



# Hurunui-Waiau Zone Committee

# Agenda

**3.00pm, Monday, 19 September 2016** *Bio-diversity sub-committee workshop to commence at 12.00 – 1.00pm Public workshop to commence at 1.00 - 2.45pm* 

Community Hall, 19 Heaton Street, Rotherham

Community Partnership in Growth and Wellbeing

### **Committee Membership:**

John Faulkner (Chairperson) James McCone (Deputy Chairperson) David Bedford (Canterbury Regional Council) Mayor Winton Dalley (Hurunui District Council) Vince Daly (Hurunui District Council) James Costello Michele Hawke Ken Hughey Makarini Rupene (Te Ngāi Tūāhuriri Rūnanga) Representative to be advised (Te Rūnanga o Kaikōura) Ben Ensor Dan Shand Olmec Sinclair

### Quorum:

The quorum of the meeting consists of:

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

### 

### The purpose of local government:

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

(Local Government Act 2002 – Amendment Act 2012)

### HURUNUI – WAIAU ZONE COMMITTEE WORKSHOP & MEETING Monday, 19 September 2016 Community Hall, 19 Heaton St, Rotherham TIMETABLE & ORDER OF BUSINESS

Midday – 1.00pmBiodiversity Sub-committee1.00 – 2.45pmPublic workshop: Review Hurunui Waiau ZIP recommendations<br/>(Papers included as a separate attachment)

	3.00pm	Zone Committee Meeting commences with karakia and	
		formal order of business	
		Apologies	
		Announced urgent business	
		<ul> <li>Interests register (changes or updates)</li> </ul>	4-5
		<ul> <li>Confirmation of minutes – 15 August 2016</li> </ul>	6-17
		Matters arising.	
1	3.15pm	Update on Regional Committee	
		Winton Dalley	
2	3.20pm	Update from Zone Committee members on activities and	
		meetings attended that relate to the Committee's outcomes	
		for the zone	
3	3.30pm	Public Contribution	
4	3.35pm	Update from North Canterbury Landcare Group and any other	
		organisations wishing to speak	
5	3.40pm	Impact of AIC piping on flows and reliability of supply	18-25
		Peter Brown, Aqualinc	
6	4.00pm	Zone Committee identify what they like and what they don't	26-30
		like about the HWRRP.	
7	5.00pm	BREAK	
8	5.20pm	Proposed approach to collaborative science and technical	31-37
		briefings	
		Ian Whitehouse and Ned Norton, Environment Canterbury	
9	5.45pm	Progress on 5-year Delivery Outcomes	38-49
		Kevin Heays and Zone Team, Environment Canterbury	
10	6.10pm	Mapping area of intensive winter grazing in the zone	50-51
		Brodie Young, Environment Canterbury	
11	6.20pm	Zone Facilitator's report	52-54
		Ian Whitehouse, Environment Canterbury	
	6.30pm	Meeting concludes	

# Register of Interests for the Hurunui-Waiau Zone Committee

Committee	Interests
Member	
James Costello	<ul> <li>Farm owner – sheep in the Hurunui Catchment</li> </ul>
	Water Resource Consent to take water from the Waitohi River
	Shareholder in Hurunui Water Project
	Possibly an affected landowner by infrastructure of Hurunui Water
	Project
	Dryland Farmers Committee member
Ben Ensor	• Land owner in the coastal hills, Jed and lower Waiau catchments.
	<ul> <li>Managing director of Seaward Stock Company Ltd, comprising sheep, boof and cropping optorprises</li> </ul>
	Concert helder to take water for invigation from a stream
	Consent holder to take water for imgation from a stream     budraulically connected to the Water Diver
	Namban of the University Vision Londonne Channel Company (Devland Formany
	<ul> <li>Member of the Hurunul Walau Landcare Group (Dryland Farmers Group).</li> </ul>
John Faulkner	Dairy farm owner in the Amuri Basin.
	<ul> <li>Irrigation water supplied by Amuri Irrigation Company Ltd</li> </ul>
	(Shareholder).
	• Dairy Support block owner, consent to take water from a gallery.
	Member of the independent irrigators Group.
	Rural Real Estate Agent for Bayleys Realty Ltd.
Michele Hawke	Nil
Dan Shand	Land owner Hurunui and Waiau catchments
	Dry land farmer
	Member of the Hurunui/Waiau Landcare Group
Mayor Winton Dalley	• Register of Interests lies with the CEO of the Hurunui District Council.
Ken Hughey	<ul> <li>Professor of Environmental Management, Lincoln University (2 days per week)</li> </ul>
	Chief Science Advisor, Department of Conservation, Wellington (3
	days per week)
	Board member Waihora Ellesmere Trust
	<ul> <li>Board member Hanmer Springs Conservation Trust</li> </ul>
	Member Royal Forest and Bird Protection Society.
	Member Royal Society of NZ
	Member NZ Geographical Society.
	Occasional contract water-related research work including for
	Environment Canterbury.
Olmec Sinclair	Nil
Makarini Rupene	ТВС

James McCone	Dairy Farming businesses- Director and Shareholder		
	<ul> <li>Dry Creek Dairy Ltd- AIC Balmoral scheme</li> </ul>		
	Kinloch Dairy Ltd- AIC Waiau Scheme		
	Dairy Farm Director		
	LH Dairy Ltd- Independent irrigation consent, lease of dryland hill		
	country		
	Water management		
	Amuri Irrigation Company Director		
	<ul> <li>Committee Member Upper Waiau Independent Irrigators</li> </ul>		
	<ul> <li>Informal interest in potential emu plains irrigation</li> </ul>		
Councillor Vince	<ul> <li>Farm owner - mixed cropping and livestock farm</li> </ul>		
Daly	<ul> <li>Water resource consent to take water from unnamed lake in Jed</li> </ul>		
	catchment		
Commissioner David	<ul> <li>Register of Interests is held by Environment Canterbury.</li> </ul>		
Bedford			

# HURUNUI DISTRICT COUNCIL MINUTES

Meeting	Hurunui-Waiau Zone Committee
Date and Time	15 August 2016, 3.00pm
Venue	Waikari Hall, Princes Street, Waikari.
Members Present	John Faulkner (Chair), Mayor Winton Dalley, Commissioner David Bedford, James Costello, Councillor Vince Daly, Ben Ensor, Michele Hawke, James McCone, Makarini Rupene, Ken Hughey, Dan Shand and Olmec Sinclair.
In Attendance	<ul> <li>Environment Canterbury (ECan) – Ian Whitehouse (Zone Facilitator), Kevin Heays, Stephen Bragg, Dennis Jamieson, and Michael Bennett.</li> <li>Hurunui Water Project – Alex Adams.</li> <li>Fish and Game – Scott Pearson.</li> <li>Department of Conservation – John Benn.</li> <li>Amuri Irrigation Company – David Croft and Andrew Barton.</li> <li>Ngai Tahu Farm Enterprises – Andrew Priest.</li> <li>Fish and Game – Scott Pearson.</li> <li>Fonterra – Shaun Lissington.</li> <li>Ministry for Primary Industries – Jenny Ridgen.</li> <li>Members of the Public – David Kirkness and Sue Graham Turnbull.</li> <li>Committee Secretary – Michelle Thompson.</li> </ul>
Recording Device	A recording device was used for the accuracy of the minutes.
Karakia	Makarini Rupene lead the karakia.
Apologies	Nil.
Conflict of Interest Declarations	Nil.
Urgent Business	Brodie Young (Environment Canterbury scientist) has some information regarding satellite imagery.
Interests Register	John Faulkner to add some later.
Minutes	THAT THE MINUTES OF THE 15 JULY MEETING BE CONFIRMED SUBJECT TO THE FOLLOWING AMENDMENTS:

- Page 10, third paragraph, clarification is required from Tim Davie (Environment Canterbury).
- Page 10, last paragraph change "... good information on the flow of the Waiau ..." to read "... good information on the flow of the mouth if the Waiau..."
- Page 11, second line change Waitari to Waipara

Matter Arising	<ul> <li>Vince Daly offered to work with Environment Canterbury and landowners to resolve access difficulties for monitoring (as detailed on page 10).</li> </ul>	
	<ul> <li>The Committee asked when there will be a briefing on wilding pines. Ian Whitehouse undertook to include this in the work schedule for the Committee to determine the priority of this presentation.</li> </ul>	
	<ul> <li>Scott Pearson (Fish and Game) noted that his comments were not minuted he offered to forward his comments.</li> </ul>	
1. Update on Regional	Michele Hawke and Winton Dalley attended a meeting last Tuesday. The following points were noted regarding this meeting:	
Committee	<ul> <li>the Committee heard reports back from working groups</li> <li>the Committee heard a presentation on drinking water, high nitrate levels and the continued impact of the drought</li> <li>the Committee noted that there is monitoring of nitrate levels and an aquifer recharge programme flushing nitrates out</li> <li>the Committee are encouraging people to join the large schemes as opposed to addressing the problem of people deepening smaller wells</li> <li>Ellie McNae (Environment Canterbury) is circulating a survey about swimming and people's values for swimming in lakes</li> <li>there has been an induction for the new community representatives coming onto the Regional Committee: this provided a perspective on</li> </ul>	
	<ul> <li>where the Committee has come from</li> <li>Michele Hawke stated that some of this induction material may be of value to the zone committee.</li> </ul>	
	Winton Dalley reported that he is a member of the infrastructure group but does not attend meetings that are focussed on the southern areas.	
	Winton reported that there had been a meeting of all the zone committee chairs and deputy chairs. At the meeting it was discussed how it was difficult to get things done and have discussions at the zone committee meetings as opposed to just considering reports and receiving information.	
	Ian Whitehouse said that he can arrange meetings with other zone committees to compare how things are done and have some philosophical conversations and talk about unintentional consequences.	
2. Update from Zone Committee	The Zone Committee Members provided an update on activities and meetings attended that relate to the Committee's outcomes for the zone.	
Members	John Faulkner reported that he had attended an Emu Plains Scheme meeting. He noted that there was an overall acceptance of the scheme development and an attitude of wanting to move forward. He added that there is of course a lot of work that needs to happen.	
	James McCone reported that the Upper Waiau Independent Irrigators are now an incorporated society and have surveyed the landowners asking them how much water storage they want.	
	Michele Hawke reported that Jessica Hill (Environment Canterbury), Danny Kimber (Department of Conservation), David Bedford (Commissioner Environment Canterbury, David Hislop and herself visited sites within the	

		zone with a view to improved Immediate Steps (IS) programme focus.		
		Michelle Hawke reported that Kanuka Reserve has some very good wetlands and they found some encouraging opportunities and potential corridors for mountain to the sea IS projects. She added that there were some long term strategy opportunities identified.		
		David Bedford reported that Danny Kimber (Department of Conservation (DOC)) is enthusiastic about a one hectare piece of LINZ land that has huge potential for DOC. This land has been identified as special because it has never been cultivated. He stated that there are some very exciting projects out there that need to be identified and progressed with improved trust between landowners and the Crown.		
3.	General Public Contribution	Nil		
4. Update from Ben Ensor reported that:		Ben Ensor reported that:		
	North Canterbury Landcare Group	<ul> <li>there will be a special meeting at the beginning of September to become an incorporated society</li> <li>he gave thanks to Environment Canterbury for assistance with printing</li> <li>membership is approximately 120 but has not been pushed since May, because Plan Change 5 has taken up a lot of time</li> <li>as soon as the group has become an incorporated society funding will be available to employ someone to drive membership</li> </ul>		
		Winton Dalley reported that there are a large number of people outside a collective or land care group. He stated that there are projects in other zones where one to one communication is funded. Winton Dally asked if there is funding in this zone for such an approach to help groups or individuals that are disengaged.		
		Kevin Heays (Environment Canterbury) stated that he had been giving this some thought. He confirmed that he can accommodate people one on one but there is no set fund. Winton Dalley said this is a priority for this zone and he would like more information on whether or not this is a potential project.		
5.	Update from Zone Manager	Kevin Heays (Environment Canterbury Zone Manager) provided a verbal update.		
		Hurunui biodiversity update:		
		<ul> <li>currently the biodiversity team are scoping for projects including one on the Hurunui which could include DOC</li> <li>there are four current IS working projects: St Annes, Ladino, Spring Farm and Lindon Lea</li> <li>some IS applications that do not meet the qualifying criteria for funding are referred to other funding sources and provided with advice and outside assistance</li> <li>the Hurunui District Council (HDC) is prepared to assist with an Enviro Schools programme this year.</li> </ul>		
		<ul> <li>a story featuring Amuri Irrigation Company (AIC) will be printed by Irrigation NZ</li> </ul>		

- there has been good feedback regarding Environment Canterbury's proactive media communication around the water take issues and the drought
- Environment Canterbury will publish seven names and addresses of properties that have not responded to requests to fix water issues including one in this zone
- this action is taken in order to be more transparent with water take measuring compliance.

### Manager's update:

- and monitoring/compliance strategies for the next five years
- an additional resource management officer is being recruited
- a protocol for opening the Waipara River Mouth has been agreed upon as a result of meeting with HDC, Runanga, Environment Canterbury Parks and Reserves and Kevin Heays
- it is expected that a consent will be applied for in the near future
- a side agreement is being drawn up to clarify who and how this is paid for
- monthly meetings of the Zone Manager with the Committee chair, Hurunui Mayor, HDC Chief Executive Officer, Ian Brown, and Ian Whitehouse have been introduced.

Kevin Heayes provided a brief update on the Lakes Station. The following points were made:

- there has been a lot of engagement with the owners
- the owners have committed to undertake work so the accessible parts of the farm are managed with fences active management
- the farm will be managed through a farm management plan
- the owners will need a resource consent to comply with stock access rules
- at the moment farming is a permitted activity but at the end of this year every farm has to have a resource consent unless it is part of an irrigation scheme
- the owners do not want to be in an ambiguous situation where they do not comply.

 6. Ngai Tahu Farms, Amuri Irrigation and Hurunui Water Project
 The three stakeholders provided brief updates prior to presenting an integrated power point presentation.
 Hurunui Water Project (HWP) update provided by Alex Adams

The HWP held a shareholders meeting 27 July 2016.

Alex Adams showed a map with the primary coverage areas shown in grey and the potential areas indicated in green; the areas that will overlap with the Amuri scheme were also shown.

Since the HWP's consents were issued 18 December 2015 they have got stuck into a series of work which will take HWP through to the next pivotal date of 31 August.

