

**47<sup>TH</sup> MEETING OF THE  
REGIONAL WATER MANAGEMENT COMMITTEE**

**Tuesday 14 February 2017 at 2-6pm**

**TO THE CHAIR AND MEMBERS OF THE  
REGIONAL WATER MANAGEMENT COMMITTEE**

**MEMBERSHIP OF THE COMMITTEE**

Andy Pearce (Chair)

<b>Community Representatives</b>	
Hugh Canard	Cole Groves
Jane Demeter	Nicky Hyslop
Andrew Mockford	Ross Millichamp
Vicky Southworth	
<b>Zone Representatives</b>	
Matt Hoggard	Kaikoura
Michele Hawke	Hurunui-Waiau
<i>Vacant</i>	Waimakariri
<i>Vacant</i>	Banks Peninsula
Les Wanhalla	Christchurch-West Melton
Ron Pellow	Selwyn-Waihora
Ben Curry	Ashburton
John Talbot	Orari-Temuka-Opihi-Pareora
Barry Shepherd	Upper Waitaki
Bruce Murphy	Lower Waitaki-South Coastal Canterbury
<b>Christchurch City Council</b>	Cr Sara Templeton
<b>District Council Representatives</b>	
Mayor Winton Dalley	North Canterbury
Mayor Sam Broughton	Mid Canterbury
Peter McIlraith	South Canterbury
<b>Te Rūnanga o Ngāi Tahu</b>	Rebecca Clements
<b>Ngā Rūnanga</b>	Nigel Harris
	Riki Lewis
	David Higgins
<b>Councillors</b>	Cr Rod Cullinane
	Cr Claire McKay
<b>Central Government Observer</b>	Nick Vincent (MFE) Kevin Steel (MAF) Jenny Ridgen (MPI)
<b>CDHB Observer</b>	Dr Alistair Humphrey

**VENUE:** Council Chamber, 200 Tuam Street, Christchurch

**BUSINESS:** As per Order Paper attached.  
Agendas are available on our website three days prior to the date of the meeting  
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Canterbury**  
Regional Council  
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## COMPLIANCE WITH LOCAL GOVERNMENT ACT 2002 DECISION-MAKING REQUIREMENTS

Except as below, a statement of compliance and a completed decision checklist is required for any agenda item on a council committee or the council recommending that a decision be made. This will be the responsibility of the person signing off the agenda item.

### The compliance statement and checklist will not be used for:

- Recommendations that information be received or that the Council make a decision.
- Decisions taken under the Resource Management Act 1991 or the Biosecurity Act 1993 in relation to resource consents, decisions required when following the procedures set out in Schedule 1 of the Resource Management Act 1991, other permissions, submissions on plans, or references to the Environment Court.
- Decisions taken to proceed with enforcement procedures under various primary or secondary legislation or regulations, including procedures under the Resource Management Act 1991, the Biosecurity Act 1993, the Local Government Act 2002, and Environment Canterbury Bylaws.
- Administrative and personnel decisions that are entirely internal to Environment Canterbury.
- Other decisions where the procedures to be followed are set out in Legislation.

### COMPLIANCE STATEMENT

The council committee (or the council) must formally certify that:

- (a) It is satisfied that it has sufficient information about the options and their benefits and costs, in terms of the region's social, economic, environmental and cultural well-being and the effects on community outcomes, bearing in mind the significance of the decisions.
- (b) It is satisfied that it knows enough about and has given adequate consideration to the views and preferences of affected and interested parties bearing in mind the significance of the decision.

### INFORMATION CHECKLIST

(a)	A Statement of the Proposed Decision
(b)	A Statement of the Objective of the Proposed Decision and the Issue or Problem being addressed
(c)	A list of all reasonably practicable options, (including doing nothing).
(d)	For each option in (c): An evaluation of the Benefits and Costs, in terms of the region's social, economic, environmental and cultural well-being.
(e)	For each option in (c): A statement of the extent to which community outcomes would be promoted or achieved in an integrated and efficient manner.
(f)	For each option in (c): A statement of the Impact, if any, on Environment Canterbury's capacity to undertake its statutory responsibilities
(g)	If the Proposed Decision is a significant decision in relation to land or a body of water, a statement of how Maori values have been taken into account
(h)	A Statement of significant inconsistencies, if any, with any Existing Policy, Plan or Legislation arising from the Proposed Decision.
(i)	A statement how the views and preferences of affected or interested persons have been given adequate consideration during the definition of the problem or issue, the objective, the assessment of options and the development of the proposed decision, including the particular contribution of Maori to the decision-making process.

### Notes:

The significance of proposals and decisions determines how much time, money and effort is put into exploring and evaluating options and obtaining the views of affected and interested parties. The significance of proposals and decisions is determined through reference to criteria contained in the policy on significance.

The policy on significance together with Section 76 of the Local Government Act 2002 set out the Council's requirements in relation to decisions. Some decisions can only be made through the Long-Term Council Community Plan, or after the Special Consultative Procedures set out in the Act have been used, (refer to the policy on significance and the Act).

All decisions of Environment Canterbury are subject to the decision-making requirements of section 76 of the Act unless inconsistent with specific requirements of other legislation.

**CANTERBURY REGIONAL COUNCIL**  
**REGIONAL WATER MANAGEMENT COMMITTEE MEETING**

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**MINUTES OF 46<sup>TH</sup> MEETING OF THE REGIONAL WATER MANAGEMENT COMMITTEE  
HELD IN THE COUNCIL CHAMBER, CANTERBURY REGIONAL COUNCIL,  
200 TUAM STREET, CHRISTCHURCH  
ON TUESDAY 13 DECEMBER 2016 AT 1.30PM**

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KARAKIA  
CLOSURE OF PUBLIC MEETING

**PRESENT**

*Chair:* Andy Pearce

*Community:* Hugh Canard, Jane Demeter, Nicky Hyslop, Ross Millichamp, Vicky Southworth, Cole Groves

*Zone Representatives:* Michele Hawke, Ron Pellow and Barry Shepherd

*Christchurch City Council:* Cr Sara Templeton

*Te Rūnanga o Ngāi Tahu:* Rebecca Clements

*Ngā Rūnanga:* Nigel Harris, Riki Lewis

*Territorial Authorities:* Mayor Sam Broughton and Peter McIlraith

*Environment Canterbury:* Cr Rod Cullinane and Cr Claire McKay

*Central Government Observers:* Murray Doak

CDHB Observer: Judy Williamson

**IN ATTENDANCE**

Barbara Nicholas, Peter Ramsden, Bill Bayfield, Lesley Woudberg, Dan Olykan, Tim Davie, Cr Tom Lambie and Therese Davel (Environment Canterbury), Ted Howard via Lync (Kaikoura Zone Committee), Pam Richardson and Grant Edge (Zone Committee members)

**WELCOME**

Andy Pearce opened the meeting at 1.30pm.

