent challenges in securing o irrigation schemes and withdrawal of funding support from Central Government.

Counter	ТА	TT (Themes from 2017 & 2015 Targets Reports)	Intent (The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
		Reliability	Develop Storage for Irrigation Reliability				Integrated Infrastructure system provides ¥95% reliability to ¥25% 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 ¥95% reliability to ¥75% of irrigated land area while also ensuring all target area water uses (environmental (incl. MAR, drinking water, kaitiakitanga) are met as per CWMS priorities.	122) Improved reliability of supply for all irrigated land.	Before agreeing that comes from Related to A166 % land are at or reliability.
										climate change
A173	IRR									infrastructure s target area wat CWMS prioritie
		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.		Struck out the 2 High Value Prog gaining farmer irrigated area to application of w Feedback sugge CWMS - was su element in driv
A175	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.		Sector brand re Again feedback the CWMS
A1//	IRR	Water Us	e Efficiency					-		
A178	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		The Industry-ag FEP Audit proce require access t
A179	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	106) 80% of water used for irrigation and stockwater is operating according to best practice water use	BestGood Management Practice: 100% of water used for irrigation and stockwater is operating according to best practice water use	BestGood Management Practice: 100% of water used for irrigation and stockwater is operating according to water use Good Management Practices.	109) Implemented best practice water use on all irrigation, stockwater and industrial/commercial use in Canterbury	This target exter the 2020 target and the need to Because the FE
A182	WUE									uata best of go
		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	10/) Reduced water used for community water supply by 10% (measured in litres per person for day) compared to that used in 2010	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.	112) Reduced water used for community water supply by 20% (measured in litres per person per day) compared to that used in 2010.	Benchmarks for benchmarks for for urban water Need to check
A184	WHE	General (Water Use Efficiency)	Increase Value Benefits from Water Use			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.	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.	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.	2010 baseline This target requ Access to basic use requires ac Need to check to baseline.
		Energy Se	curity and F	fficiency						
A188	ENE	Efficiency	Ontimise Energy Lise	inclency		127) Increased the productivity per	Measured and reported on	Increased the productivity per unit		Difficult to mea
		спостсу	via Improved Scheduling			unit of electricity – per hectare consumption for irrigation sector and equivalent measures in other	productivity per unit of energy.	of energy by X from 2025 (downward trend in energy use per hectare).		would be meas
						sectors.				electiviy in 2010 Feedback from
A196	ENE									suggested takir

ng to 95% reliability need to know what this means across Canterbury – how much of om additional supply, scheduling, efficiency gains and storage/capacity.

58 - Infrastructure is focused on providing reliability. The targets for % reliability on odds within A168 and need to be agreed with reference to current understanding of

standing of reliability needs to be qualified by our understanding of the impact of e in terms of reliable flows (supply) and evapotranspiration (demand).

ure targets were set for 2040. A new target was suggested for 2040: that system provides 95% reliability to 100% of irrigated land area while also ensuring all ater uses (environmental (incl. MAR, drinking water, kaitiakitanga) are met as per les.

2020 targets as we are focused only on 2025 and 2030.

oduction was discussed as an option to consider given 1) the challenge faced in r commitment to new irrigation schemes and 2) a desire to steer away from an target to a target and set a target with a focus on higher value production from the water.

gests limited support for High Value and Sustainable Land Use Targets here or in the uggested by Task Group that "By 2030, access to reliable water is a foundational ving increasingly higher value production options for the primary sector; Primary recognition is tied to suitable production – especially in the use of water

suggests limited support for High Value and Sustainable Land Use Targets here or in

agreed GMPs do include practices relating to irrigation and water use. The FEP and cess only reports grade levels A through D. Specific metrics for water use will s to better information on farm type and actual use.

n groups was that benchmarks are important to allow peers to compare progress.

ends on the 2015 target of "... 60% of water used for irrigation is at best practice" and et which continues this theme on best practice. Some concern about this 100% target to refer to GMP not 'Best Practice'.