The current focus of the scheme is not to be looking at 58,500 hectares that they are consented for but 21,000 hectares as a result of the April 2016 farmer shareholder surveys. The surveys showed that the farmer shareholders are looking for about 17,500 hectares of land to be irrigated

(relatively low density).

HWP is consented to put in 6.5million cubic meters of on plains storage on the hatched areas of the consent maps. The exact location of this proposed on plains storages is not certain. HWP are also looking at storage in the Waitohi and this river has sufficient flow to re-charge storage to irrigate somewhere around 10,000 to 11,000 hectares.

The survey showed that 50% of the shareholders intended to continue farming sheep and beef, 26% are arable and there is a small amount of deer farming. The survey showed that 80% of the land users are not dairy farmers.

These above statistics are important when considering nutrients. In the Hurunui catchment HWP would be allowed to increase leaching up to 360 tonne of nitrogen. That is using the 25% allocated to HWP under the Hurunui Waiau Rivers Regional Plan.

If these figures are extrapolated out to the proposed 21,000 hectares of irrigation it would mean a potential 250 tonne of nitrogen leaching which is comfortably under the permitted 360 tonne. The gap is needed and although these figures are not perfect they are in the correct order (as estimated proposed nutrient leaching is under the permitted amount as opposed to over). The gap is needed to accommodate current irrigation and the fact that some of the farmers that receive the irrigation may also intensify dry land farming.

The proposed scheme has provided for some overbuild. 17,000 hectares of irrigation was reported to be required from the results of the survey. However once a scheme is being built there will additional demand. This is a high level presentation; there is significant work and calculations in behind these numbers.

### **HWP and the Waipara Catchment**

This catchment area is red zone under the Canterbury Land and Water Regional Plan (CLWRP). HWP has a clause in its consents that lets HWP consider an irrigation project in the Waipara area. HWP needs to first find out what the Waipara community is thinking.

In the upper Waipara in the area around Pyramid Valley the farmer shareholders are looking at doing about 1,500 hectares of irrigation; the farmers in Omihi are looking at about 2,000 hectares.

This low density demand is good news but there is work to be done and HWP will meet with the people of Waipara 18 August.

### **HWP Capital Cost of the Scheme**

HWP do have a specimen design and the estimated capital cost of \$200m is based on this. The specimen design is not publically available yet.

A feasibility study is the next step. This will cost \$6.4m and take 18 months. HWP will apply for up to \$3.3m from Crown Irrigation, receive approximately \$750,000 from shareholders and approximately \$2.5m from contractors' contributions. HWP are also seeking the expertise of the contractors.

All of this information is contained in the shareholders' newsletter which is now publically available.

There was a critical shareholder meeting 27 July 2016 which was well

attended. The shareholders voted on whether or not to apply for a loan for the project to continue. There was an 83% vote in favour of continuing with the project.

The Board was pleased with the positive nature of the meeting, considering the current challenging environment for farmers. The loan process commenced 8 August and there are potential contractor interviews this week.

The shareholders' loan is conditional on having a contractor's agreement and the deadline is 31 August 2016. The loan is through Lend Me which is a peer to peer lending organisation.

### Amuri Irrigation Company (AIC) update provided by Andrew Barton

The AIC piping upgrade is progressing; funding has been confirmed and contractor negotiations are almost complete.

With regards to integration of reticulation AIC have a proposal of taking water from the natural races which leave the Waiau main race water close to the Balmoral. This is something that AIC is in discussion with NTFE at present.

Andrew Barton showed and described proposed plans for integrating reticulation. It is proposed that the Waiau and Balmoral schemes be linked. With this proposal it mainly works better moving water from Balmoral to Waiau because the Balmoral intake is 60 meters higher than the Waiau intake. This proposal provides good options for the future whereby additional properties with no irrigation can access the water storage and be included in the scheme.

Andrew Barton used several maps to illustrate the detailed workings of proposed reticulation.

Andrew Barton stated that there will be some overbuild to accommodate future hydroelectric generation.

# Ngai Tahu Farm Enterprise (NTFE) Balmoral Development Overview – 2016 to 2033 presented by Andrew Priest.

Andrew Priest prefaced that the NTFE proposal is aspirational and staged in three proposed phases.

Stage one 2016 - 2022

The first step is a 360 hectare pilot farm which should be operational for the 2016 irrigation season.

The zone committee was invited to view this property at its convenience.

Other stage one projects include the development of a total of 500 hectares of riparian planting.

Stage 2 2023 – 2033 is the re-fit.

Stage 3 2023 – 2033 is completely reliant on a storage option north of the river.

The farm systems will be determined by water, nutrients and the aspirations of the iwi.

This is a long term plan because there is still a significant amount of pine to be milled and the trees do not belong to NTFE. The plan gives an indication

on the staging.

#### **NTF – HWP Heads of Agreement**

Alex Adams showed details of the heads of agreement signed on 25 July between NTFE and HWP and added that NTFE has withdrawn its consent application for the Balmoral.

NTFE shareholding in HWP will reduce from 9182 shares to 780 shares i.e. the Medbury area only. Medbury will be a standard HWP shareholder/irrigator.

HWP will transfer to NTFE part of its consents and will work with Environment Canterbury to make this work.

NTFE and HWP have agreed to work cooperatively on storage on the north side and the 2018 HWRRP review. The two parties expect that AIC will also be involved and on board.

Joint work with three stakeholders and the consenting team at Environment Canterbury is underway with good results so far. High level conversations are being conducted with detailed discussions starting this week whereby the parties will start to drill down. No issues have been identified thus far, there is a willingness to get on and the objective is to get rid of the overlapping consents.

With regards to HWP shareholding currently NTFE have approximately a 29.6% shareholding. But when the heads of agreement have been given effect NTFE will have a 3.3% shareholding and Mainpower will have approximately 17%. It is important to note that the Crown will be a 5% shareholder.

### Hurunui Storage

Andrew Barton explained to the Committee some details of the proposed Hurunui Storage opportunity. He explained that in order to irrigate 58,250 hectares with good reliability 55.4M m3 of storage would be required.

He added that the immediate integrated demand was 37Mm3 and the 55.4Mm3 figure was aspirational.

The three stakeholders had individually investigated storage options and opportunities around the zone.

For the storage to be integrated it will need to be upper catchment storage as opposed to on plain storage and will need to be in either Zone A or Zone B. The large scale options are not available in Zone C.

The challenges are that damming in Zone A is prohibited and would require a plan change and damming in Zone B is a non-complying activity.

An integrated storage system would be more effective for all parties but there are timing pressures. The HWP need to know in about a year if there is an alternative to the Waitohi option. The stakeholders have a one year window to firm up an integrated storage solution. They suggested that the most likely location of an integrated storage solution was in Zone B.

The stakeholders requested that the Zone Committee consider rezoning parts of Zone B for storage sites and create a supportive framework for a dam consent application. The best case scenario would be a proposed plan change notified within one year.

The integrated storage solution is more cost effective and one storage site has a reduced environmental footprint, but the current plan does not allow for this.

#### Waiau Storage Integration

There are opportunities for storage in the Waiau. This area was discussed. Integrated storage in the Waiau area is not easy.

A copy of the presentation would be available via email from Ian Whitehouse and available on the committee's webpage.

### John Faulkner opened the floor up for questions and discussion.

John Faulkner stated that the results of the storage options and the piping will have an effect on the discussion in agenda item 8. He added that some of these tributaries will run drier. Andrew Barton responded stating that there has been some new shareholders as farmers look to ensure they do not own stranded assets and safe guard against further droughts. He added that AIC are investigating how they can still take some tributary water and that it is sometimes better to take this water with a higher nutrient load than letting it go down the rivers.

John Faulkner said that the Committee would like to go for a site visit to the NTFE farm in Balmoral.

Alex Adams made the following comments:

The augmentation of the Waipara River was not going to happen once the scheme shifted into the Waitohi because there is not enough storage in the Waitohi. In practical terms water cannot be pumped from the Hurunui across the saddle and into the Waitohi to be used to augment the Waipara.

Winton Dalley raised the question as to whether (irrespective of the zone committee's support for the plan change to accommodate Zone B in the plan review) the potential plan change and the increase in minimum flows can occur in a timeframe that works for HWP. The stakeholders stated their challenges around this timeframe.

Ken Hughey questioned too whether NTFE and HWP are up to the one year time frame and suggested that perhaps the zone committee may be able to facilitate something. He added that an investigation for alternative sites in and around zone B needs to be happening now and there needs to be resources and a commitment to working together on this all along the process.

Alex Adams responded by stating that in order to progress this the stakeholders are looking for some feedback from the zone committee as to whether it supports in principal or not the proposed plan change.

James McCone asked if it is a private plan change that is proposed. Andrew Priest stated that this has not been determined yet. He added that if there is going to be a plan change they do not want it challenged. He explained that there is a lot of work to be done. At present the plan assumes that C Block is pumped continuously but there is some potential improvements that can be made. There is however more science and data required to achieve this. Andrew Priest said that he did not think that they would want to do this in isolation.

David Bedford stated that the zone committee wrote to the three chairs of

	the three stakeholders he assumes that what has been stated by the three organisation's representatives has the support of their respective boards. The stakeholders confirmed that they did.			
	Winton Dalley said that the three stakeholders cannot work in isolation and must work with the zone committee.			
Break	The meeting adjourned for a break at 5.00 pm and reconvened at 5.21pm.			
7.Brodie Young Verbal Presentation	Brodie Young Science Manager Environment Canterbury provided a verbal update on a project that has just started. Included in his presentation were the following points:			
	<ul> <li>new satellite imagery is being used throughout the region to provide information about winter grazing</li> <li>it is expected that this information will assist with Plan Change 5 (PC5).</li> <li>this work has come together very quickly</li> <li>PC5 has arisen from problems with using Overseer to determine consenting thresholds</li> <li>it is important for Environment Canterbury to understand the extent of winter grazing because of the potential for higher nutrient and sediment losses from some winter grazing land</li> <li>this work will allow Environment Canterbury to understand what the practices are and it will be useful for estimating catchment loads</li> <li>the satellite imagery is free the cost is in getting Landcare to interpret the images</li> <li>this work provides a broad view of the region and will provide information that will inform future discussions</li> <li>the zone committee will be able to use this information on what can be consented in the future.</li> </ul>			
	The floor was then opened up for questions and discussion. The following comments and questions were made and asked:			
	Winton Dalley asked:			
	<ul><li>What the value of this work is?</li><li>Why will you not work with the community?</li><li>Where is the courtesy and cooperation?</li></ul>			
	Brodie Young responded stating that this opportunity came up very quickly and they (Environment Canterbury officers) had to move quickly to get the winter images.			
	Winton Dalley said that these images have been available for years; Environment Canterbury just did not know about this.			
	A farmer from the floor made the following comments:			
	<ul> <li>Farmers will not trust you (Environment Canterbury) now and you will not get cooperation from them (farmers).</li> </ul>			

- This is spying.
- Why waste resources on this?

Brodie Young stated that this work was done for the next lot of plan changes

that are coming through.

		<ul> <li>Winton Dalley questioned how much valuable information has come through. He stated that Environment Canterbury do not know what is being grown, when it is going to be grazed and how it is going to be grazed.</li> <li>Brodie Young explained that this does not give site specific information; it is parallel information to help with the conversations that are going on. This is will hopefully help Environment Canterbury to set nitrate levels.</li> <li>Scott Pearson (Fish and Game) said that this will show an increase in winter grazing and that it is not all negative and will provide a better understanding.</li> <li>John Faulkner requested that a written report at the next meeting would be the best way to deal efficiently with this subject. He said that the Committee need time to digest information properly so the Committee can have a reasonable discussion. He requested that the discussion be deferred.</li> </ul>	
8.	Review Hurunui Waiau ZIP recommenda tion	<ul> <li>A report on the review of the Hurunui – Waiau Zone Implementation Programme (ZIP) recommendations was provided by the zone facilitator commencing on page 15 of the agenda. The report author was present to speak to the report and facilitate the discussion. He noted that the recommendations are prompts for discussion. He suggested the Committee endeavour to work through as many of the recommendations as possible at this meeting. The Committee worked through the recommendations as follows:</li> <li>3.1.1 discussed earlier, the timeframe is November 2016</li> <li>3.1.3 wetlands have been given a SNA status and given that some groups are</li> </ul>	
		too hard basket here.	
		Ken Hughey added his comments which included the following:	
		<ul> <li>with reluctance he agreed</li> <li>he suggested that alternative strategy where the regional, community have worked together that where those properties are then we could work with all of those people to have the no net lost</li> <li>the whole zone is a step too far</li> <li>no doubt there is net lost all the time</li> <li>wetland is being lost all the time but the Committee can influence those spaces that we are actively assisting.</li> </ul>	
		Winton Dalley added his comments which included the following:	
		<ul> <li>the Committee cannot abandon this this as part of its responsibility</li> <li>the Committee cannot abandon the priority that wetlands are part of the natural purification of water</li> <li>the Committee has opportunities – why should it abandon this?</li> </ul>	
		Ken Hughey responded stating:	
		<ul> <li>the Committee could work with the willing; look at Ngai Tahu Farming who has identified 500 hectares of wetlands to be cared for and protected</li> <li>the Committee could set a high level rule for everyone and then another set of rules that targets specific areas</li> </ul>	

• the key word is targeting.

Ian Whitehouse summarised:

The Committee wish to recognise the importance of protecting wetlands in targeted areas.

The no net loss term has been debated by this Committee.

Ian Whitehouse summarised stating that the Committee agreed upon no net loss in the targeted areas.

3.1.4 – similar approach to 3.1.3

3.1.5 – Ian Whitehouse asked the Committee to consider water storage in the South Branch and Lake Sumner and consider if the Committee was going to leave them on the table and go through this battle again or will the Committee push for an integrated storage solution.

John Faulkner asked if the Committee was better to scrap the South Branch and Lake Sumner now and push forward with what the Committee is comfortable with.

Winton Dalley suggested that the line between Zone A and Zone B be changed so a little is taken off the Glenrae. He observed that this was almost requested today during the stakeholders' presentation earlier in the meeting. He suggested that the Committee go back to HWP and ask them if not supporting the South Branch and Lake Sumner but redefining the boundary line would be a win win for everyone and promote a favourable integrated solution.

Ken Hughey said that cheap storage on the South Branch would negatively impact the Hurunui River. He added that the Committee is on the right track with this discussion.

Ian Whitehouse summarised stating that water storage in the South Branch and Sumner should remain prohibited.

3.1.6 a & b

Ian Whitehouse noted that the focus point that the health of the Hapua being the key to the success. At present the Committee is not doing anything in this area.