Nigel Harris opened with karakia.

Andy Pearce welcomed everyone, especially new members. There was a round of introductions.

## ITEM 1 - APOLOGIES

Apologies were received from Matt Hoggard, Andrew Mockford, Les Wanhalla, Ben Curry, John Talbot, Nick Vincent, Mayor Winton Dalley, David Higgins, Bruce Murphy, Dr Alistair Humphrey and Jenny Ridgen

## ITEM 2 - CONFLICTS OF INTEREST

Conflict of interest schedules were circulated.

## ITEM 3 - MINUTES OF THE PREVIOUS MEETING

Minutes of meeting of 11 October 2016

*(Refer pages 4 - 14 of agenda)*

### **Resolved:**

***That the minutes of the Regional Water Management Committee meeting held on 11 October 2016, be received and, subject to the following amendments, be confirmed a true and accurate record:***

***Item 7 page 6 of the agenda:***

***'Te Waihora' to be replaced throughout by 'Wairewa'***

***4<sup>th</sup> bullet point, Item 9 page 8 of the agenda:***

***'... over the last 2-3 years, including the effects of climate change on habitat, and how this has ...'***

## ITEM 4 - MATTERS ARISING

None.

## ITEM 5 – CORRESPONDENCE

None.

## ITEM 6 – ZONE UPDATES

*(Refer pages 15 - 27 of the agenda)*

Barbara Nicholas presented this item, noting that the updates were at the beginning of the meeting so that consideration of the work across the zones is the starting point of developing the regional committee's work programme for 2017. Listening to the updates, members were invited to listen for where the same issues come up in more than one zone, and/or where there are issues that require inputs and attention at regional level.

In discussion there was a suggestion that higher-level branding for Canterbury's Water be done, so that people think of it as a region-wide resource rather than at zone level. And that people do not always know what zone they live in and all they care about is the water in Canterbury.

After all the other zones representatives had provided a brief update on their paper Andy Pearce invited Ted Howard to tell the Committee about some of the issues facing Kaikōura at the moment.

Ted informed the Committee that when they started their zone process the focus was mostly around ecological issues with drought becoming a major issue 2 years ago. The earthquake has changed everything, and seriously stressed every bit of infrastructure e.g. bridges, irrigation etc. Ted noted that especially rural areas were suffering and the focus for the next 12 – 18 months would be around psychological and physical survival. With all the traffic going through Lewis pass winter could be a risky time. There is also a significant risk of flooding in a large rainfall event as the riverbeds are up to 2m higher than before the quake.

Quoting a number of examples of damage it was clear that the scale of the event was overwhelming.

Andy Pearce thanked Ted for his time and sharing his story. He acknowledged how overwhelming the situation was and asked Ted to share with his zone committee members the thoughts of everyone in the Committee are with them.

**Resolved by consensus:**

**That the Regional Committee:**

- 1. Note the reports from the zone committees; and**
- 2. Consider where the regional committee can add value to the work of the zone committees.**

**ITEM 7. – RECREATION AND AMENITY WORKING GROUP**

*(Refer pages 28 - 30 of the agenda)*

Grant Edge reported on the recreation and amenity working group meeting immediately prior to the regional committee meeting, that followed up on the issues raised at the working group meeting reported in the agenda.

Following advice and discussion the working group has agreed:

- The Sub-regional process continues to be way forward as both plans and activities can progress recreational opportunities
- There is still a need for a scoping study to identify information gaps for recreation
- The Regional committee should continue to champion recreational and amenity values, and develop a work programme and action plan to deliver against Targets
- Regional committee to progress this in first instance
  - A. via engagement with
    - a. zones to
      - Understand what they are already doing wrt recreation and amenity values
      - Understand any recreational knowledge gaps
      - Encourage zones to request briefing from TAs on the RPS opportunity to consider amenity values (note: Schedule of outstanding natural landscape – at regional level.)
    - b. DOC to understand the work they already do.
  - B. Through exploration of how do we get people to know what we are doing and how we can make better use of information already available about recreational sites.

**Resolved by consensus:**  
**That the Regional Committee:**  
**1. *Note the RAWG update.***

**ITEM 8 – DRINKING WATER REPORT**  
*(Refer pages 31 - 35 of the agenda)*

Tim Davie presented this item, noting the Canterbury Drinking Water Reference Group was formed in response to the Havelock North campylobacter incident earlier in 2016. The Group identified 5 tasks to ensure that should a similar event occur there would be a plan in place to deal with it.

The 5 tasks were:

- 1) Review compliance in the Canterbury region with current regulation;
- 2) Identify high-risk drinking water supplies, alongside current measures / plans to mitigate or eliminate these risks;
- 3) Review contingency planning and preparedness for contamination response;
- 4) Review and develop recommendations on any other measures that may be required to ensure the security of drinking water supplies, including any associated costs of such measures; and
- 5) Develop a strategy if Canterbury councils are asked for information through the Havelock North Inquiry process.

Items 1 and 2 have been done; Item 3 was nearly done and there will be an update at the Chief Executives Forum in February 2017.

**Resolved by consensus:**

**That the Regional Committee:**  
**1. *Receive and note the existence and progress of the Canterbury Drinking Water Reference Group.***

**ITEM 9 – WORKSHOP ON PRIORITIES FOR 2017**  
*(Refer pages 36 - 37 of the agenda)*

Barbara Nicholas facilitated the workshop and provided brief background as to former working groups. She noted there were four working groups, Biodiversity and Ecosystem Health; Regional Infrastructure; Recreation and Amenity; and Land Use and Water Quality. The latter is now in abeyance. There was also a Start and Finish working group for a short period to look at public funding of public benefit elements of infrastructure projects.

Jane Demeter provided a quick update on what the Biodiversity and Ecosystem Health Working Group (BEWG) had done and Andy Pearce provided an update on how the Regional Infrastructure Working Group (RIWG) was tracking.