EP Audit process only reports a summary grade; level A through D, access to specific ood practices in water use will be required to adequately report on this goal.

r irrigation are covered in A179. Territorial Authorities need to set appropriate r this target. Feedback is that this level of benchmarking should already be in place r management.

that these percentage reductions are feasible and that it is possible to report the

uires a detailed level of analysis across both consumptive and non-consumptive use. c level *use by farm type* or *use by indsutry* is not easy to find. In addition, beneficial ccess to data related to production.

that these percentage gains are feasible and that it is possible to report the 2010

asure productivity per unit of electricity. More work needed to resolve how this sured.

n stakeholders focused on the summer demand for irrigation. Energy demand for L6-17 for Cantebrury peaked in mid-summer

n schemes that they are already focused on this especially lines changes. Task Group ng that a step further with scheduling demand using new technology.

С	ounter	ТА	π	Intent							
			(Themes from 2017 & 2015 Targets Reports)	(The Objective in 4-5 words)	2010	2015	2020	2025	2030	2040	
			2015 Targets Reports)								
			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.	129) Reduced the energy used per hectare for irrigation in Canterbury compared to that used in the 2010/11 season	Energy use per ongoing EECA p Schemes have i demand. Feedback from Scheduling and reliability and c There are many PV becoming cl
	107										Need to check
<u>A</u> .	197	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.	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	Develop an understanding of the electricity demand of irrigation to determine options to reduce both energy and water usage 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).	Collaborate between irrigators to reduce transmission demand and cost through better use of technology.	128) Factored efficient use of electricity in all irrigation infrastructure	Feedback from by 2020 given t was appropriat Does the 2015 How do we me Multi use optio Montalto Hight
A	199	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		131) Maintain or increase Canterbury's contribution to New Zealand's security of electricity Supply.	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). Continue to maintain or increase Canterbury's contribution to New Zealand's security of electricity supply.	Electricity use practices in water- infrastructure applications- represent good practice Continue to maintain or increase Canterbury's contribution to New Zealand's security of electricity supply.		Canterbuy's con uncertainty abo Task and sector To meet GHG o system provide generation with energy spillage an important de
A	201	ENE									

r hectare could ony be done through sampling/surveying - could be doen as part of an project.

invested in some cases (piping) to supply water at pressure to reduce electricity

n the groups was focused on the options that <u>scheduling</u> technology could provide. d therfire the levfeling of electicity load can only be anabled through improved coopertaion across users.

ny ways of achieving this also on-farm - adoption of hardware and technology; Solar cheaper.

that energy used per hectare is measureable and that reductions for 2040 are n task group was that it was difficult to see how the 40-45% target could be achived the changing market conditions for investment in electicity generation and whether it the for this to focus on the irrigation sector alone.

target still stand, is it realistic?

easure the demand from irrigation?

ons - are they still viable? We have co-use through CPW and Rakaia 'Scheme', bank. What are the realistic options or future scenarios?

ontribution to the natrional energy picture is important. External factors and bout future supply and demand have influenced thinking from stakeholder groups. or groups have questioned - how realistic this is.

objectives and Central Government objectives for renewable energy, the hydro lake es important virtual storage for wind energy where wind operates as "must run" th hydro responding to natural fluctuations and vice versa. The degree of hydro e and/or use for irrigation is needs to balance these broader national objectives and is design objective when considering new infrastructure.