Makarini Rupene stated that the wetlands absorb nutrients that could impact on the shellfish and contribute to increasing flow. He asked how aspirations can be turned into actions. He noted that there has been progress on the Waipara River and asked if this could be replicated.

David Bedford stated that many stakeholders were involved in the work on the Waipara River. He suggested that this model could be replicated in other areas. He noted that Hapua and rivers come at a high value culturally and environmentally. He explained that if this model were to be replicated care need to be taken that there is no "preaching" to others. The approach should be giving feedback, advice and promoting working together collectively. He reiterated that there has got to be some potential to learn from what has been done at the Waipara.

Ian Whitehouse suggested working on the Hapua of the following rivers in the descending order of priority; Conway, Waiau, and Hurunui.

The Committee agreed to make these a priority.

Ian Whitehouse advised that the sooner the Committee makes a decision on

what it is going to focus on, the sooner it can be incorporated into a work programme.

Reviewing the ZIP Recommendations will be the first agenda item at the next meeting. It was noted that this whole document will be up for approval at the next meeting.

 9. Zone Facilitators Report
 Ian Whitehouse (Environment Canterbury Zone Facilitator) provided a report commencing on page 50 of the agenda. The report provided a review on the current level of engagement. The report was taken as read.

Ian Whitehouse asked the Committee what it would like to discuss at the next workshop.

Commissioner Bedford made several comments including:

- at the next meeting the Committee needs to hear from all the scientists
- the Committee needs to know how they are going to use the science that they have available
- the Committee would like to invite the new director of science to come to the meeting
- the Committee also needs to hear the science information that stakeholders have including NTFE, AIC, dry land farmers and Fish and Game
- the Committee needs to understand the technical stuff as soon possible so it fix what it needs to in the HWRRP
- the Committee needs to understand what is being monitored in terms of trends; the Committee is a bit slow but it needs to seriously poke and shove to discover where the phosphorus comes from
- Ned Norton needs to start pulling together this information
- the Committee needs a schedule and to spend a good few hours in on each area
- the Committee needs to retrain the science people to support a situation; the Committee needs to get to them before they come to the Committee and defend a situation.

This facilitators report was taken as read and for the Committee's information.

10. Urgent Business	Brodie Young provided a verbal update on satellite imagery earlier in the meeting directly after the break.	
Meeting concluded	The meeting concluded at 6.29pm.	
Next meeting	Monday, 19 September 2016.	

AGENDA ITEM NO: 5	SUBJECT MATTER: Impact of AIC piping on flows and reliability of supply
REPORT BY: Ian Whitehouse, Environment Canterbury ATTACHMENTS: Gin Loughnan, Environment Canterbury and Peter Brown, Aqualinc	DATE OF MEETING: 19 September 2016

### Action required

Note the attached papers following up on the Committee's concerns at the August meeting on the potential impact of AIC's piping.

### Background

At the August Hurunui Waiau Zone Committee meeting concern was raised about the adverse impacts that could arise when AIC pipes its scheme. The concerns related to:

- 1. Likely impacts on flows in tributaries in the Amuri Basin Dry Stream, St Leonards, Pahau and Lowry Peaks Drain. Andrew Barton talks of Dry Stream going dry again with summer flows more like those currently seen in winter (when there is no irrigation).
- 2. How the piping will impact on the amount of water in Hurunui River and how this might impact the reliability of irrigators in the lower Hurunui River and on ecological flows (i.e. will the river be "flat-lined" for longer). The concerns relate to piping reducing by-wash and reducing flows that currently come from the end of the irrigation races (this will reduce the amount of "by-wash" water from Waiau River that would get into the Hurunui River). In addition, AIC will use the water saved through the piping to irrigate more land and with this water being used very efficiently there will be less water in the Hurunui River (and possibly Waiau River) for other irrigators and so the other irrigators will be on restrictions for longer periods.

### Attachments

- 1. Summary of AIC's water use and land use consents Gin Loughnan, Environment Canterbury
- 2. Impact of AIC piping on lower Hurunui mainstem supply reliability Peter Brown, Aqualinc

Andrew Barton, AIC will be at the meeting to answer questions on this issue.



### Date: 19 September 2016 MEMORANDUM

FROM:	CONSENTS SECTION, ENVIRONMENT CANTERBURY
то:	HURUNUI WAIAU ZONE COMMITTEE
SUBJECT :	AMURI IRRIGATION COMPANY (AIC) LIMITED PIPING UPGRADE AND ASSOCIATED CONSENTS

### Summary:

Amuri Irrigation Company (AIC) was granted a water use (CRC153155) and land use (CRC153154) consents in August 2015; and consents for construction phase activities and new discharge locations for bywash in July 2016 (CRC169649 – CRC169653, CRC169657) for the scheme piping upgrade.

### Water use and land use consents

The proposal focused primarily on:

- achieving an 80% efficiency for all shareholders (as required by the Hurunui Waiau Regional Plan (HWRRP));
- •an increase in irrigation area as a result of efficiency gains; and
- •the calculation of the N load for the Hurunui and Waiau catchments and associated mitigation.

The application also identified the scheme's proposal for a piping upgrade in 2017.

The application detailed that the requirement under the HWRRP for the scheme to meet 80% efficiency, would result in indirect localised effects on drains and tributaries particularly in the Amuri Basin where scheme bywash is currently discharged (i.e. Lowry Peaks, Hermitage Drain etc.).

AIC has committed in their Environmental Management Strategy (approved under Schedule 2 of the HWRRP) to moving border dyke irrigation to 80% efficiency within 10 years, and all irrigators are expected to progressively improve efficiency between now and that point in time. The land use and water use application detailed it was expected that with efficient water use, drains in the district that have only flowed regularly as a result of irrigation scheme drainage, will revert to their natural state over time.

Main points to note:

- •80% efficiency requirement under HWRRP
- •Acknowledgement of localised effects but given plan requirements and also mitigation proposed, effects were considered acceptable.
- •Hurunui mainstem flows were not looked as part of these consents given the scheme's <u>take</u> consents were not being changed;
- •Piping consents current bywash locations not changing only adding new locations therefore couldn't look at reduction of current bywash volumes as still operating under current consents
- •Piping proposal identified that through efficiency gains approximately 1 cumec of A block water would be freed up

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# Memorandum

Subject:	Impact of AIC piping on lower Hurunui mainstem supply reliability		
Reviewer:	Neal Borrie		
From:	Peter Brown	12 August 2016	
То:	Andrew Barton	Amuri Irrigation Ltd (AIC)	

## 1. Summary

The key conclusions from this memorandum are:

- 1. Current low flows in the Hurunui at SH1 are about 30% higher than at Mandamus
- 2. The combination of higher flows, and a smaller block size, means (under the HWRRP) current irrigation reliability below SH1 is much higher than in the middle mainstem.
- 3. AIC's piping will potentially reduce the amount of bywash water that enters the Hurunui catchment. This could reduce flows at SH1.
- 4. Even after the reduction in flows from AIC piping, lower mainstem irrigators will still have much better supply reliability than middle mainstem irrigators.



### 2. Planning context.

The Hurunui Waiau River Regional Plan (HWRRP) specifies Hurunui River minimum flows at two locations: Mandamus and State Highway 1 (SH1).

Water takes between Mandamus and SH1 (i.e. middle mainstem) are subject to Mandamus minimum flows. The minimum flow site is upstream of where water is taken, so abstractors are subject to partial restrictions before the minimum flow is reached. This ensures that abstraction does not reduce flow in the main stem below the minimum flow, downstream of the Mandamus monitoring point. For the irrigation season (September to April) the Plan specifies a minimum flow for A-Block irrigators of 15 m<sup>3</sup>/s, and a block size of 6.47 m<sup>3</sup>/s. Restrictions at different flows are shown in Table 1.

Flow at Mandamus (m³/s)	Level of restriction
15.0	Full
16.6	75%
18.2	50%
19.9	25%
21.5	None

Table 1: Middle mainstem A-Block restrictions

Water takes below SH1 (i.e. lower mainstem) are subject to SH1 minimum flows. The minimum flow is upstream of where water is taken, so (like the middle mainstem) abstractors are subject to partial restrictions before the minimum flow is reached. A-Block permits have a minimum flow of 15 m<sup>3</sup>/s (September to April) and a block size of 2.03 m<sup>3</sup>/s. Restrictions at different flows are shown in Table 2. Because of the smaller block size lower mainstem irrigators are subject to less partial restrictions than middle mainstem irrigators. For example, middle mainstem restrictions start at a flow of 21.5 m<sup>3</sup>/s, while lower mainstem restrictions start at a flow of 17.0 m<sup>3</sup>/s.

Table 2: Lower mainstem A-Block restrictions

Flow at SH1 (m³/s)	Level of restriction
15.0	Full
15.5	75%
16.0	50%
16.5	25%
17.0	None

There is only a very small amount of water taken above Mandamus ( $0.06 \text{ m}^3/\text{s}$ ).

## 3. Catchment hydrology

Current flows in the Hurunui mainstem at Mandamus and SH1 are illustrated in Table 3 and Figures 1 and 2. The catchments for the two sites are illustrated in Figure 3. These flows include the effect of existing irrigation, and the addition of Amuri Irrigation bywash water.

Flow at SH1 is generally higher than at Mandamus, primarily because of the larger catchment area. For example, low flows during the critical period of January to March are on average 30% higher at SH1. Major tributaries that enter the Hurunui River below the Mandamus recorder include the Mandamus, Pahau, and Waitohi and Rivers. These rivers provide some base flow even during very dry periods. The Hurunui River is also supplemented with Waiau River water via the Waiau Irrigation Scheme. The supplementary water is both from bywash and increased groundwater recharge as a result of irrigation. Historically the vast majority of the time, on any given day flows have been higher at SH1 than at Mandamus.

During the recent drought the difference between flow at SH1 and Mandamus has been less, because tributaries such as the Pahau and Waitohi Rivers have contributed less base flow. For example, in January and February 2015 there was little difference between the flow at Mandamus and SH1.

Parameter	Mandamus	SH1	SH1/ Mandamus
Catchment area (km <sup>2</sup> )	1,059	2,517	2.38
Average flow (m <sup>3</sup> /s)	50.9	69.1	1.36
Median flow (m <sup>3</sup> /s)	39.3	50.5	1.29
7DMALF (m <sup>3</sup> /s)	13.0	19.3	1.49
7day average monthly low flow (Jan-Mar)	17.1	22.2	1.29

Table 3: Hurunui River main stem flows from 2008 to 2015



Figure 1: Hurunui River main stem flows



Figure 2: Hurunui River main stem flows from 2008 to 2015



Figure 3: Hurunui River catchments

### 4. Impact of AIC piping

AIC piping has the potential to reduce flow at SH1. The main change that will affect flows at SH1 will be the volume of bywash into Pahau River, Dry Creek and St Leonards Drain. AIC are proposing to close or move some of their existing open race bywash points. The Balmoral Irrigation Scheme will retain a single bywash point to the Pahau River, while the Waiau Irrigation Scheme will primarily bywash to the Pahau River and Dry Stream.

For the Balmoral Irrigation Scheme we expect the increase in irrigated area will result in a reduction in bywash during low flow periods. The net change in bywash volumes for the Waiau Irrigation Scheme (that discharge to the Hurunui Catchment) is less clear. While overall we expect total Waiau Irrigation Scheme bywash to reduce, a greater proportion of the bywash may potentially go to the Hurunui River rather than the Waiau River.

We have set up a hydrological model of the Pahau River and Lowry Drain, to assess how piping will affect flows in these waterways. The worst case scenario, where piping results in no future bywash, is illustrated below. In practice even with piping we expect some bywash, so the actual impact will be less than predicted.



Calculated reliability for the status quo, and with piping, is shown in Table 4.

Figure 4: Hurunui River flows at SH1

Tahle	⊿.	Sunnhy	reliability	for	October	2007	to A	March	2015
Table	4.	Supply	renadiny	jor	Ociober	2007	lo h	arcn	2015

River section	Supply reliability (Oct- Mar)
Middle Hurunui	83%
Lower Hurunui (status quo)	98%
Lower Hurunui (with piping, worst case)	96%
Lower Hurunui (with piping, expected case)	97-98%

Table 4 illustrates that the combination of higher flows at SH1, and a smaller block size, means that (under the HWRRP) irrigation reliability for lower mainstem irrigators is higher than in the middle mainstem. Under all scenarios lower mainstem irrigators will receive significantly higher reliability than middle mainstem irrigators. In conclusion lower mainstem irrigators should continue to receive high supply reliability even after AIC piping.

### AGENDA ITEM 6: Zone Committee's evaluation of Hurunui Waiau Rivers Regional Plan (HWRRP)

### Prompt for discussion on 19 September, 2016 – not agreed by Committee

Торіс	What do you like?	What don't you like or wish to improve	Comment from facilitator
WATER QUANTITY			
Takes for community and/or stock drinking schemes	Support this - community drinking schemes should have priority over irrigation		HWRRP gives priority to community schemes
<ul> <li>Minimum flows:</li> <li>Hurunui River;</li> <li>Waiau River;</li> <li>Jed River;</li> <li>Tributaries.</li> </ul>	Minimum flows were pretty well thrashed out in the planning process particularly for the mainstem rivers so leave as is.	The link between storage and new minimum flows was severed in the Hearing process. Min flows on some of the tributaries of low ecological value may need looked at where there is the opportunity to remove water with high nutrient loads for a net benefit to the environment. Some rivers are dry for part of the year yet still have minimum flow requirements.	As consents have not been reviewed the HWRRP minimum flows are not yet "in effect" except for a few new consents. The Waiau River mouth closed and this could suggest the minimum flows are inadequate or the way the river is managed is not working.
Allocation of water • Waiau River • Hurunui River • Tributaries	Support approach in HWRRP		Should consideration be given to B Block for some tributaries to enable takes to storage (e.g. Leader River)

Торіс	What do you like?	What don't you like or wish to improve	Comment from facilitator
Groundwater takes			
Transfer of water take consents			
WATER STORAGE			
<ul> <li>Development zones:</li> <li>Zone A (upper Hurunui &amp; Waiau) – storage prohibited;</li> <li>Zone B – non- complying;</li> <li>Zone C – restricted discretionary (for storage &gt;20,000m<sup>3</sup>);</li> <li>Zone D (Jed) - storage &lt;20,000m<sup>3</sup> permitted;</li> </ul>	General support for the zoning approach though "tweaks" may be needed.	Focus has been on large water storage and on integration across AIC, HWP, NTP. Need to ensure that independent irrigators and irrigators in the lower catchments are also considered and part of the conversation. Consider how well HWRRP supports approaches other than "mega" storage, for example, numerous small scale projects. Consider "tweaks" as identified in comments from facilitator.	Zone Committee agreed at August meeting that Lake Sumner and South Branch are "off the table". Developers have told zone committee that a large Glenrae storage would require adjustment to Zone A/B boundary. Developers have told committee that requirements for Zone B are "too hard" for an integrated solution.