The Committee then worked in five smaller groups to reflect on what they had heard from zone committee updates, and to discuss the issues the regional committee should be working on.



Via the plenary session the group identified the following potential working groups (with some discussion of whether some working group's work could be integrated into other working groups).

1. Infrastructure
2. Braided rivers
3. Communications/education
4. Biodiversity and ecosystem health
5. Recreation and amenities

Additional issues and roles to be discussed further included:

- Work with central government/advocacy
- Help prioritise regional work streams
- Lead discussions on limits/distributions
- Cross- learning on implementation of limits
- Water quality outcomes – holding then improving
- Energy security and efficiency
- Regional opportunities to lift compliance
- Regional outcomes should reflect lead from zone implementation programmes.

The feedback will be collated in one report for the Committee's consideration at its first meeting in 2017 to formalise its work programme. Members were encouraged to start considering which groups they would want to contribute to.

One action point for staff to consider was setting up an on-line forum between Zone Committees and the Regional Committee.

*Peter McIlraith left at 4.34pm*

**Resolved by consensus:**

**That the Regional Committee:**

- 1. *Provide direction on the work programme for 2017,***

*Cr Cullinane left at 4.39pm*

*Cr McKay and Rebecca Clements left 4.43pm*

## **ITEM 10 – 2017 MEETING DATES**

*(Refer page 38 of the agenda)*

There was a request from Christchurch City Council to start the meeting later in the day. After a brief discussion the committee decided to start the meetings at 2pm, aim for a 6pm finish with the intention to change it back if it does not suit; and/or change it in the winter time.

It was noted there was provision for overnight accommodation for members who travel far.

**Resolved by consensus:**

**That the Regional Committee:**

- 1. *Agree on the schedule of meetings for 2017, amending the start time to 2pm.***

## **ITEM 11 - GENERAL BUSINESS**

Barry Shepherd noted that it would be useful to address linkages at regional level between

all targets.

**CLOSURE**

Andy Pearce wished everyone a Merry Christmas with safe travels during the holiday period.

The meeting ended at 4.47m.

Nigel Harris closed with a karakia.

**Date:** \_\_\_\_\_

\_\_\_\_\_ **Chairperson**

<b>AGENDA ITEM NO: 6.</b>	<b>SUBJECT MATTER: RECREATION AND AMENITY WORKING GROUP</b>
<b>REPORT:</b> Regional Water Management Committee	<b>DATE OF MEETING: 14 February 2017</b>
<b>REPORT BY:</b> Barbara Nicolas	

## **PURPOSE**

To update committee on the work of the recreation and amenity working group

## **BACKGROUND**

The recreation and amenity working group (RAWG) met on the morning of the December 14 regional committee meeting. The main focus of that meeting had been a discussion of a proposal from Scott Pearson (North Canterbury F&G) and Doug Rankin (Whitewater NZ) that mapped out a possible pathway for ensuring recreation and amenity values were adequately understood and recognised under the wider CWMS process.

The working group provided a verbal update to the regional meeting (as noted in the last minutes) with their recommendations for continuing work in this area. Tom Lambie and staff met with Scott and Doug in January to discuss the deliberations and directions of the working group and committee. The meeting discussed possible uses of a scoping report and the issues to which it needed to respond. Staff will now progress work with the working group to scope this report. Scott and Doug are keen to remain involved and will provide examples of key recreational issues where current structures and approaches are not working well.

## **RECOMMENDATIONS**

- That the committee note the report of RAWG

## **ATTACHMENTS**

RAWG meeting notes 13 December 2016

## Recreation and amenity working group 13 December 2016

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**Present:** Grant Edge, Thomas Kulpe, Hugh Cannard, Tom Lambie

**Staff:** Barbara Nicholas, Jason Holland

**Apologies:** Matt Hoggard

Agreed at our last meeting to discuss Doug and Scott's proposal for how to integrate recreational values into planning process (as means to deliver CWMS targets).

Jason Holland attended. Noted:

- Planning information hungry process – as community demands. Good info enables conversation to attend to key issues and possible solutions.
- Welcomes current info (angling surveys every 4 years/ kayaking report/swimming report (due Feb 2017). There may be some gaps that could be filled to make sure all up to date
- Use of the information is in the sub-regional process – feed into conversations with community.
- Proposal as tabled seems to look for a region-wide approach, but do not think it is the way to go, given the approach the council is taking. Planning solution needs to reflect the conversations at local level, and balancing of all the values.

Discussion noted:

- Proposal missing out on the conversations around the table with the community, and the value of collaborative process – need for the community process/explorations. What would be useful for that process?
- ? spend money on scoping report – where are the gaps? And then recommendations.
- That change will take time – things in places are likely to get worse before they get better.
- Need to think outside the planning process and identify where quick wins can take place – engage with the community and the non-stat processes eg Coes Ford initiatives
- Enough mechanisms with planning process and regional policy statement that give enough direction. Key thing is the resource – flows and water quality – and then whatever the activity it will benefit
- ? go back to meeting early in year – where do they have activity and what do they need?
- District councils have a role too – proposal does not address that.
- ? do planners know where the gaps are for recreation outcomes? Always get social/economic/cultural/biophysical assessments for sub-regional processes (recreation within social)
- Plans cannot deliver on *one* set of values – higher-level plan directives are multi-valued. CWMS, RPS etc provide facilities – and then a management plan/catchment decides what needs to happen.
- To ensure recreational values are included, people need to participate in community processes.
- If have lost recreational values, how does that impact on planners? Where does distribution of recreational opportunities get addressed? Done at zone scale. Community notes that things have been lost and higher order documents do require that those issues be addressed – plans need meaningful limits, and how to get there. When talk about what is degraded, look at values in the zone – recreational groups need to be in the process,

note what is degraded and what is important to achieve those values, and then this opens up conversation with other parties. Have conversations earlier in the process.