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)?
Drinking water	Alignment of regional and district plans – identify areas in plans that are barriers to CWMS targets	
	Drinking water standards – a programme to focus on private supplies; improvement programme for community supplies, including better compliance	
	Comms/education – develop guidance documents aimed at consistent regional application; turn data and monitoring into information that the community can use	
	Measuring and monitoring – develop a comprehensive groundwater monitoring programme	
	Possible contaminants - develop a watchlist	
Recreation and amenity	Measuring and monitoring – develop recreational base data (flow, quality, site) and model future trends in recreation; review science behind flow regimes and flow limits	
	Protection – identify options and priorities by zone for protection and enhancement; review consents to ensure flows are met	
Ecosystem health and	Comms/education – use social science to develop tools for behaviour change	
biodiversity	Funding – provide funding for landowners to make changes, including for land retirement	
Braided rivers	Regulation – review flow regimes, including considering use of Cawthron methodology	
	At risk ecosystems and restoration targets – identify the ecosystems at risk and critical source areas (including groundwater); identify restoration areas	
	Measuring and monitoring – improve monitoring so success against goals can be measured	
Environmental Limits	Measuring and monitoring – measure and review progress on meeting limits, and report to the community, sector groups, Ngai Tahu etc.	
	Regulation and adaptation – review limits in plans and the on-ground actions being taken to meet limits to assess their effectiveness.	
Kaitiakitanga	Marae – 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)?
	Measuring and monitoring- identify Mātauranga indicators	
	Protection zones - develop actions plans for protection zones (led by Papatipu).	
	Identify and use a generic process for actions towards goals (e.g. improved mahinga kai) with year by year action plans, lead agencies, funders, communications	
	Align work programmes with existing Tuia/Ngāi Tahu programmes	
	Comms/education – develop programme for community understanding of kaitiakitanga	
Irrigated land area and reliability	Infrastructure- need to develop regional strategic storage to improve reliability.	
	Innovation – innovation support and technology needed to allow exploration of new farm systems and alternative land use	
	Comms/education – improve irrigation scheme collaboration; develop education programme for the public, schools etc	
	Funding – need to explore new options for infrastructure	
	Measuring and monitoring – improve data and information collection and analysis	
Water use efficiency	Innovation – increase use of new technology, such as automated control systems	
	Benchmarking – allocation and efficiency measurement to drive better water use.	
	Measuring and monitoring – develop better methods for collecting and analysing water use efficiency data.	
	Regulation - new allocation models are needed.	
Energy security and efficiency	Benchmarking – better measurement to allow benchmarking of energy efficiency	
	Innovation – develop understanding of new technology	

AGENDA ITEM NO: 7	SUBJECT: Committee Updates			
REPORT TO: Kaikōura Water Zone Committee		DATE OF MEETING: 5 December 2018		
REPORT BY: Murray Griffin, CWMS Facilitator – Kaikōura				

PURPOSE

The purpose of the agenda item is to provide the committee with an overview of updates to be tabled.

COMMITTEE UPDATES

The following updates will be addressed with the committee:

• CWMS Regional Committee

No update this meeting as the **next Regional Committee meeting** will be on Tuesday 11 December.

 Link to all Regional Committee meetings and agenda papers – <u>https://ecan.govt.nz/data/document-</u> <u>library/?Search=regional+water+management+committee%2C+agenda&docu</u> <u>mentTypes=-1&pageSize=12&start=1&sortDir=desc</u>

• Communications

- 2018 Zone Committee Annual Report a draft of the Annual Report will be presented at the meeting for review.
- **Zone Committee Newsletter** an update on the newsletter will be provided at the meeting for discussion.
- The LAWA (Land, Air, Water Aotearoa) website, <u>www.lawa.org.nz</u>, is now being updated weekly on water quality in local waterways.
- Immediate Steps a short update on profiling local immediate steps projects will be provided at the meeting.

• Kaikōura Zone Delivery Team –update

- Zone Delivery quarterly update is provided at this meeting as agenda item 3.
- Zone Manager, Kevin Heays, will provide a short update any additional issues or items not covered in the quarterly update.

• 3 Waters Update – Kaikōura District Council

- A short update from the District Council on 3 waters management is being arranged for this meeting.
- 2019 Zone Committee Meeting Schedule and Work Programme
 - The Zone Committee is scheduled to meeting on the first Wednesday of each month for 2019 but will commence on 13 February 2019 because of Waitangi Day (6 February 2019).
 - The remaining meeting dates for 2019 are:
 - 6 March
 - 3 April

- 1 May
- 5 June
- 3 July
- 7 August
- 4 September
- 2 October
- 6 November* (may change pending local body elections)
- 4 December* (may change pending local body elections)
- The committee will discuss what it sees as the priorities to address in the meetings scheduled for the first half of 2019 as a lead in to building the committee's work programme for 2019.

RECOMMENDATIONS

• The Zone Committee are asked to receive these updates for their information, and with reference to the committee's 2019 work programme priorities and 5 Year Outcomes.