Торіс	What do you like?	What don't you like or wish to improve	Comment from facilitator
Water use efficiency			
<ul> <li>80% application efficiency</li> <li>Annual volume to provide reasonable use of water, for the intended land use, for 9 out of 10 years.</li> </ul>	General support.	Application efficiency is only part of the equation. Need to consider how to encourage water to be used for the highest value land use. Does there need to be a timeframe to get uptake of technologies such as soil- moisture monitoring, variable rate irrigation?	
Water quality and land	use		
<ul> <li>Periphyton limits for:</li> <li>Hurunui River;</li> <li>Pahau and Waitohi Rivers;</li> <li>Waiau River</li> </ul>		Need to review limits and be clear how these relate to the freshwater objectives for each river	Limits will be reviewed. NPS for FM includes national bottomline and attribute states. The HWRRP does not define freshwater management units (FMUs) so these will also be identified as part of HWRRP review/sub-regional.
<ul> <li>Nitrate toxicity limits for:</li> <li>Hurunui River &amp; tributaries:</li> <li>above Mandamus;</li> <li>below Mandamus; Waiau River &amp; tributaries</li> <li>above Marble Point;</li> <li>below Marble Point.</li> </ul>		Need to review limits and be clear how these relate to the freshwater objectives for each river	Limits will be reviewed. NPS for FM includes national bottomline and attribute states.

Торіс	What do you like?	What don't you like or wish to improve	Comment from facilitator
Phosphorus concentration limit for Hurunui River		Need to review limits and be clear how these relate to the freshwater objectives for each river	Limits will be reviewed and the relationship between P concentration and periphyton scrutinised.
Nitrogen and Phosphorus load limits for Hurunui River at • Mandamus; • State Highway 1.		Need to review limits and be clear how these relate to the freshwater objectives for each river	Limits will be reviewed as well as the role of in-river and/or catchment loads in helping achieve freshwater objectives
Support for Collective approach			Two "collectives" approved to date – AIC and Cheviot Irrigators Group.
Land use consent required if not part of Collective		Need better approach for properties with low environmental impact.	HWRRP review will consider regulatory approach for properties with low environmental impact.
"Change in land use" definition and related matters (the "10%-rule" issue)		Need to remove this rule.	Advice Note addressed the unfairness of the "10%-rule" for dry land farmers. HWRRP review will consider regulatory approach for properties with low environmental impact.
			PC5 approach will be starting point.

Торіс	What do you like?	What don't you like or wish to improve	Comment from facilitator
Report annual average N and P losses for 2012 - 2016			HWRRP requires this to reported by 1 October 2016. Unlikely to receive this information from many farmers.
			The intent of this policy was to ensure good information for review of the HWRRP. Other ways will be needed to get property-scale N and P losses to inform revised approach to property- scale nutrient management rules and limits.
FEP and environment management system requirements (Schedule 2)			Note that PC5 proposes revisions to the region-wide schedule for audited FEPs and this will be the starting point for HWRRP revision.

AGENDA ITEM NO: 8	SUBJECT MATTER:
	Suggested approach to collaborative science and engagement on technical matters in Hurunui Waiau plan revision and sub-regional process
REPORT BY: Ian Whitehouse, Environment Canterbury	DATE OF MEETING: 19 September 2016

### **Action required**

- 1. Zone Committee agree the approach as summarised below for collaborative science and engagement on technical matters over the next 6 months as part of HWRRP review/sub-regional process.
- 2. Zone Committee discuss whether it should formally appoint committee members to the Science Stakeholder Group.

# Suggested approach to collaborative science and engagement on technical matters in Hurunui Waiau plan revision and sub-regional process

### Summary

To provide collaborative science and strong engagement on technical matters in Hurunui Waiau Zone over the next three years the following are proposed:

- 1. Establish a Science Stakeholder Group to:
  - a. Ensure all information from all sources is used;
  - b. Scrutinise technical information and the conclusions from data analysis and modelling.
- 2. Appoint a small Peer Review Group to independently review:
  - a. Technical reports;
  - b. Conceptual models and their underlying assumptions.
- 3. Provide briefings on findings from water quality and land use related monitoring and investigations, catchment by catchment, to:
  - a. Science Stakeholder Group;
  - b. Zone-committee hosted community meetings.
- 4. Identify from the briefings above:
  - a. Critical information that needs to be obtained;
  - b. Water quality and land management issues that need to be resolved.
- 5. Establish a Waipara Working Party comprising Ngāi Tūāhuriri, science stakeholders and local land users and interest groups.

### 1 Background

It is important that all information from all sources, not just Environment Canterbury, is used over the next two to three years to revise the HWRRP and develop the water management solutions package (ZIP Addendum) for the whole zone.

There also needs to be buy-in from stakeholders on the technical information and models being used and the results from analysis and modelling, thereby improving the focus on the value judgements needed and lessening the contest over technical matters in the RMA Hearing on the plan change.

Environment Canterbury takes a collaborative science approach to developing technical information to underpin the preparation of sub-regional sections of the Canterbury Land and Water Regional Plan (LWRP). For example, the current process in the Waimakariri zone includes a Science Stakeholder Advisory Group and a Technical Lead Advisory Group (peer reviewers and advisors).

In the Hurunui Waiau zone there is:

- A high level of engagement following the "10%-rule" issue;
- A substantial body of information, particularly for Hurunui catchment, from monitoring and investigations carried out by AIC, Ngāi Tahu Property and others;
- A belief amongst some that the HWRRP was developed with "shonky" science;
- A suspicion of Environment Canterbury's approach and role in collecting land-related information, particularly at a property scale;
- A need for land use and land management information that can be used at a catchment and sub-catchment scale to understand current farm practices, the uptake of good management practices (GMPs) and the environmental gains of all farms being at GMP, and the impact of reasonable on-farm development scenarios.

The following approach is suggested, taking into account the local Hurunui context and learnings from the collaborative science approach in Waimakariri and other sub-regional processes.

The Waipara catchment has different issues, land uses and science stakeholders than the rest of the zone. A different approach is proposed for Waipara catchment.

### 2 Science Stakeholder Group

It is proposed to establish a Science Stakeholder Group.

### Purpose and function

The Science Stakeholder Group will:

- 1. Build involvement and confidence in the science being carried out;
- 2. Ensure that information is used from all sources, not just from Environment Canterbury;
- 3. Recommend membership of the Peer Review Group (see below);
- 4. Help to identify the key issues of contention that require technical input;
- 5. Review and validate the results from analysis and modelling;
- 6. Identify scientific limitations and provide clarity on underlying assumptions.

The Science Stakeholder Group will not, as a group, be involved in developing the water management solutions for the zone or parts of it; nor will it make recommendation on the development of water management policy choices. Organisations involved in the Science Stakeholder Group are, however, expected to be involved in the zone-committee led

process, involving community and all interests in water in the zone, developing the water management solutions package for the entire zone. This process will include evaluation of "what-if" options (scenarios) and is likely to take place in mid to late 2017. The organisations and individuals involved in this process are there as "advocates" rather than in the "technical" role they have in the Science Stakeholder Group.

The Science Stakeholder Group's purpose and function will be described in its Terms of Reference (TOR). The TOR will be agreed by the Zone Committee prior to the first meeting of the Science Stakeholder Group. Any changes or additions requested by the Science Stakeholder Group will be subject to zone committee approval.

### Membership

The following organisations would be invited to participate in the Science Stakeholder Group:

- Te Rūnanga o Ngāi Tahu (TRoNT);
- Kaikōura Rūnanga;
- Ngāi Tūāhuriri;
- Amuri Irrigation Company;
- Ngai Tahu Farms;
- Hurunui Water Project;
- Cheviot Irrigators Group;
- Fish and Game;
- Forest and Bird;
- Department of Conservation;
- North Canterbury Landcare Group;
- Federated Farmers;
- Rural Advocacy Group;
- Beef and Lamb;
- Deer NZ;
- Dairy NZ;
- Fonterra;
- Foundation for Arable Research;
- Horticulture NZ;
- Balance;
- Ravensdown;
- Whitewater NZ;
- Whitewater Canoe Club;
- Jet Boating NZ;
- Canterbury Tourism;
- Hurunui District Council;
- Canterbury District Health Board;
- Environment Canterbury.

All of the Zone Committee would be invited to all meetings of the Science Stakeholders Group. It is recommended that at least two zone committee members attend as many of the Science Stakeholder Group meetings as possible. The zone committee should consider whether it wishes these people to be formal members of the Group.

### Outline of initial meetings of Science Stakeholder Group

The organisations above would be invited to an initial meeting to form a Science Stakeholder Group. This meeting would discuss the role of the group (including its Terms of Reference) and the process going forward. If the Zone Committee supports the approach being proposed here, this initial meeting would be held in October.

If possible, at the initial meeting key information held by organisations other than Environment Canterbury would be identified and discussion started on possible membership of the Peer Review Group (see below). A second meeting is likely to be needed on these matters, particularly to get a recommendation on who should be on the Peer Review Group.

Subsequent meetings would take a catchment-by-catchment approach (see below).

### **3 Peer Review Group**

It is proposed to establish a small Peer Review Group.

### Purpose and function

The Peer Review Group will provide:

- 1. Independent review of conceptual model and assumptions;
- 2. Independent review of technical reports prepared by Environment Canterbury and their contractors. Where the members of the Peer Review Group do not have the specific expertise to review reports it will work with the Technical Lead to identify suitable independent reviewers;
- 3. External expert advice to Environment Canterbury's technical team.

The Peer Review Group's key function is ensuring the technical information and modelling is fit for purpose and of a high standard. The Peer Review Group will not synthesis information or seek consensus on the science and what it means. This will be role of the facilitated process involving the Science Stakeholder Group.

### Membership

The Science Stakeholder Group will recommend the membership of the Peer Review Group. The Science Director, Environment Canterbury, will appoint the Peer Review Group following the Zone Committee endorsing the Science Stakeholder Group's recommendation.

Peer Review Group members will be paid. In Waimakariri stakeholders provided some of the funding for the Peer Review Group, Environment Canterbury the rest.

It is anticipated that the Peer Review Group will have three members.

Given the issues in the Hurunui Waiau Zone it is expected the Peer Review Group would include expertise on:

1. The relationship between outcomes, relating to ecosystem health (e.g. periphyton cover) and human health for recreation (e.g. pathogens and toxins), and in-river or resource-use limits;

- 2. The relationship between nutrient losses and land use, farming systems and farm practices including the impact of intensification scenarios and of all farms being at good management practice;
- 3. The interaction of the groundwater and surface water systems and what this means for transport pathways and attenuation of nutrient losses between farms and waterways.

### 4 Proposed briefings on water quality and land use

It is proposed to commence engagement on technical matters through a series of community meetings and workshops with the Science Stakeholder Group. These briefings would be provided by the parties involved in technical work in the zone (not just Environment Canterbury) and describe the findings from water quality- and land use-related monitoring and investigations. This would include assessment of trends and comparison with bottom lines and benchmarks. These briefings would be provided on a catchment basis in the following order:

- 1. Waiau
- 2. Conway/Tutaeputaputa catchment; catchment;
- 3. Hurunui catchment;
- 4. Waipara catchment;
- 5. Jed River;
- 6. Other catchments (e.g. Motunau).

The briefings will be organised by Environment Canterbury staff. Presentations will be provided by technical staff from Environment Canterbury and other organisations.

The briefings would include findings from:

- Water quality monitoring (N, P, periphyton) in mainstem and tributaries;
- Water quality monitoring (N) in groundwater;
- Ecosystem health monitoring in mainstem and tributaries;
- Monitoring of the source water for HDC community drinking water supplies;
- Monitoring of pathogens and toxic algae at contact recreation monitoring sites;
- Estimates of catchment and tributary agricultural N loads and comparison of these with estimates of in-river N loads;
- Catchment-specific investigations relating to water quality (e.g. Ngāi Tahu Property's investigations in Hurunui River; current NIWA study of Hurunui hapua).

The briefings would be provided first to the Science Stakeholder Group. They would:

- review the completeness of the information
- review the validity of the findings
- identify key issues of contention that are likely to require further technical input;
- identify additional information needed, such as property-scale nutrient losses to improve estimates of current and GMP N losses for major catchments and tributaries.

All of the zone committee would be invited to the briefings to the Science Stakeholder Group. Leading farmers and community leaders from the catchment could also be invited. Following the briefing to the Science Stakeholder Group on a catchment the zone committee would host an evening community meeting in the catchment. These meetings would be additional to the monthly zone meetings. The meetings would be well advertised and email lists (such as from the Nutrient Working Group) used to notify people of the meetings. A very brief overview of the RMA planning context could also be provided at these meetings. This would cover the NPS for Freshwater Management and the LWRP.

The community meetings would seek to:

- Build a shared understanding of the findings from water quality monitoring and investigations, and what they mean;
- Identify the issues needing to be resolved in the review of the HWRRP/sub-regional process.

The first of the catchment water quality briefing meetings (to Science Stakeholder Group and local community) will be scheduled after the initial meeting(s) of the Science Stakeholders Group. The timing of the water quality meetings will depend on how soon technical staff can organise and analyse information. Realistically the first meeting would be in November as estimates of catchment and sub-catchment agricultural N loads under GMP will not be available prior to then.

### 5 Proposed approach for Waipara catchment

The water management challenges in the Waipara are different to those in the rest of the zone. In addition, many of the science stakeholders involved in the Waipara are not involved in other catchments in the zone. Therefore a modified approach is proposed for Waipara catchment.

It is proposed to form a Waipara Working Party comprising science stakeholders, Ngāi Tūāhuriri, local landowners and interests. The purpose and function would be similar to the Science Stakeholder Group except its membership would be wider than science stakeholders and its role limited to the Waipara catchment. The Waipara Working Party would be established in about November.

The Zone Committee would host a community meeting in Amberley or Waipara to brief people on the findings from water-quality and land-use related monitoring and activities.

The Waipara Working Party would be involved in 2017–18 in developing a water management solutions package for the catchment, including regulatory approach and limits.