- Target area is 'recreation and amenity' – 'amenity' an holistic approach to landscape. But others may see 'amenity as carparks/toilets/etc. Large scale amenity addressed in RPS, and contributed to via other targets such as braided rivers. But physical amenities that support recreational activity may require additional work eg new toilets. This not likely to be addressed via the Plan.
- Plan changes 1-3, minimum flows have gone up. Very difficult for any sub-regional to downsize minimum flows.
- River flows (even without extractions) are dropping over recent decades. There will be ongoing pressure.
- Some zips have nothing in them on recreational values. Needs strengthening. How to protect values (including passive values) in planning process? How to give these values sufficient weight?
- How can recreational values be considered in the *consenting* process?
- Options for letting people know what is happening in various sites (signage/apps/websites etc)

#### **Agreed**

- Need to encourage recreational interests to engage with sub-regional process – to deliver local solutions to be delivered via statutory and non-statutory actions
- Need a scoping study of where the information gaps are
- Need to raise profile of recreation at zone level

**Advice to full regional committee:**

*Sub-regional process continues to be way forward as is both plans and activities that can progress recreational opportunities*

*Agree need scoping study to identify information gaps for recreation*

*Regional committee champion recreational and amenity values - work programme and action plan to deliver against Targets*

*Regional committee to progress this in first instance*

A. *via engagement with*

1. *zones to*

- *Understand what they are already doing wrt recreation and amenity values*
- *Understand any recreational knowledge gaps*
- *Encourage zones to request briefing from TAs on the RPS opportunity to consider amenity values (note: Schedule of outstanding natural landscape – at regional level.*

2. *DOC to understand the work they already do.*

B. *Explore how do we get people to know what we are doing? And make better use of information already available about recreational sites*

<b>AGENDA ITEM NO: 7</b>	<b>SUBJECT MATTER: 2017 WORK PROGRAMME</b>
<b>REPORT:</b> Regional Water Management Committee	<b>DATE OF MEETING: 14 Feb 2017</b>
<b>REPORT BY:</b> Barbara Nicholas, Facilitator	

## PURPOSE

To inform the committee's decisions about the work programme and working groups for 2017.

## BACKGROUND

The purpose and function of the CWMS regional committee is to:

1. Monitor progress of the implementation of the CWMS cross the Canterbury Region, and
2. Provide advice to Environment Canterbury on regional issues associated with the implementation of CWMS.

In previous years this work has been progressed through a combination of

- regular reports on key issues and work streams (e.g. CWMS targets reports, drinking water)
- requests for specific advice (e.g. use of public funding for environmentally beneficial projects), and
- work streams on specific areas.

In addition, zone committee representatives have provided an update on the work of their committees.

At a workshop at the 13 December 2016 regional committee meeting the committee

- a. Was briefed on the previous structure of working groups
- b. Identified potential priority work areas and consequential working groups for the year ahead
- c. Named some additional issues and roles for further consideration.

The five potential working groups identified were:

1. Infrastructure
2. Braided rivers
3. Communications/education
4. Biodiversity and ecosystem health
5. Recreation and amenity.

Other issues noted for further discussion were:

- Further regional scale work
  - Regional outcomes should reflect lead from zone implementation programmes.
  - Prioritisation of regional work streams
  - Regional opportunities to lift compliance
- Limits and water quality
  - Discussions on limits/distributions
  - Cross- learning on implementation of limits
  - Water quality outcomes – holding then improving
- Work with central government/advocacy
- Energy security and efficiency

## DISCUSSION

Further information about each of the CWMS areas of work that could be covered by the proposed working groups is provided in the appendices to this paper. There will also be presentations at the meeting with opportunities for some further discussion before confirming (or otherwise) these working groups and agreeing their membership.

Some of the additional issues identified at the December workshop or previously underway through joint work programmes (eg drinking water) will be addressed at the April meeting, when the committee will be updated on

- the work of the zone implementation teams as they work with all the CWMS partners to deliver on the ground activities
- progress on setting limits and improving water quality
- work to improve and protect drinking water.

In previous years, the zone committee representatives have provided updates on zone activity at each regional committee meeting. These updates have been largely 'for your information', but these updates could be used by the committee as a means to identify additional strategic issues that cut across zones. One way to do this would be for 5 zone reps/meeting to provide a more in-depth briefing to profile the achievements, and the current challenges and priorities, and for this to be the basis for discussion of emerging issues.

## RECOMMENDATIONS

That the regional committee

- Notes the work underway
- Agrees that the working groups are
  - Infrastructure
  - Braided rivers
  - Communications/education
  - Biodiversity and ecosystem health
  - Recreation and amenity.
- Agrees membership of the working groups
- Agrees to the new structure for zone committee reporting.

## APPENDICIES

### 1. Infrastructure

#### Background

Infrastructure is important for achievement of all CWMS target areas. It is not a target area itself, but a means for managing the water resource in ways that advance all the targets. It is a category



that covers storage, diversion, damming, drainage, waste water, public drinking water supplies, storm water and flood management.

The CWMS approach involves a facilitation role with infrastructure interests and owners and other parties. Actual ownership of water infrastructure in Canterbury is spread between the public and private sectors. Notable public sector infrastructure includes stormwater/wastewater/drinking water (domestic and stock) and flood protection while irrigation water supply infrastructure is privately held. Hydropower interests act in a commercial manner whether fully privately held (Trustpower, Opuha Water Ltd) or partly publicly owned (Genesis, Meridian). This complexity of ownership is similar to other infrastructure classes such as electricity and telecommunications.

CWMS infrastructure activities are about good infrastructure processes. Identification and implementation of good infrastructure processes is an area of active international endeavour. The New Zealand Central Government has provided a mixture of guidance and resources relevant to this through MPI grant funding, the National Infrastructure Unit of Treasury and more recently Crown Irrigation Investments Limited (CIIL). CWMS infrastructure processes are often at the cutting edge of international experience in topics such as “Early Contractor Engagement”, flow regimes from infrastructure to deliver community values (“Ecohydrology”) and cooperation between different infrastructure owners.

Physical and non-physical water infrastructure across Canterbury is evolving through an approach based on:

- “Networking” – linking individual components where they work better together
- Making maximum use of existing facilities.
- Keeping investigations at an early stage until concepts emerge that address CWMS targets.

Important elements of the CWMS infrastructure approach include:

- Consideration of future needs taking into account both supply and demand factors.
- Building management, governance and operations capacity and capability of organisations and individuals we work with.
- Coordination, cooperation and communication between diverse parties.
- Collaboration with Central Government agencies, NGO’s, industry organisations and participation and partnership with Rūnanga and iwi.

An important tool to inform infrastructure consideration is the Strategic Assessment. The objective of a Strategic Assessment is to compare the expected outcomes of a number potential water management concepts against all of the Principles and Targets of the CWMS. This involves incorporation of a wide range of technical, social and cultural information in a form that is understandable to a wide audience and which conveys accurately the relative merits of different concepts.