### 6 Indicative time table (subject to change)

early October	invite people to a meeting to form a Hurunui Waiau Science Stakeholders Group
17 October	Zone Committee meeting (Cheviot) Confirm schedule for local community water briefings on Waiau, Conway and Hurunui catchments. Agree Terms of Reference for Science Stakeholder Group
mid October	First meeting of Science Stakeholders Group
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late October early November	Second meeting Science Stakeholder Group (recommend membership of Peer Review Group)
mid November	Water quality briefing on Waiau catchment to Science Stakeholder Group
mid November	invite people to form a Waipara Working Party
21 November	Zone Committee meeting Endorse recommendations on membership of Peer Review Group
late November	Local community briefing on water quality of Waiau catchment
early December	First meeting of Waipara Working Group
early December	Water quality briefing on Conway catchment to Science Stakeholder Group
mid December	Local community briefing on water quality briefing in Conway catchment
12 December	Zone committee meeting (Amberley)
	Confirm schedule for technical briefings (Hurunui catchment and other areas) for early 2017.

AGENDA ITEM NO: 9	SUBJECT MATTER: Zone Team Quarterly report (Progress on 5-year Delivery Outcomes)
<b>REPORT TO:</b>	DATE OF MEETING:
Hurunui-Waiau Zone Committee	19 September 2016
<b>PREPARED BY:</b>	ACTION:
Kevin Heays et al	For information

#### Purpose

To update the zone committee on the progress of milestone actions to Outcomes

#### Recommendation

The zone committee receives this update.

#### Preamble

This report has been gleaned from zone team members and other ECan staff and officers. It will be taken as read at the 19<sup>th</sup> September meeting – some staff will be present to answer any queries.

In essence, the Zone Team is very aware of the "busy-ness" of the rural community at this time of the year, alongside the stresses that have come with a continued lack of adequate rainfall. A level of urban education via a variety of communications methods has been a focus as a result of that rural busy-ness.

Comments and information needs to be aligned with the HWZC agreed outcomes. Appendices attached for each outcome as indicated. \*

#### Outcome 1 – "Operate at Good Management"

Quarterly Report to HW Zone Committee September 2016 Michael Bennett – Senior Land Management Advisor

#### Good Management Practice

I continue to respond to various requests for one-on-one advice to farmers as a priority. I continuously extend my networks and attend community events such as farm discussion groups and farm environment plan workshops.

An irrigation training day took place in Culverden on the 7<sup>th</sup> of September – I was not able to attend for family reasons, however others may be able to comment on how this day went.

I am assisting with a further irrigation training day set down for the 2<sup>nd</sup> of November in Cheviot – with another planned for autumn. This day will also introduce the Cheviot Irrigators Group.

The GMP website, the purpose of which is to support better communication on good management practice on farm is up and running as a test page. It includes basic information on each zone and links off to various online resources. Feedback on this page has been received from Zone Committee members and passed on to developers.

The Nitrogen Loss Calculator is now live and able to provide estimated nitrogen loss numbers for farms at GMP.

#### HWRRP 'Collectives'

An Environmental Management Strategy was approved for the Cheviot Irrigators Group in late July. This group will be the basis of a Farm Environment Plan Audit system for approximately 30 irrigated farmers around Spotswood and Domett.

The Hurunui District Landcare Group signed off on an incorporated society at their AGM on the 29<sup>th</sup> of August. Supporting this group to move to the next stage of formally signing up members and progressing actions to promote good management practice will be a priority.

I have also met with a small group of irrigated farmers in the Hawarden – Scargill area and explained the Hurunui Regional Plan and how a Collective might work for them. This group are unsure about progressing at this stage. We agreed to re-convene after the workshop on 2<sup>nd</sup> November.

#### Irrigation Schemes

I continue to support HWP and AIC on various issues as they arise. I currently take an approach of maintaining good communication and addressing issues proactively as they arise.

#### Communication

There have been several articles in local media to inform the community about the progress that is being made with AICs Environmental Management Scheme. A contractor (Penny Wardle) has been engaged to progress stories about environmental practice/progress on sheep and beef farms.

#### One – Offs

Several one-offs have been underway this quarter, including:

- Ongoing support for Lakes Station
- Community concern over low groundwater levels to the north of Amberley
- A spill of agrichemicals on a farm near Hawarden which made clear a specific need for better communication and support to get rid of old chemicals.

#### Outcome 2 – "HWRRP and sub regional."

From Lisa Jenkins- Senior Planner with a focus on HW Sub regional build.

- We are trying to get out and talk to people in the zone about how they want to engage in the land and water management review process, but this has stalled a bit as Lisa has had to focus on completing the Air Plan. From October we will be back out and about.
- We have been doing some thinking internally around the different approaches we can take to the review of the land and water management package in the Hurunui Zone. There are lots of ways to skin this cat and we hope to be able to have a discussion around this with the committee sometime in the next few months.

#### And from Whit .....

Milestone 3 has been completed. The Zone Committee finalised the nutrient management principles that should underpin the development of property-scale nutrient management in the zone. These are available on the committee's webpage

http://ecan.govt.nz/get-involved/canterburywater/committees/hurunui-waiau/Pages/Default.aspx

Ned Norton has been contracted by Environment Canterbury as the Technical Lead for the HWRRP review/sub-regional process. Ned led the sub-regional process in the South Coastal Canterbury streams (including Lake Wainono) and was involved in the Selwyn Waihora process. He has started working with technical staff in Environment Canterbury and other organisations to develop a work programme for the next 6 - 12 months. With the Zone Facilitator he has designed an approach for collaborative science to underpin the HWRRP review/sub-regional and for an initial round of

community briefings on water quality catchment by catchment. The Zone Committee will discuss the proposed approach at this (September) meeting.

#### Outcome 3 – Integrated Water Infrastructure

HWP, AIC and NTFE reported to the August zone committee meeting on progress towards an integrated solution. The developers are jointly working on investigations into options for major water storage. HWP and NTFE have resolved how Balmoral Forest "fits" into HWP's consents for N discharge and water takes. The two parties are working with Environment Canterbury to effect the transfer of part of HWP's consent to provide  $1m^3/s$  of B Block water and N load increase (from below root-zone) of 80t/yr to NTFE.

#### Outcome 4 – Ecosystem health and Biodiversity.

From Jesse Hill- ZT Biodiversity Officer

- A re-prioritisation process is underway with the Biodiversity subgroup. Chris Keeling (Senior Strategy Advisor), Environment Canterbury will be attending biodiversity subgroup meetings (prior to the zone committee meeting) to discuss how such a strategy could look and be implemented over the next five years.
- Several new biodiversity applications have been received, all applicants were receptive to the fact that project decisions will not be made until the re-prioritisation process is completed. Applicants have been assisted with their application form and next steps (developing the project plan and obtaining quotes).
- Several phone calls/emails were a result of the recent advertising campaign by the Christchurch-West Melton Zone Team pool funding round.

And from Tammy Mcmahon... Zone extension services, the following.....

### Process for environmental enhancement projects that require resource consent

#### Purpose

The purpose of this paper is for information purposes for the Hurunui-Waiau Zone Committee to:

- 1. Note this process is available for enhancement projects
- 2. Identify to the zone team projects that would be appropria

#### Background

With the establishment of zone teams, Environment Canterbury is better placed to provide support to individual landowners who wish to undertake projects that will have positive environmental outcomes. Many landowners wish to undertake such projects, however, the cost of obtaining resource consents "the paper work" has been identified as being the barrier to these projects proceeding.

This is a new initiative to remove that financial barrier to enable on-the-ground enhancement projects to proceed. If a project meets the criteria provided below and approved by a panel of zone managers, the zone team will assist landowners to prepare the resource consent application. This process would allow resource consent process to be cost neutral to the landowner.

#### **Examples of enhancement projects**

For a proposal to be successful it has to be demonstrated that there is a direct positive effect on the environment. At this time there are two potential projects that are currently being considered by zone teams, firstly the construction of three sediment traps on a property that is in a catchment with high phosphorus in South Canterbury. It's worth noting that zone team members are now gauging the interest of other farmers in the catchment to apply for a global consent to cover several properties to build a network of sediment traps at a catchment scale. A simpler example is the construction of a bird roosting site in the Heathcote Estuary.

#### Project Criteria:

The works proposed are not required to be undertaken to meet a rule in a plan or a condition of consent.	This process is developed to encourage environmental enhancement initiatives over and above regulatory requirements.			
The proposal must contribute to achieving zone outcomes.	To ensure projects are specific to achieving desired outcomes set by the community through the zone committee.			
The consent should be minor in scale.	Id be minor in The amount of time staff spend providing support to suc projects will be a key consideration when determining whether a project is appropriate.			
	Zone team managers have discretion in terms of the time allocated to assisting the proposal.			
	It is expected that applications that are put forward are not complex - if a proposal needs to be limited or publicly notified it is not minor in scale.			
Applicant understands the role of being the applicant and consent holder.	<ul> <li>It is important to this process that the applicants:</li> <li>Acknowledge and understand they are the consent holder and the obligations of it, including their liability under the RMA for any breaches.</li> </ul>			
	• Other than staff time, agree that all costs will be borne by the applicant. This may include additional reports if required, completing the works and meeting conditions of consent and monitoring fees.			
	This information is publicly retrievable.			

## Outcome 5 – "Community Ownership" \*

#### Media focus

- Drought update 2 August:
  - Environment Canterbury is highlighting the potential for low or no flow in many of the region's streams and rivers in coming months.
- Water metering update 2 September:
  - 100% of water consent holders in Canterbury are fully compliant or have abatement notices in place to become fully compliant with the Water Measuring National Regulations.
- Irrigation workshops: FEP requirements 9 September
  - The ins and outs of Canterbury' Farm Environment Plans will be laid out for North Canterbury's farmer irrigators at a workshop in Culveden on Friday September 9.
- Group cleans up river, rejuvenates pasture, August 30, NZ Farmer

Cont.....

# Group cleans up river, rejuvenates pasture

A dairy farmer makes changes to comply with Canterbury's tougher land and water regulations. **Tony Benny** reports.

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nterbury dairy farmer David Croft has changed form border-dyke to spray im

#### Other activity

- North Canterbury Landcare Manual 500 copies being distributed mid-September to with 0 accompanying letter inviting people to join the Hurunui-Waiau Landcare Group.
- Meeting to progress 'dryland stories" around public perception: August 26. 0
- Hurunui DC is now supporting Enviroschools in the district. 0

AIC story also in the Irrigation NZ magazine as part of the Environment Canterbury insert due for distribution in September to around 3300 water consent holders

#### Chemical spill information and chemical recovery

The communications team is working with the contaminated land and hazardous waste teams to create a document which farmers can refer to for the immediate response to chemical spills. The spill information will be placed in a logical position on the new website –which is designed to be fully functional on a smartphone – and there will be a printable version (PDF). The printable information will be very generic to avoid becoming outdated.

To ensure the public have the most up-to-date information, we will continue to direct people to the two credible sources:

- Worksafe (safer farms website) for spill containment guidelines and;
- Agrecovery for collection of waste/expired agrichemicals. •

Environment Canterbury doesn't directly provide collection services for used or expired agricultural chemicals, so to produce a flyer to that end would be confusing. We encourage farmers to use the existing Agrecovery collection programme, which is funded by industry, Territorial Authorities and Environment Canterbury.

A posted leaflet displaying even simpler messages is being investigated as another option.

#### Outcome 6 - Recreation, Tourism and Amenity opportunities. \* (maps-river and coastal access)

A series of maps have been produced for each Zone identifying public accessways to river and coast recreational areas-see appendices. These will be utilized for general information as well as any public access/land focus on biodiversity activities if the subcommittee decides to give those places any emphasis.

It will enable a starting point also for our teams LMA to site visit, and make any recommendations in alignment with a strategy to deal with this outcome.

And Regionally.....

Recreation and Amenity Update: The swimming values research data collection began in August with the launch of anonline survey. This closed on September 3<sup>rd</sup>, with over 1300 responses. Focus groups were also held in a number of schools in the region, though unfortunately no schools in the Hurunui-Waiau zone were able to participate. However, there was a good level of response from this area to the online survey, and some other schools surveyed cited swimming spots in the zone that they valued. Analysis of this data has now begun, and the report is on schedule to be delivered in December.

Work has also continued on the development of a regional work programme. This included an initial workshop at Environment Canterbury on July 29<sup>th</sup> with a wide range of recreational groups.

#### Outcome 7 – Reliable Drinking Water

HDC reporting covers this milestone.

#### <u>Outcome 8 – Enhance Mahinga Kai</u>

Stephen Bragg to report.

#### <u>Outcome 9 – Maintain Natural Character of Braided Rivers</u> Braided Riverbeds

Decisions on Plan Change 4 to Land and Water Regional Plan have been notified and are now subject to appeal to the High Court. The Decisions and the appeal are relevant because they concern continued 'farming' in the bed of a braided river. Whatever the outcome, an integrated approach across different parts of the organisation, and good communication will be fundamental to making progress on the CWMS outcome for braided riverbeds.

There will be a Riverbird Survey in the Waiau in late October. This survey monitors the state of braided riverbed populations.

And a quick update from Leanne Lye, Biosecurity.....

#### Changes to the Nassella Tussock Compliance Process in the Hurunui District for this season

#### Background

There are nearly 900 properties in the Hurunui district that have an occurrence of nassella tussock. Of these, approximately 750 properties are required to control nassella tussock annually. For the majority of people this work is required to be completed prior to 30<sup>th</sup> September. For a smaller number (289) they are given until 31<sup>st</sup> October to complete control work. This is generally due to the density of nassella tussock & the topography of their land.

Land occupiers must undertake a thorough control programme by the abovementioned dates. The objective for nassella tussock as outlined in the Regional Pest Management Plan is to reduce the population of nassella tussock within the region. Currently this objective is not being met.

Due to a number of factors including the small window of time to inspect properties before nassella tussock seeds (mid-late November) it is important that land occupiers complete a thorough control programme prior to the compliance dates. Most land occupiers do a good job and try to complete their control work by the due dates, However there are a small number of land occupiers who fail to comply at initial inspection in early November.

#### Changes to the Nassella tussock inspection process

There are a number of changes in the way that nassella inspections are undertaken in the Hurunui district on properties with a compliance date of 31st October. These changes are supported by the Hurunui Nassella Tussock Pest Management Liaison Committee.

There has been much discussion recently about how nassella inspections are undertaken and why some land occupiers do not appear to take their control work seriously. In an effort to work more collaboratively with land occupiers who try to complete their control work early, the following incentives have been implemented:

- Early inspections from 1 July where land occupiers have completed their control work early. This means Biosecurity staff will have completed the inspection before lambing and tailing.
- Large high density properties will be eligible for a partial inspection when 50% of the property in the high density hill areas is completed. These partial inspections will check control work is of a good standard, while allowing time to remedy any issues found.
- A Notice of Direction will not be issued at initial inspection to land occupiers with a 31 October finish date who have completed their control work and had an initial inspection before 15 September. If too many plants are found during the inspection land occupiers will be given time to remedy the control work and a subsequent inspection paid for by rates will be undertaken.

There are a small number of properties with a poor compliance history. This is either because control work is insufficient or is not completed by 31 October each year. The land occupiers of these properties will be notified and issued with a compliance order. Compliance orders will be served directing the land occupier to undertake the required work before 31 October. Failure to comply will result in a Notice of Intention to Act on Default. If necessary, contractors will be employed to undertake the work at the land occupier's expense and a statutory land charge will be placed on the property title.

#### Outcome

Biosecurity Staff and the Hurunui Nassella Tussock Pest Management Liaison Committee are hopeful that these changes will help to ensure a reduction in plant numbers. This approach allows for more flexibility for those land occupiers who generally are trying to complete their control work to a good standard in a timely manner. It also target land occupiers who have had a history of non-compliance and will allow for remedial work to be undertaken before seed sets.



**Appendices – as supplied.** <u>Outcome 6</u> - **Recreation, Tourism and Amenity opportunities**. Maps of Public access to rivers and coastal recreational areas.



#### Outcome 9 - Maintain Natural Character of Braided Rivers

Regional Work around Braided Rivers (River Bed Lines)

Environment Canterbury staff are working through a process to review short- and long-term planning provisions for land use and development on the margins of braided river beds. This will be a three step process:

- 1. Clarifying regulatory requirements internally around braided river margins in the Hurunui District and discussing this with relevant local landowners face-to-face (mid end June 2016).
- 2. Post Hurunui meeting, clarifying regulatory requirements internally and working across the region to clearly communicate this to the public (July 2016).

3. Developing a simple and clear long-term approach to the regulation of braided river margins in future plans (July 2016 onwards).

## Zone Report For Hurunui Waiau CWMS Zone

Total Number of Active Consents :1920









AGENDA ITEM NO: 10	SUBJECT MATTER: Winter forage study
REPORT BY: Brodie Young, Environment Canterbury	DATE OF MEETING: 19 September 2016

#### Action required

- 1. Note the briefing below, as requested at September meeting, on the project to identify winter forage using satellite imagery.
- 2. Ask further questions at the zone meeting the paper will be taken as read.

# ENVIRONMENT CANTERBURY – REPORT TO HURUNUI-WAIAU ZONE COMMITTEE ON THE 2016 WINTER FORAGE STUDY

#### What is being done?

Environment Canterbury has contracted Landcare Research to use satellite imagery to produce a map identifying common winter forage crops on farmland in the region - such as kale, swedes, turnips and fodder beet.

#### Why do we need this?

Getting accurate data on landuse across the Region is important. Amongst other things this information is required as a key building block for our modelling of scenarios for limit setting. In particular we have limited knowledge of the scale and extent of intensive winter grazing in the region, or how it is changing over time. The regional extent of winter forage crops is an indicator of winter grazing. Having a regional map for 2016 would be extremely useful in calculating and modelling catchment loads. It is worth noting that this work is underway as a response to concerns raised by farmers and Zone Committees alike with respect to previous nutrient management initiatives. We are seeking refined data to better inform the models and provide more precise information that benefits the community.

The proposed Nutrient Management Plan Change 5 (PC5) uses irrigation and winter grazing as a basis for intensive farming (the extent of winter grazing is one of the opening questions posed by the portal). This study is part of our work to inform a more flexible, and risk-based approach to managing nutrient loads.

#### Is ground-truthing required?

The variation in climate and growing season across Canterbury means that to understand different vegetation growth rates, ground truthing of the satellite images must occur at different locations. We have done this by either having detailed paddock history information from farmers, or by taking photos of crop type/growth from the roadside at various locations throughout Canterbury. These photos are compared to the satellite images, so that a regional picture can be compiled. The photos are used by Landcare Research scientists for this purpose only.

The ground-truthing exercise only requires a representative sample of paddocks across the

region. We recognise that for the paddocks Landcare Research staff photographed from the roadside, no contact was made with the landowners. This type of fieldwork is common for a study like this. However we are aware of the concerns about this practice raised through the Hurunui-Waiau Zone Committee and the Rural Advocacy Network. Our next steps are to revise how we better deliver activities through our contractors and to revisit and refresh our work approaches within the Hurunui-Waiau in order to enhance transparency and strengthen our relationships with the community.

#### How much will it cost?

This is a significant job delivered across the Canterbury region and spans much of 2016. Landcare Research quoted the work at \$124,000 + GST.

#### What is the output and how long will it take?

The study commenced in April 2016. The ground truthing and image acquisition have been underway over the last few months. Ground truthing is now complete and the output, a Canterbury-wide 2016 winter forage map, will be finished by December this year.

AGENDA ITEM NO: 11	SUBJECT MATTER: Zone Facilitator's Report
REPORT BY: Ian Whitehouse, Environment Canterbury	DATE OF MEETING: 19 September 2016

#### Action required

- 1. Note follow up to briefing by AIC, HWP and NTFE at August meeting.
- 2. Note the final set of the nutrient management principles agreed by the committee at its August workshop.

#### 1 Integrated Water Storage

AIC, HWP and NTFE briefed the Zone Committee last month on progress towards an integrated approach. The developers told the committee that an integrated approach was very challenging under the HWRRP with a small part of the large Glenrae storage option being in Zone A (where storage is prohibited) and the objectives and policies in the HWRRP creating a very high hurdle for getting a consent for water storage in Zone B (and this is likely to be seen as too high risk by a developer). The developers asked the Zone Committee to consider a plan change and that this be notified within 12 months.

Before the Zone Committee can discuss it needs more information to understand the implication of the changes to the HWRRP being requested. More information is needed on the values being protected in Zone B and how the HWRRP seeks to do this (and how this differs in Zone C) and on specific concerns about the location of the boundary of Zone A in relation to a possible large water storage in Glenrae (and any other possible storages) and the values at this location. A workshop will be held in late September/early October to identify what information is needed. This workshop will include people from the zone committee (John and Ken), AIC, HWP, NTFE, and Environment Canterbury.

#### 2 Presentation to local community group in Amberley

The Facilitator and Kimberley Dynes (Water Quality Scientist) presented to a local community group in Amberley on 05 September. About 25 people attended. The group, under the banner of "Food for Thought", meets monthly to hear about and discuss sustainability issues. The meeting was organised by Andrew Boyd. Our presentation covered the CWMS, zone committee and water quality in the Hurunui and Waipara Rivers. There were lots of questions and good discussion about water takes, nutrient management and the state of the waterways.

#### **3 Final Nutrient Management Principles**

At the August workshop the Committee finalised the Nutrient Management Principles that should underpin the development of property-scale nutrient management in the zone. These are attached as well as being available on the committee's web page <a href="http://ecan.govt.nz/get-involved/canterburywater/committees/hurunui-waiau/Pages/Default.aspx">http://ecan.govt.nz/get-involved/canterburywater/committees/hurunui-waiau/Pages/Default.aspx</a>

Hurunui Waiau Zone Committee's Nutrient Management Principles that should underpin the development of property-scale nutrient management in the zone

Principles agreed by Zone Committee on 15 August 2016.

#### Context

The unintended consequences of the so-called "10%-rule" in the Hurunui Waiau Rivers Regional Plan (HWRRP) raised farmer concerns about approaches to property-scale nutrient management, particularly nitrogen (N) allocation. In October 2015 the Zone Committee included property-scale nutrient management as one of the big issues they needed to progress in preparation for the HWRRP review/sub-regional process. The committee prepared a set of principles for property-scale nutrient management in the zone in April 2016. Fourteen organisations provided feedback on these in June 2016. The committee considered this feedback and revised the principles, as below, in July and August 2016.

Property-scale nutrient management, including N allocation, is only one of the tools for achieving water quality. It is likely that a range of tools will be used. The starting point should be the community's outcomes for freshwater and a scientifically robust assessment of current water quality and the reasons for poor quality. This informs what needs to be done to manage water quality to deliver the community's outcomes for freshwater. The solutions package, including rules and limits, to deliver water quality outcomes in the zone must give effect to the NPS for Freshwater Management, including the requirement to maintain water quality. It is likely that property-scale nutrient management will be part of the suite of actions required to maintain, or where needed, improve water quality.

The following principle will be used by the zone committee to advise Environment Canterbury on changes to the HWRRP and on a water management solutions package for the zone. In using these principles the zone committee will consider all of the principles not just one or some in isolation. The Committee has discussed the value of developing a long-term vision for property-scale nutrient management in the zone acknowledging that changing the framework for nutrient allocation could require decades.

#### **Principles**

- 1 Manage all contaminants (N, P, sediment and pathogens)
- 2 All land users are required to use good management practices (GMP) or better
- 3 The properties, land uses or activities that contribute most to a water quality issue should have to contribute most to addressing the issue
- 4 Where change is required, timeframes should be realistic
- 5 Where regulatory control is justified including rules and conditions, monitoring, auditing and reporting it should be commensurate with the degree of environmental impact and pressure
- 6 Support the use of group approaches to discharge management

- 7 Use the best available technical information from all sources to inform evidence-based decision making.
- 8. A right to discharge a nutrient should be coupled with an obligation to minimise that discharge and to periodically surrender all discharge rights in excess of reasonable requirements.
- 9. The framework for property-scale nutrient management should be technically feasible, simple to operate and understandable.
- 10 Approaches to nutrient management should be able to accommodate "adaptive management" solutions that could be needed with future changes in farm practices or land use and to respond to major climatic events.



## Hurunui Waiau Zone Water Management Committee

### **Terms of Reference**

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

#### Establishment

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

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

#### **Purpose and Functions**

The purpose and function of the Committee is to:

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

#### Objectives

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







#### **Limitation of Powers**

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

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

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

#### **Committee Membership**

The Zone Committee will comprise:

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

#### **Selection of Community Members**

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

#### Quorum

The quorum at a meeting consists of:

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

#### **Chair and Deputy Chair**

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

#### **Term of Appointment**

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

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#### **Financial Delegations**

None

#### **Operating Philosophy**

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

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

#### **Meeting and Remuneration Guidelines**

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

a.	Appointed	members	- \$4,000	ра
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- b. Deputy Chair \$5,000 pa
- c. Chair \$6,000 pa.

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

Mileage will be reimbursed.

#### **Committee Support**

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

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#### Map showing Hurunui Waiau Water Management







## **Review of Hurunui Waiau ZIP recommendations**

## Prompt for discussion at Zone Committee public workshop 19 September 2016

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
3.1.1	Immediate Steps Biodiversity Fund	Target Immediate Steps Biodiversity Funding for 2011/12 through 2014/15 to some or all of the following priority areas: 1. North Pegasus Bay coastal wetlands 2. Lower Waitohi wetlands 3. Conway Flat to Waiau River mouth; 4. Braided River Ecosystems 5. Sumner Lakes complex. Seek Immediate Steps funding proposals from biodiversity "experts" and interested individuals/communities.		<ul> <li>\$435,323 allocated to July 2016 of \$500,000 Immediate Steps funding. 22 projects.</li> <li>Environment Canterbury will continue Immediate Steps funding for further five years.</li> <li><b>RECOMMENDATION</b>: Zone Committee reviews priority areas and considers a strategic/multi-year approach for some areas. Move from small scale to larger "projects" that can be leveraged to access funding from corporate bodies - projects that are visible to the greater public.</li> </ul>
3.1.2	River flows to protect aquatic ecosystems and braided-river processes	See sections 6 - 9		
3.1.3 (a)	Wetland protection & land use development	Work with landowners (and potential developers) to identify significant wetlands throughout the Zone, obtain independent ecological assessment to identify and protect, maintain and enhance these wetlands. Where wetlands are impacted by land-use development ensure appropriate offsets are developed to ensure no 'net loss' of wetlands.		No systematic identification of significant wetlands. HWP has identified wetlands in their command area. <b>RECOMMENDATION</b> : Work with HWP and other developments with goal of protecting wetlands as part of development. Committee champion the importance of protecting wetlands. Accept that zone-wide identification and independent assessment of significant wetlands is in "too hard" basket. Strategy is to work with those who are willing.
3.1.3 (b)	Wetland protection target	Set a target for wetland protection in the Zone (taking into account the CWMS target/goals) and identify how this target would be achieved (including through 3.1.3(a)).	2	See above.