Development of infrastructure concepts and physical trials (“pilots”) to meet environmental targets is well underway. Examples include the Managed Aquifer Recharge (MAR) trial, targeted stream augmentation trials, a solar pump to enhance mudfish habitat and potential indirect augmentation of the Selwyn River system through delivery of off-peak water from Central Plains Water .

Key partners and the work already underway

Partner	Work underway
Central Government	<b>MPI:</b> Early stage regional and specific concept investigations <b>CIL:</b> Later stage investigations <b>DOC:</b> Identification of DOC interests <b>MBIE:</b> Research via CRI's and other partners. Priority topics include "uptake" of improved water application practices and better information to manage irrigation on "light" soils.
Private sector (Include majority government owned power companies)	<b>Irrigation schemes</b> (Companies): Both existing and recently formed continue to engage constructively. <b>Irrigation NZ:</b> <u>Joint work programme with ECan</u> . Focus on <u>uptake of better water use efficiency</u> , industry standards, training, properly designed, maintained and operated irrigation systems and practices. <b>Industry sector organisations and dairy companies:</b> Participation in work on water use efficiency and new crop options. Opportunity to align with industry and Central government commitment to Sustainable Development Goals of UN.

## Strategic issues ahead

The regional picture of future water supply infrastructure is well advanced through the central part of Canterbury from the Rangitata River to north of the Waimakariri River. Attention is therefore focussed on:

- Southern Canterbury (Orari-Temuka-Opihi-Pareora and consequential effects on surrounding Zones). A reduction in access to water by existing consent holders from hill fed and lowland waterway and challenges in transporting water from alpine rivers.
- Hurunui Waiau Zone where three infrastructure parties have encountered difficulties working together to develop an optimal concept of water supply infrastructure.

Water use effectiveness and efficiency. Effectiveness (best use of water) is receiving attention from a number of parties. Primary current need is on efficiency and specifically the need uptake of water efficient methods by "average" farmers.

Stormwater/wastewater/drinking water infrastructure is receiving attention from the Canterbury Mayoral Forum (CMF) given intense interest from Central Government in improvements in this sector across NZ. As with other CMF activities CWMS involvement is on the basis of working alongside other councils to achieve required infrastructure outcomes for communities across Canterbury.

For environmental infrastructure there is significant work to be done around identification of further opportunities, management and governance of systems and funding.

Flow regimes from infrastructure to deliver community values ("Ecohydrology") are an active area of international work. This field is important for all scales of water in Canterbury with significant concern being expressed by a number of groups about the flow regime in the Rakaia River following changes in the operation of Lake Coleridge diversions and new irrigation abstractions in recent years.

## 2. Braided rivers

### Background

The Natural Character of Braided Rivers is one of the ten CWMS target areas (see CWMS Chapter 5).

Sub-level targets within this area include environmental flows, natural character, ecosystems, habitats & species and riparian wetlands, springs & lagoons.

Key 2040 targets are:

- Canterbury's braided rivers show the dynamic, braided nature typical of such rivers
- Achieved all environmental flows
- All indigenous braided river-dependent species showing positive trends in abundance and health
- Increased habitat area usable by all species of braided river indigenous birds
- Protected and enhanced the habitats in riparian wetlands, springs and the lagoons associated with braided rivers.

A number of values are associated with braided rivers: cultural, biodiversity/environment, economic, recreation, and tourism. Threats to maintaining these values include engineering work, recreation activities, pest spread, water abstraction and marginal land use change.

### Key partners and the work already underway

Partner	Work underway
Central Government	LINZ and others carry out biosecurity control programmes along braided rivers. DOC's wetland programme work also contributes to braided river ecosystems. Project River Recovery is a Department of Conservation (DOC) programme funded by Genesis and Meridian Energy that recognises the adverse effects of hydroelectric power development on upper Waitaki Basin rivers and wetlands implemented through Upper Waitaki.
Local Government	Passing of Northern Pegasus Bay Bylaw – actions to protect bird rookeries in the Ashley/Rakahuri estuary. District plan provisions and some control applied to vehicle presence in river beds. Environment Canterbury work programmes contribute to the Upper Rangitata and Lower Waitaki as well as three smaller projects (black billed gull survey, black billed mgmt. investigation and robust grasshopper trial). 20-25% of Parks and Reserves work also contributes to biodiversity, carrying out activity along the Waimakariri 'corridor' with 32 indigenous vegetation sites. Management plans are in place for Ashley River/Rakahuri and Waimakariri River. River engineering also carry out work which may contribute to biodiversity outcomes.

Landowners	Contribution and involvement in a variety of projects alongside zone committees, local government and government agencies.
Zone Committees / Regional Committee	A number of projects undertaken through Immediate Steps funding, including through the Regional Committee's Braided River Flagship Project (Upper Rangitata and Upper Rakaia Rivers). Kaikoura Zone Committee, with a number of partners, has drafted an action plan for the Clarence River as part of an extensive programme of works Ashburton zone committee have developed a discussion document on recommendations for improving bird habitat on lower Ashburton River.
Community-based organisations	Community-based river care groups for several rivers (e.g. Ashley/Rakahuri RiverCare Group). An upper Rangitata River valley group which works to keep the valley broom- and lupin-free These community groups and others have also formed a Canterbury based group Braided River Aid – BRaid <a href="http://braid.org.nz/">http://braid.org.nz/</a> . Activities include surveys, and funding research projects.
NGOs	Fish and Game Council sports fish and game management plans. Enviroschools with partners have programmes at Kowhai sanctuary, Waimakariri regional park. Also school created signs for black billed gull protection.

### Strategic issues ahead

Braided rivers are dynamic and ever-changing environments. Managing the effects of activities on braided rivers poses a significant challenge for our region. Further work needs to be done to achieve the right balance of protection and use across all the values. Discussion around this needs to have representation from all the values areas and interests associated with braided rivers.

Working with partners is also a major component of work on braided rivers. There are a number of public and private interests that need to be drawn together to achieve a cohesive joined up approach.

To achieve the 2040 target, best practice management of braided rivers will need to be developed and implemented.

### 3. Communications/education

#### Background

Communication and education are key to the community being engaged with Canterbury's water resource, its uses now and how we can protect it for the future. Research tells us that the community has limited understanding of the science, of the actual state of our rivers and lakes, or the facts around the impact of farming and other activity on our waterways. The CWMS is understood by engaged stakeholders such as those represented on the Regional Committee and Zone Committees, but with the general public there is little visibility of the strategy or actions being taken on the ground.