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
3.1.4	Ecosystem protection & irrigation development	Work with landowners to identify and prioritise for protection significant native ecosystems throughout the Zone and obtain independent ecological assessment to identify the most significant native ecosystems. Developers will ensure, as part of irrigation development, that the most significant ecosystems adjacent to the proposed development (including dam, reservoir, canals and irrigation command area) are protected and have a restoration plan as a first order priority or where affected, ensure appropriate offsets are developed.		No systematic identification of significant native ecosystems. HWP has identified native ecosystems in their command area and wants to protect these. <b>RECOMMENDATION</b> : Work with HWP and other developments with goal of protecting native ecosystems as part of development. Committee champion the importance of protecting native ecosystems. Accept that zone-wide identification and independent assessment of significant native ecosystems is in "too hard" basket. Strategy is to work with those who are willing. May be an opportunity to engage with "Collectives".
3.1.5	Protection of high- value conservation lands in upper catchments	<ul> <li>See Section 12.</li> <li>The Zone Committee does not support major water storage reservoirs in the any of the following locations:</li> <li>mainstems of Waiau River including Boyle and Hope Rivers;</li> <li>all tributaries of Waiau, Boyle and Hope Rivers, above Hope-Waiau Confluence</li> <li>mainstem of Hurunui River below the South Branch confluence.</li> <li>The Zone Committee supports deferring South Branch and Lake Sumner water storages until Waitohi options are demonstrated not to be viable or for two years, whichever is shorter.</li> <li>The Zone Committee will work with developers and other parties to progress other more preferable water reservoir options.</li> </ul>		<ul> <li>Achieved in HWRRP.</li> <li>HWP has consent for off-mainstem storage in Waitohi. Other irrigators looking at other off-mainstem storage.</li> <li><b>RECOMMENDATION</b>: Continue to work with developers.</li> <li>Zone Committee's position is that major storage should continue to be prohibited at Lake Sumner and South Branch of Hurunui river.</li> <li>Consider minor adjustments to the Zone A (prohibited area) boundary to accommodate large Glenrae storage option.</li> </ul>

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	Торіс	ZIP Recommendation	Status	Comment/Recommendation
3.1.6 (a)	Hapua improvement	Identify what is required, beyond river flow regime, for thriving culturally and recreationally attractive river mouths and hapua on the four rivers in the zone, including cost of activities and how these might be implemented.		Actions agreed and being progressed for Waipara hapua. No list of activities available for other hapua. Richard Measures (NIWA) currently doing Ph.D. study on Hurunui hapua that may provide information. <b>RECOMMENDATION</b> : Zone Team get parties together, including land owners, rūnanga and District Council, for each hapua to identify issues and what could be done to fix the issues – as was done for Waipara hapua. As part of HWRRP review seek to understand then recommend further actions to protect hapua
3.1.6 (b)	Hapua as 'ultimate' health measure	Identify and prioritise the use of hapua to monitor the "ultimate" health of the contributing catchment, including advantages/limitations, current monitoring and cost of additional monitoring and how these might be implemented. This monitoring should start as soon as possible.	21	Some monitoring/investigations will be done for HWRRP review. <b>RECOMMENDATION</b> : Review investigations/monitoring done as part of informing HWRRP review and then make recommendation about on-going monitoring programme. Zone Committee champion the importance of hapua as an indicator of the ultimate "health" of the zone's rivers.
3.1.7 (a)	Baseline assessment of aquatic ecosystem health	Provide baseline assessment (from currently available information including from cultural assessments) of aquatic ecosystem health of rivers/streams and lakes in the Zone and identify significant information gaps and how these will be addressed.	•••	Routine state of environment ecosystem health and water quality monitoring. <b>RECOMMENDATION</b> : Zone committee to be briefed on health and water quality of rivers and lakes, catchment by catchment to understand current state and trends and any issues of concern.
3.1.7 (b)(i)	Baseline assessment of aquatic ecosystem health	Provide identification (from current information) of intermontane basin & plains aquatic and dryland (native) ecosystems, lowland stream ecosystems, high-country spring-fed foothill rivers and lakes ecosystems, and wetlands in the Zone (including relative significance of each site).		No systematic identification of significant native ecosystems. <b>RECOMMENDATION</b> : Accept that zone-wide identification and independent assessment of native ecosystems is in "too hard" category.
3.1.7 (b)(ii)	Baseline assessment of aquatic ecosystem health	Define ecosystems targets for valued ecosystems and the threats to achieving these targets.		No targets set. <b>RECOMMENDATION</b> : Accept that this is not going to happen.

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	Торіс	ZIP Recommendation	Status	Comment/Recommendation
3.1.8 (a)	Freshwater fisheries: eel	Zone Committee be informed of North Canterbury Eel Management Plan and extract key policies for inclusion in the 2012 ZIP. Ministry of Fisheries provide Zone Committee with status of longfin eel in		Zone Committee has not been briefed; however, Regional Committee has pursued increased protection of longfin eel.
		Zone.		<b>RECOMMENDATION</b> : Keep informed of Regional Committee's work to protect longfin eel.
3.1.8 (b)	Freshwater fisheries: inanga	The Zone Committee encourage University of Canterbury (with links to Department of Conservation) to identify current (and historic) inanga snawning sites in the Zone and with DOC. Bunanga and interested parties		Plan Change 4 to LWRP provides map of inanga spawning habitat and provisions to protect these habitats.
		establish spawning area targets and management actions.		<b>RECOMMENDATION</b> : No further action required by zone committee.
3.1.8	Other native fisheries	Zone Committee be informed about and develop recommendations for other native fisheries	(00)	.No specific recommendations for zone.
(0)				Regional committee project on fish barriers
				<b>RECOMMENDATION</b> : Not a committee priority unless specific issues identified in HWRRP review.
3.1.9 (a)	Braided riverbed weeds	Identify the reaches of all (major) rivers in the Zone where the active riverbed is being invaded by standing trees (e.g. willow), woody and	00	Not done.
(0)		herbaceous weeds and to develop a control strategy.		The challenge is how to empower landowners, including government agencies, to undertake extensive weed control and to
				not put onerous regulation or other hurdles in the way of this happening yet still providing some sort of regulatory backstop to ensure action by all who need to be involved.
				<b>RECOMMENDATION</b> : Committee to consider if this is a priority
319	Braided riverbed	Develop policies and rules that facilitate river-bed weed control without		Not done
(b)	weeds	compromising flood protection	<b>99</b>	<b>RECOMMENDATION</b> : Committee to consider if this is a priority
				and, if so, how it wants to proceed.
3.1.10	Increasing funding	The Zone Committee supports a feasibility study and investigation of the		HWP has a mechanism in place to fund biodiversity enhancement
		from the CWMS) by way of public and landowner contribution as part of		BECOMMENDATION: Committee to continue to support UM/D
		ן מו ווונצומנפט וווטופ שמנפו טףנוטוו.		RECOMMENDATION. Committee to continue to support HWP.

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
4.1.1	Ensuring drinking water supply	The Hurunui Waiau Regional Plan must include provision of water availability to meet future demand for community water supplies in volume, quality and location to align with existing schemes as identified by Hurunui District Council.		Provisions in HWRRP. <b>RECOMMENDATION</b> : No further action required.
4.1.2	Cost of providing drinking water source	A whole-of-life cost assessment will be carried out of the provision of secure community drinking water (and stockwater) from a Waitohi water storage reservoir.		Not done as Waitohi water storage not started. <b>RECOMMENDATION</b> : HDC and HWP work on this if HDC wishes to consider the option while recognising this cannot put an unrealistic burden on HWP.
4.1.3	Drinking water provided from major water storage	Provision of secure community drinking water (and stockwater) of a quality capable of being treated to New Zealand Drinking Water Standard should be part of an integrated "more water" project and developers will partner with Hurunui District Council to deliver this outcome in their proposals and plans		No "more water" developments have progressed beyond early design so too early to say if they could provide secure water supply. RECOMMENDATION: see above (4.1.2)
4.1.4	Partial funding for community supplies from regional and national government	In a first world country all citizens should be prepared to contribute to making clean drinking water available to communities that are not able to financially afford to meet the costs on their own. Support, as appropriate, Hurunui District Council initiatives to improve community water supplies to meet New Zealand Drinking Water Standard.		<b>RECOMMENDATION</b> : HDC provides guidance to Zone Committee on how, if at all, it wishes the Zone Committee to support the Council in improving community drinking water.
5.1	Mixing of waters	The Hurunui Waiau Regional Plan will require all developers who seek to mix waters to engage with Tangata Whenua so that appropriate solutions can be identified on a case-by-case basis.		Mixing of water provisions in HWRRP
5.2	Te Runanga o Ngai Tahu Freshwater Policy & other relevant iwi Environmental Management Plans	The Hurunui Waiau Regional Plan will take into account the Ngāi Tahu Freshwater Policy and other relevant Iwi Environmental Management Plans including Te Pōhā o Tohu Raumati – Te Rūnanga o Kaikōura Environmental Management Plan (2005); Te Whakatau Kaupapa – Ngāi Tahu Resource Management Strategy for the Canterbury Region (1990), and the North Canterbury South Marlborough Eel Management Plan (1999).	•••	Considered in developing HWRRP and by Hearing Commissioners. <b>RECOMMENDATION</b> : No further action required

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
5.3	Cultural Monitoring	The Hurunui Waiau Regional Plan will recognize and provide for cultural monitoring on all rivers in the zone.		HWRRP does not include a requirement to provide cultural monitoring of all rivers. State of Takiwa monitoring of Hurunui River done in 2011 and needs to be written up.
				<b>RECOMMENDATION</b> : Cultural monitoring (or COMAR) to be done to inform HWRRP review. This may include cultural monitoring at hapua.
5.4	Wāhi Tapu & Wāhi Taonga	The Hurunui Waiau Regional Plan will recognize and provide for all wāhi tapu and wāhi taonga within the Hurunui and Waiau catchments (e.g. spawning grounds and key habitats for native fish species are protected and maintained or enhanced to ensure the ongoing health and vitality of those species).		No HWRRP provisions specifically relate to wāhi tapu and wāhi taonga although provisions seek to protect mauri and native fish and take into consideration Ngai Tahu values. <b>RECOMMENDATION</b> : As part of HWRRP review consider whether specific provisions are needed relating to wāhi tapu and wāhi taonga.
6.1.1	Environmental flows (minimum flows and flow variability)	The Hurunui Waiau Regional Plan must include minimum flows and flow variability for Waiau River that provide for: • in-stream river ecology (including native fish and invertebrates); • maintain mauri of river; • maintenance of river mouth and hapua; • mahinga kai; • protection of river-nesting birds during breeding season; • the needs for salmon and trout fisheries (including fishability); • maintenance of in-stream recreation opportunities (particularly whitewater kayaking and jet-boating (including commercial jetboating)); • maintain existing out-of-stream uses and allow for future growth in out- of-stream uses: • primarily, irrigation supply • secondarily, hydro-power generation.		<ul> <li>HWRRP revised minimum flows and allocation. As there has been no review of existing consents these have not been implemented except for new consents.</li> <li><b>RECOMMENDATION</b>: In the revision of HWRRP only change minimum flows and allocation regime if there are very compelling reasons to do so.</li> </ul>

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
6.1.2	Tributary minimum flows	The Hurunui Waiau Regional Plan must include minimum flows for key tributaries of Waiau River to protect in-stream values of these tributaries while allowing for out-of-stream use.		<ul> <li>HWRRP includes minimum flows for key tributaries though consents have not been reviewed to give effect to these on current consents.</li> <li><b>RECOMMENDATION</b>: In the revision of HWRRP only change minimum flows if there are very compelling reasons to do so, such as there being no minimum flow set on a tributary where there is current water takes.</li> <li>As part of HWRRP review consider impact of piping of irrigation</li> </ul>
				schemes on flows and how ecosystem health objectives can be achieved in tributaries (and not just by setting minimum flows).
7.1.1	Environmental flows (minimum flows and flow variability)	The Hurunui Waiau Regional Plan must include minimum flows and flow variability for Hurunui River that provide for: • in-stream river ecology (including native fish and invertebrates); • maintain mauri of the river; • maintenance of river mouth and hapua; • mahinga kai; • protection of river-nesting birds during breeding season; • the needs for salmon and trout fisheries (including fishability); • maintenance of in-stream recreation opportunities (particularly whitewater kayaking and jet-boating (including commercial jetboating)) • out-of-stream uses: • primarily, irrigation supply • secondarily, hydro-power generation.		<ul> <li>HWRRP revised minimum flows and allocation. As there has been no review of existing consents these have not been implemented except for new consents.</li> <li><b>RECOMMENDATION</b>: In the revision of HWRRP only change minimum flows and allocation regime if there are very compelling reasons to do so.</li> </ul>
7.1.2	Tributary minimum flows	The Hurunui Waiau Regional Plan must include minimum flows for key tributaries of Hurunui River to protect in-stream values of these tributaries while allowing for out-of-stream use.		<ul> <li>HWRRP includes minimum flows for key tributaries though consents have not been reviewed to give effect to these on current consents.</li> <li><b>RECOMMENDATION</b>: In the revision of HWRRP only change minimum flows if there are very compelling reasons to do so, such as there being no minimum flow set on a tributary where there are current water takes.</li> <li>As part of HWRRP review consider impact of piping of irrigation schemes on flows and how ecosystem health objectives can be achieved in tributaries (and not just by cotting minimum flows)</li> </ul>

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
8.1.1	Increasing Waipara River Flows	The Committee supports an increase in Waipara River flows. The Committee, supported by Environment Canterbury and Hurunui District Council, will work with water users, Ngāi Tūāhuriri Rūnanga and interest groups to establish and then support a Waipara River Care Group that includes all interested parties from source to sea that will: • identify options for increasing river flows (including willow control and flow augmentation from outside of catchment); • identify other actions required to improve Waipara River.		<ul> <li>Waipara Working Group identified that willow control would improve low flows but not result in flushing flows to remove periphyton.</li> <li>Augmentation depends on HWP's irrigation plans. HWP's current plans will not be able to provide flushing flows for Waipara River.</li> <li><b>RECOMMENDATION</b>: Consider ways of improving Waipara River as part of HWRRP review/sub-regional process.</li> </ul>
9.1.1	Variation to Conway River/Tutae Putaputa Flow and Allocation Plan	The variation to the Conway River/ Tutae Putaputa Plan be further developed through discussion with submitters to ensure that concerns on the following are addressed: • value of the hapua; • river-mouth opening; • value as a bird habitat; • reliability of supply.		Decisions of Hearing on Conway flows was included in LWRP and now operative.
10.1.1	Priority to drinking water & stockwater schemes	The Hurunui Waiau Regional Plan must give priority to takes for community drinking water and stock water schemes.		Provisions in HWRRP give priority to drinking water and stock water takes.
10.1.2	Environmental flows	The Hurunui Waiau Regional Plan must provide environmental flows for Hurunui and Waiau rivers and their tributaries (see sections 6 and 7).		See above
10.1.3	Takes for water storage	The Hurunui Waiau Regional Plan must include provision for takes to major storage.		C Block included in HWRRP for Waiau and Hurunui Rivers (but not for tributaries) providing high flows to be taken to storage. <b>RECOMMENDATION</b> : Consider whether C Block takes should be allowed on some tributaries (such as Leader River) as part of HWRRP review/sub-regional process.

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
10.1.4	Irrigation vs hydro	The Hurunui Waiau Regional Plan should give priority to allocation for irrigation development (particularly for integrated irrigation and hydro- generation projects) rather than allocation just for hydro-generation.		This provision removed from notified HWRRP by Hearing Commissioners after considering submission from Meridian arguing that this provision was counter to the requirements of the NPS for Renewable Energy. All proposed developments to date are primarily irrigation developments with complementary generation. <b>RECOMMENDATION</b> : Committee continue to work with developers to encourage them to consider hydro-generation as a complement to irrigation. As part of the HWRRP review, the Committee consider whether it wishes to recommend that Environment Canterbury planners include a provision giving priority to allocation for irrigation rather than hydro-generation, and whether such a provision is likely to survive the RMA Hearing process.
10.1.5	Inter-catchment transfers	The Hurunui Waiau Regional Plan must provide for transfer of water from Waiau River to Hurunui Basin and from Hurunui River to Waipara catchment. The River Plan should ensure local Runanga determine how the waters are mixed.		Included in HWRRP
10.1.6	Parnassus – Cheviot irrigation	The Hurunui Waiau Regional Plan will ensure water will be available to meet reasonable demand for new irrigation in Parnassus – Spotswood – Cheviot area.		Policy and rules provide for this
10.1.7	Irrigable land target	The Hurunui Waiau Regional Plan should ensure water would be available (including through storage) to irrigate the approximately 100,000ha (net) irrigable area in the Zone.		C Block allocation on Waiau and Hurunui Rivers provides sufficient water for all irrigable land in zone.
10.1.8 (a)	Water use efficiency	The Hurunui Waiau Regional Plan will ensure new irrigation includes efficient distribution and irrigation systems and that water-use efficiency continues to improve in current irrigation.		Policies in HWRRP relating to water use efficiency.
10.1.8 (b)	Water use efficiency	The Zone Committee will work with Amuri Irrigation Company and Irrigation New Zealand to identify and then support activities to improve water-use efficiency amongst current irrigators in the Zone.		AIC's Irrigation Management System includes focus on water-use efficiency. Piping will improve water-use efficiency.

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
11.1.1	Water Quality Outcomes for Zone	<ul> <li>Water quality outcomes for mainstem of Hurunui and Waiau Rivers:</li> <li>Achieve in most years periphyton limits as identified in NRRP (that is, four years in every five);</li> <li>Safe for contact recreation;</li> <li>Maintain or enhance the mauri of the river;</li> <li>Toxin producing cyanobacteria shall not render the river unsuitable for recreation or animal drinking water;</li> <li>Nutrients (particularly nitrate and phosphorous) will decrease over time at sufficient rate and to a lovel such that additional irrigation.</li> </ul>		Water quality outcomes are reflected in HWRRP. N and P have not decreased over time – no headroom created. Toxic algae (Phormidium) have been present on occasions in Hurunui River. <b>RECOMMENDATION</b> : Review the water quality outcomes as part of review of HWRPP. Powice if required
		<ul> <li>development can occur without compromising water quality outcomes for the river (i.e. reduce current loads to create "headroom" for new irrigation development).</li> <li>Water quality outcomes for tributaries of major rivers:</li> <li>As above for mainstems, and;</li> <li>Achieve ecosystem health outcomes agreed for the particular tributary through a collaborative community-based process.</li> </ul>		of review of HWRRP. Revise if required.
11.1.2	Nutrient load limits for Hurunui River	The goal for water quality in the Hurunui River at the SH1 bridge will be at or about the same or better standard as present, in terms of nitrate and phosphorus loads. The Hurunui and Waiau River Plan will include targets for nitrate (N) and phosphorous (P) limits for the Hurunui River (mainstem) at Mandamus, State Highway 1 and the river mouth. These limits must be implemented and applied in a way that results in the wide uptake of best practices without diminishing the viability of current land users. This will require flexibility in the timing of their implementation where consequences arise that unreasonably impact on the wellbeing of the Hurunui community. This is not a get out of jail card for farmers but recognition of the need to provide reasonable time for change to occur in a manner that does not destroy existing economic value. The load limits will be reviewed in five years.		<ul> <li>Limits included in HWRRP with supporting rules to manage to the limits.</li> <li>The "10%-rule" has unintended consequences for dry land farmers. This has been addressed through the Environment Canterbury Advice Note.</li> <li><b>RECOMMENDATION</b>: Review the water quality limit framework for Hurunui River and the approach to managing to these at the property-scale as part of review of HWRRP. Revise as required.</li> </ul>

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
11.1.3	Implementation Plan	Urgently develop a plan for implementing improved nutrient management in Hurunui Basin. This plan must identify roles, responsibilities and timetable, including incentives for uptake and resourcing to facilitate and support the tributary- and farmer-based approach. The direct involvement and leadership by community based land user groups will be critical to this approach being successful. Develop plan(s) for implementing improved nutrient management in other parts of the Zone.		Improved nutrient management is being led by AIC and North Canterbury Landcare Group. A "GMP game plan" has been developed, with priorities, as part of the 5-year Delivery Outcomes and Milestones. <b>RECOMMENDATION</b> : Continue to support the "collectives".
11.1.4	Tributary- and community-based approach	Implementation of improved nutrient management to achieve the load limits should take a tributary- and land/water user-based approach. The Hurunui and Waiau River Plan should support a tributary- and land/water user-based approach to nutrient management.		HWRRP strongly encourages a "collective" approach. <b>RECOMMENDATION</b> : Continue to support the "collectives".
11.1.5	Zone Committee leadership	The Zone Committee will take a lead role in communicating the need for and supporting improved nutrient management in the Zone based on a tributary and farmer-based approach. The nitrate (N) and phosphorous (P) guidelines for the tributaries of Hurunui River (Pahau, St Leonards, Dry and Waitohi should be consistent with the water quality standards set in the Hurunui Waiau plan for the Hurunui river at State Highway 1.		Zone Committee has taken leadership in supporting the need for good nutrient management. <b>RECOMMENDATION</b> : Continue to take a leadership role in supporting good nutrient management practices.
11.1.6	Farm-scale guidelines	Implementation of improved nutrient management will include guidelines to land/water users on "good management" N and P loads for their land.	•••	Industry-agreed GMPs produced and being implemented through audited FEPs. <b>RECOMMENDATION</b> : As part of review of HWRRP, review property-scale approach to nutrient management to achieve water quality outcomes.
11.1.7	Regulatory backstop	The Hurunui and Waiau River Plan should require land/water users in Hurunui Basin to adopt good nutrient management practices within a reasonable time if voluntary farmer-based approach has not achieved required uptake of good nutrient management practice. The Committee will engage with land users and others to determine what is a "reasonable" time.		<ul> <li>HWRRP encourages "collective" approach with land use farming activity consent required in 2017 as a backstop where not part of collective.</li> <li><b>RECOMMENDATION</b>: As part of review of HWRRP, review property-scale approach to nutrient management to achieve water quality outcomes.</li> </ul>

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
11.1.8	New irrigation development	The Hurunui and Waiau River Plan will include a requirement for new irrigation development to adopt good nutrient management practice and achieve their own load limits for Hurunui River and other catchment load limits as these are set.		AIC, HWP and NTP have land use consents that include nutrient discharge allowances and committed to GMP. <b>RECOMMENDATION</b> : As part of review of HWRRP, review water quality limits and nutrient management requirements needed to achieve water quality outcomes.
11.1.9	Waiau River & Hurunui below SH1	Set load limits based on NRRP targets, for N and P for Waiau River and for Domett area and then for other areas in the Zone including Conway and Waipara Rivers.	9	Water quality limits still to be set for other rivers. Will be part of revision of HWRRP/sub-regional process.
11.1.1 0	Monitoring	Prepare and then implement a monitoring programme to provide the knowledge required to underpin improved nutrient management that achieves load limits for Hurunui and Waiau Rivers and main tributaries. This must include monitoring of water quality in hapua.	<b>2</b>	Monitoring programme in place for rivers; not for water quality in hapua. See 3.1.6 (b)
12.1.1	Integrated approach	The Zone Committee will work with developers to bring forward an integrated "more water" proposal or proposals for the Zone that: • uses water from Waiau and Hurunui Rivers in an integrated manner; • utilizes off-mainstem storage reservoir(s); • provides more water for Waipara River and environmental flows for Waitohi River; • includes hydro-power generation as part of an integrated approach with irrigation development; • protects and develops wetlands and significant native ecosystems within the irrigation command area; • will be capable of irrigating (with existing irrigation) most of the approximately 100,000ha (net) of irrigable land in the Zone; • will adopt good nutrient management practices to meet their share of nutrient load limits for Hurunui River (and other areas as limits developed for all of the Zone); • meets significant in-stream, cultural, environmental and recreational needs • uses highly efficient distribution and irrigation systems; • takes a community irrigation scheme approach; • provides recreation opportunities, where possible.		Committee has worked hard, with limited success to date, to get NTP, AIC and HWP to work together on an integrated water infrastructure approach. Signs are encouraging that the developers are now working collaboratively and could bring an integrated approach to the committee in the near future. <b>RECOMMENDATION</b> : Zone Committee continue to encourage and support a collaborative, integrated approach to water infrastructure.

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
12.1.2	Economic viability	Zone Committee will work with developers and others to progress investigations, funding discussions and economic assessments of major water storage in Waitohi River.		HWP has consent for storage in Waitohi River.
12.1.3	Waitohi/Waiau option	The Committee supports an integrated option utilizing a major water storage in Waitohi River combined with or in conjunction with transfer of Waiau River water and storage of Waiau River water. The Committee regards this is an environmentally & recreationally attractive option but acknowledges that it is uncertain at this stage if Waitohi River storage is affordable.		HWP has consent for Waitohi storage but construction has not started.
12.1.4	Lake Sumner	The proposal to manage Lake Sumner as a water storage be deferred until a Waitohi storage option is shown not to be economically viable or for two years (from October 2011), whichever is sooner.	99	HWRRP prohibits the use of Lake Sumner as a water storage. <b>RECOMMENDATION</b> : Zone Committee endorses the HWRRP provisions that prohibit the use of Lake Sumner as a water storage.
12.1.5	South Branch	The proposal to dam South Branch for a water storage be deferred until a Waitohi storage option is shown not to be economically viable or for two years (from October 2011), whichever is sooner.	99	HWRRP prohibits damming of South Branch Hurunui River. <b>RECOMMENDATION</b> : Zone Committee endorses the HWRRP provisions that prohibit damming of South Branch.
12.1.6	Excluded areas for major water storage reservoirs	The Zone Committee does not support major water storage reservoirs in the any of the following locations: • mainstems of Waiau River including Boyle and Hope Rivers; • all tributaries of Waiau, Boyle and Hope Rivers, above Hope-Waiau Confluence; • mainstem of Hurunui River below the South Branch confluence. The Zone Committee will work with developers and other parties to progress other water reservoir options.		<ul> <li>HWRRP prohibits damming and water storage in these areas.</li> <li><b>RECOMMENDATION</b>: Zone Committee endorses the HWRRP provisions that prohibit water storage in these areas.</li> <li>As part of HWRRP review, consider: <ul> <li>minor adjustment to the Zone A (prohibited) boundary to enable a large Glenrae option;</li> <li>whether the consenting requirements for Zone B are reasonable given the values in this area or are unreasonable in imposing such a high consenting hurdle that developers will consider water storage in Zone B as being too "risky".</li> <li>a "what-if" scenario where a "reasonable" storage option in Zone B or C is found to not be technically feasible (e.g. because of seismic risk) and whether this would be sufficient reason for significantly adjusting the Zone A boundary.</li> </ul> </li> </ul>

	Торіс	ZIP Recommendation	Status	Comment/Recommendation
12.1.7	On-farm and small- scale storage	The Zone Committee supports on-farm storage and small-scale storage as part of an integrated approach. The Hurunui Waiau Regional Plan should make the consent process for on-farm and small-scale storage less onerous than at present.	•••	HWRRP supports on-farm and small-scale storage, however, the HWRRP does not provide C Block allocations for tributaries that would allow high flows to be taken to storage. See 10.1.3
12.1.8	Regional Plan give effect to Zone Committee position	The Hurunui Waiau Regional Plan will give effect to the Zone Committee position as above on: • The scope and requirements in an integrated approach (12.1.1); • The "preferred option" (12.1.3); • Lake Sumner (12.1.4); • South Branch (12.1.5); • Excluded areas (12.1.6) • On-farm storage (12.1.7).		See above
13.1.1	Protect significant recreation locations	<ul> <li>The Hurunui and Waiau Regional Plan must safeguard:</li> <li>Significant salmon spawning sites;</li> <li>Significant trout fishing river reaches;</li> <li>The Hurunui River from Sisters Stream to Surveyors Stream as a nationally-significant whitewater kayaking river-reach.</li> <li>Upper Waiau and Hope catchments as a highly valued whitewater kayaking resource.</li> </ul>		HWRRP includes schedule of significant salmon spawning sites, protects significant trout fishing reaches in upper Waiau and upper Hurunui Rivers, and protects the nationally-significant whitewater Maori Gully reach of Hurunui River.
13.1.2	River flows for recreation	<ul> <li>The Hurunui and Waiau Regional plan will ensure that the flow regime will:</li> <li>Ensure salmon passage;</li> <li>Prevent mouth closures.</li> <li>The Hurunui and Waiau Regional plan will recognise:</li> <li>Flows needed for salmon angling;</li> <li>Flows needed for jet boating.</li> <li>The Zone Committee will work with developers to increase flows in the Waipara and provide flows in the Waitohi in a manner that will benefit recreation (swimming/fishing).</li> </ul>		<ul> <li>HWRRP set minimum flows and allocation taking into account the requirements for salmon passage and for preventing mouth closures and recognising flows needed for angling and jet boating. These minimum flows are not yet operative as consents have not been reviewed. Waiau River mouth has closed at least once in last few years.</li> <li>HWP development required to increase flows in Waipara or Waitohi Rivers.</li> </ul>
	Торіс	ZIP Recommendation	Status	Comment/Recommendation
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13.1.3	Quality of bathing sites	The Hurunui and Waiau Regional Plan will include gradings to be achieved in bathing sites for the Hurunui and Waiau Rivers. The Zone Committee with support from Environment Canterbury will work with developers and interested parties to deliver enhancement opportunities for the bathing sites identified in the Waipara and Waitohi Rivers.	2	HWRRP does not include gradings to be achieved at specified bathing sites. <b>RECOMMENDATION</b> : As part of HWRRP review consider water quality outcomes in relation to contact recreation.
13.1.4	Toxic Algae	The Hurunui and Waiau Regional Plan will ensure there are no toxic algae outbreaks in the Hurunui and Waiau Rivers. The Zone Committee with support from Environment Canterbury will work with developers and interested parties to ensure that toxic algae blooms do not occur in the Waipara and Waitohi Rivers		Toxic algae (Phormidium) outbreaks have occurred, for example at Balmoral camping ground (SH7 bridge) on Hurunui River. <b>RECOMMENDATION</b> : Zone Committee accept that a target of no toxic algae outbreaks is probably unrealistic and as part of review of HWRRP set target(s) and recommend actions to minimise toxic algae outbreaks.
13.1.5	Increased trout spawning	Require monitoring in the Waipara and Waitohi Rivers to ensure increased flow is increasing trout spawning habitat.	2	Augmentation of flows has not occurred as HWP not yet underway. <b>RECOMMENDATION</b> : As part of HWRRP review/sub-regional identify a package of actions to improve Waipara and Waitohi Rivers. This will take into account HWP's plans.