#### Key partners and the work already underway

Environment Canterbury has staff within the Communications and External Relations section working on CWMS communications and education. At present this is focused on assisting at zone level as well as on specific 'campaigns', for example the Nice One 'consent to farm' campaign to farmers. Relations are good with the farming sector via industry bodies, direct newsletters, rural media and so on. Much of the current focus for public communications is on reactive media responses around Canterbury water issues.

Environment Canterbury's youth engagement team are active in schools in the water space, taking information and relating it to the curriculum for primary to high school students through Enviro schools and educational resources. There is also activity with older youth (post-school) via environmental interest groups and special events, for example Youth Voice Canterbury.

Other agencies are also active in this space: from private initiatives such as Fonterra's information around what actions their farmers are taking to do the right thing, as well as IrrigationNZ, DairyNZ, HortNZ and so on.

Future communications strategies will need to address how we can a) tell the regional water story better, and b) use the limited resources across all the partners and agencies to better effect.

#### Strategic issues ahead

There is undoubtedly a need to improve community understanding. The Regional Committee can play a large part in this. The committee members – and the organisations they represent – have both reach and influence. As credible stakeholders in the future of Canterbury's water this group can help shape the water story and help tell the water story.

A working group that focuses on communications and education could be both a recipient of information about all the local and regional initiatives that are underway, the science, the environmental impacts of weather events and industry actions etc, as well as a source of guidance and strategy with an overview of the activity taking place across the region and across the partners.

A communications and education working group could provide strategic input into education in the broadest sense ie through the school curriculum system via entities like Enviro schools, as well as community education to aid understanding and engagement. The committee would need to understand the extent of all the partners' work in this space and help develop pan-organisation strategy for consistent messaging. The staff in Environment Canterbury and other partner organisations can devise the communications and education tactics but would value the views of

the committee working group as representatives of the communities the communications are designed to reach.

## 4. Biodiversity and ecosystem health

### Background

Biodiversity and Ecosystem Health is one of the ten CWMS target areas (see CWMS Chapter 4). The Biodiversity & Ecosystem Health Working Group (BEWG) is already well established, having agreed some five year regional freshwater outcomes in 2016:

By June 2021:

1. The protection, maintenance and restoration of Canterbury's braided rivers is supported
2. The protection, maintenance and restoration of wetlands is supported
3. Mahinga kai: Longfin eel / tuna is managed in a sustainable way
4. Mahinga kai: Improved fish passage is supported regionally
5. Management plans for ecologically significant habitats, key sites and corridors are in place
6. Support the protection, maintenance and restoration of coastal lagoons, river mouths and spring-fed coastal streams
7. Support is provided to the management of invasive weeds and pests in areas of biodiversity value
8. Biodiversity management is co-ordinated and aligned through a joined-up regional approach
9. Community-based organisations are supported to be more effective
10. Biodiversity is woven into working landscape with catchment group support, expertise, tools, and farm environment plans

These outcomes build on work already being undertaken by the Regional Committee through Immediate Steps funding support of Wainono Lagoon, Whakaora Te Waihora and the Braided Rivers Flagship Project.

The group is now in an implementation phase where CWMS partners work to deliver on the five year outcomes.

### Key partners and the some example projects already underway

Partner	Work underway
Central Government	DOC wetland restoration programme at O Tū Wharekai/ Ashburton Lakes Project River Recovery in Upper Waitaki DOC programme (funded by Genesis and Meridian Energy) LINZ Biosecurity control programme works
Local Government	Braided River Regional Initiatives Regional Fish Habitat Initiative Wetland identification programme District Plan provisions and bylaws Restoration and management plans (i.e North Pegasus Bay, Hororata Catchment, Ashley River/Rakahuri strategy) Te Kohaka O Tuhaitara Trust (Ngai Tahu and Waimakariri District) Enviroschools working with schools and stakeholders

	Regional biosecurity control programmes (i.e Wilding Conifer) Regional Pest Management Plan review and provisions for biodiversity value
Landowners	Management of legally protected areas, compliance Farm Environment Plans (2600 and counting)
Zone Committees / Regional Committee	Flagship projects: Braided River Flagship Scheme; Te Waihora; Wainono Lagoon restoration; Immediate Steps projects – zone programmes of work
Community-based organisations	Activities carried out by a range of River and Land care groups, Braid, ecological and conservation trusts include surveys, funding of research, advocacy, pest control and planting
NGOs	Assist landowners to legally protect areas (QEII Trust) Living Water partnership programme Advocacy role Management plans

### Strategic issues ahead

Focus is now on delivery of five year outcomes and many partners, groups and individuals are doing work that contributes. A key strategic focus needs to be on finding new opportunities to work with others to deliver, particularly in the private or philanthropic sector.

Zone Committees also have five year outcomes that are being delivered at a local level. Sharing information and identifying opportunities where regional and zonal outcomes align are key elements of achieving a cohesive, joined up approach.

## 5. Recreation and amenity.

### Background

Recreation and amenity opportunities are one of the key target areas of the CWMS. This area includes specific targets out to 2040 relating to the ‘diversity and quality of water-based recreational opportunities’, ‘achieving environmental flows’, ‘fishing opportunities’ and the restoration of ‘at least one major fresh water recreational opportunity in each zone’.

In November 2013, the Regional Committee acknowledged the need to give renewed focus to the implementation of CWMS Targets for “Recreation and amenity” from a regional perspective. A Recreation and Amenity Task & Finish Group (RATFG) was formed and in Sept 2014 proposed a CWMS Recreation and Amenity Action Plan, with recommended next steps for the CWMS Regional Committee.

Some progress was made on the recommendations, including the commissioning of reports on kayaking and jet-boating, and the establishment of joint working groups with both Canterbury-based Fish and Game councils. A committee working group was also established but due to staffing changes in Environment Canterbury did not progress a work programme.

This working group (the Recreational and Amenity Working Group, RAWG) was re-invigorated in May 2015. It includes a number of additional zone members, and in 2016;



- requested ECan to introduce the proposal to establish flagship projects to each Zone Committee (this was implemented in subsequent months) and
- hosted a workshop with a wide range of recreational groups
- advised on the scope of a report on swimming values in Canterbury (due early 2017).

In April 2016 Scott Pearson (North Canterbury F&G), supported by Doug Rankin (White Water NZ), presented to the regional committee a proposal for a project to better assess and apply the values associated with freshwater recreation in Canterbury. The committee recommended that both parties work with Environment Canterbury staff to refine the proposal. Mr Pearson and Mr Rankin presented the refined proposal to RAWG in November 2016, with the group discussing it further in December 2016. The working group reported back to the regional committee at their December meeting;

- noting that the sub-regional process continues to be the way to progress recreational opportunities,
- agreeing the need for a scoping study to identify information gaps for recreation,
- affirming that regional committee should champion recreation and amenity values,
- proposing this be progressed in the first instance via
  - a.exploration of how to make better use of information already available, and
  - b.engagement with
    - zone committees
    - Department of Conservation

#### Key partners and the work already underway

The July 2016 workshop invited a wide diversity of groups to inform the working group – e.g. fishing, tramping, jet boating, kayaking, dragon-boating, tourism interests and 4-wheel driving. In addition there is an active conversation continuing with North Canterbury Fish and Game and Whitewater NZ about the best way to improve knowledge of recreational values and then use that information.

#### Strategic issues ahead

As discussed above, the previous working group has identified a number of directions for future work, including:

- Scoping a study to inform information gaps for recreation
- Championing recreational and amenity values via engagement with the work of zone committees and the Department of Conservation.



<b>AGENDA ITEM NO: 8.</b>	<b>SUBJECT MATTER: ECAN RESPONSES TO CLIMATE CHANGE</b>
<b>REPORT:</b> Regional Water Management Committee	<b>DATE OF MEETING: 14 February 2017</b>
<b>REPORT BY:</b> Monique Eade, Environment Canterbury	

## PURPOSE

To brief the committee on the ways that Environment Canterbury and the Zone Committees take climate change into account in regional plans so you can continue this work in your committee roles.

## BACKGROUND

The Regional Committee received a presentation from Brett Mullan of the National Institute of Water and Atmospheric Research Ltd (NIWA) on climate change in August 2016. A follow-up paper from Environment Canterbury was presented at the October 2016 meeting. At that meeting you requested a further report detailing how Environment Canterbury are considering climate change in the sub-regional planning processes.

## DISCUSSION

### Local government statutory responsibilities

Environment Canterbury's statutory responsibilities are set by the Local Government Act 2002 (the LGA), the Resource Management Act 1991 (the RMA) and supporting regulation. The RMA requires that all persons exercising powers and functions under the RMA must have particular regard to climate change. The LGA states that the purpose of local government includes meeting the current and future needs of communities for efficient, effective and appropriate infrastructure and public services for present and anticipated future circumstances.

The New Zealand Coastal Policy Statement (NZCPS), which sits under the RMA, requires we take a precautionary approach for the use and management of coastal resources vulnerable to climate change. The NZCPS also requires Environment Canterbury to integrate climate change including sea level rise into coastal planning.

The 11 October 2016 paper to the Regional Water Management Committee (attachment 1) contains more detail on the Environment Canterbury's statutory responsibilities.

### Environment Canterbury's responses to climate change

Our obligations are to focus on the **consequences** of extreme weather events and changing weather patterns for the region and communities, and to prepare for managing and minimising the **effects** of these trends on environmental and community sustainability.

Many of the consequences of climate change are already considered and assessed through existing work. They are not new challenges. Climate change works as an exaserbater of natural hazards and makes the existing issues we deal with more challenging. For example, coastal erosion is already recognised as an issue that needs to be factored in when producing long-term planning documents.

Overall, our focus is on the challenges of adaption. We do this through a variety of statutory and non-statutory instruments.

### History of climate change and zone committees

Almost all of the Zone Committees had briefings early in their tenure about historical climate information, future climate research and future proofing opportunities (particularly with respect to infrastructure). Kaikōura was the last of the Zones to receive such a briefing and this occurred just prior to the earthquake.

Climate variability and future proofing has stayed high on the agenda of some of the Zone Committees, especially when considering the development of new infrastructure. This continues to be a particularly relevant topic when developing sub-regional plans under the LWRP.

Waimakariri and Orari-Temuka-Opihi-Pareora are currently going through their sub-regional planning processes. These two zones are considered to have some of the greatest issues in future proofing their infrastructure, making factoring in climate change particularly important.

The Canterbury Water Management Strategy (CWMS) also has a strong focus on utilising stored alpine water to prevent reliance on groundwater and smaller rivers. This will help build resilience to the effects of climate change.

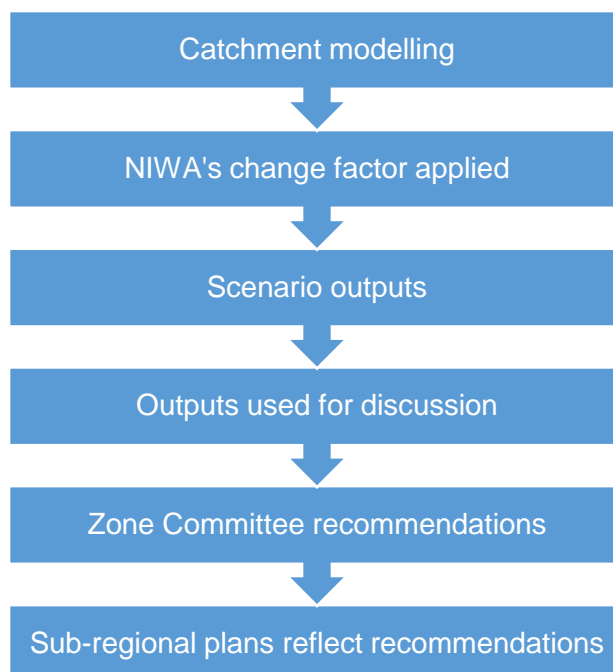
### Integrated management of climate change issues: an OTOP example

The OTOP Zone was considered the most water-challenged zone in Canterbury from the conception of the CWMS. Significant work has been ongoing to understand why that is, the role of climate trends and cycles and to look towards planning for the future of the zone.

#### *Sub-regional planning – the OTOP Healthy Catchments Project*

Through the sub-regional planning process OTOP and Waimakariri are the first two zones to include climate change as a specific variable. The flow chart to the right outlines this process.

Environment Canterbury scientists complete catchment modelling based on available information. We rely on NIWA's climate change information, which they express as a change



factor, for example a probable change in flow. We apply this change factor to our catchment model and we are able to produce scenario outputs.

Environment Canterbury provides these scenario outputs to Zone Committees and the public as a basis for discussion, consultation and decision making. Zone Committees are then able to develop a package of recommendations, some of which are delivered through a sub-regional plan and limit setting processes. Waimakariri are following a very similar process.

#### *Non-statutory solutions to local issues*

Irrigation infrastructure groups have a role to play in preparing their members and other water users for the climate change impacts on water quality and quantity.

Opuha Water are future proofing their water management system by examining snowpack measurements and historical climate records. They are considering these in line with NIWA's recent climate change forecast. This work by Opuha Water will support the OTOP sub-regional planning process.

The 11 October 2016 paper used Washdyke as an example. In response to pressure on current infrastructure and known future challenges a working group was formed. This group is able to use an integrated approach to consider issues including coastal erosion, the cumulative effect of storm water, the mataitai reserve and potential flood risk. By doing so they are able to factor in the interests of all stakeholders and develop actions and tactics.

A regional approach to managing natural hazards has been developed with the intention to improve the way we identify, research and communicate natural hazards and risk. Part of this includes ensuring communities are prepared and able to engage with conversations.

#### *Undertaking a Coastal Plan review*

The Regional Environment Coastal Plan was prepared in 2005 and Environment Canterbury is currently in the very early stages of scoping a Coastal Plan review as required by the RMA. It is likely that the process for taking climate change into account in this review will closely reflect the subregional planning model.

Thought is being put into how what is happening upriver affects the coast, and the role of hazard zones.

#### *Taking a partnership approach*

Examining the issue of climate change and adapting to the challenges it may bring is an activity we do in collaboration with other agencies and organisations. Aside from the Zone Committees, we work with the relevant Crown Research Institutes (CRIs), and universities to ensure we have the best information to inform planning and decision making. There is more detail of our partnership approach with central government in the attached paper.

Working with the Zone Committees, territorial authorities, Ngāi Tahu and communities, we aim to provide information that empowers people to make suitable decisions.

## **RECOMMENDATIONS**

That the committee

- Note the various ways in which Environment Canterbury takes account of the potential impacts of climate change.

## **ATTACHMENTS**

Attachment 1 – Climate Change Report to Regional Committee dated October 2016

<b>AGENDA ITEM NO: 8 Attachment</b>	<b>SUBJECT MATTER: ECan RESPONSES TO CLIMATE CHANGE</b>
<b>REPORT:</b> Regional Water Management Committee	<b>DATE OF MEETING: 11 October 2016</b>
<b>REPORT BY:</b> Ronnie Cooper and Barbara Nicholas, Environment Canterbury	

## PURPOSE

To brief the committee on how climate change is taken into account in the work of ECan.

## BACKGROUND

In August 2016 the Regional Committee received a presentation from Brett Mullan of NIWA on climate change. Following discussion, it was agreed that a short report would be submitted to the committee on how Environment Canterbury are considering climate change in their work.

## DISCUSSION

### Central and local government responsibilities

The role of local government is to focus on the **consequences** of extreme weather events and changing climate patterns for their regions and communities, and to plan and prepare for managing and minimising the **effects** of these trends on environmental and community sustainability. This is climate adaptation. Councils' work is shaped by a number of legislative and statutory requirements (e.g. the Local Government Act, Resource Management Act, Biosecurity Act, National Policy Statements, CDEM Act) and informed by national guidelines.

The other aspect of climate change is mitigation, or the reduction of Greenhouse Gases that cause climate change. New Zealand's emissions of greenhouse gases, emissions reduction under the Kyoto Protocol, and emissions trading mechanisms, are addressed by **central government** through climate change policies and strategies.

### Environment Canterbury's responses to climate change

The 2012-22 *Long Term Plan* acknowledged the potential impacts of climate change and the influence of these impacts on the work of Environment Canterbury. The council's focus was on **adaptation and planning to provide a relevant local response** (p 7). Extreme and more volatile weather, increased frequency and severity of floods and storms, and sea level rise were noted as issues for the council's work in Coastal Hazards, Emergency Management and Natural Hazards (pp 41, 50, 60).

The 2015-25 *Long Term Plan (LTP)* is framed within the strategic contexts of three significant emerging trends that will influence the region's future:

- Demographic changes
- Economic developments
- Changing weather patterns and climate, and the need to be prepared for more volatile and extreme conditions.

The priorities and activities in the LTP reflect Environment Canterbury's assessment of the implications of these emerging trends or '**drivers of change**' over the ten-year timeframe to 2025.

Climate change is factored into many dimensions of Environment Canterbury's work:

1. Canterbury Water Management Strategy (CWMS). This was initially driven by a concern to future proof the region to cope with extreme weather (particularly drought). The CWMS is the number one strategic priority and programme of works for Environment Canterbury, focused on how to protect reliability and distribution of water to ensure a full range of values is protected and the region is resilient in the face of changing demands on the resource.

Within CWMS climate change informs the regional approach to infrastructure development, with the attention on shifting supply to alpine rivers, resulting in a shift from groundwater and hill fed and lowland streams. It is also integrated into all zone-specific modelling to identify issues and options for managing water quality and quantity, and Central Government guidance has been applied to assess specific effects on lowland streams, groundwater etc.

2. Flood hazard modelling and management.  
Flood Hazard Modelling takes climate change into account, using the most current national guidance for undertaking climate change/sea level rise inputs and sensitivity analyses.

Flood management works draw on MfE guidance as new works are required (e.g. for the recent Washdyke upgrade sensitivity to sea level rise and increased flood frequency influenced final freeboard allowance). Climate change is also potentially a long term issue for a relatively small number of current structures as the risk of bank overtopping is likely to increase over time if the design standard is not raised.

3. Coastal hazard modelling and management  
Current coastal hazard zones are modelled on historic rates of coastal erosion and project that historic rate into the future. However, hazard zones currently do not account for recent projections of sea level rise over a 100 year time period (the minimum time period stipulated in the NZ Coastal Policy Statement for consideration of hazards). Coastal erosion hazard maps (in the Regional Coastal Environment Plan) are being reconsidered as part of a wider review of the Coastal Plan.

A regional approach to hazard management has been established, working alongside territorial authorities and Civil Defence. This regional approach is a working group of the Canterbury Mayoral Forum.

4. Biosecurity – Regional Pest Management Plan. Climate data has been factored into the Regional Pest Management Plan review to better understand which parts of the region will become more or less susceptible to various pests. The proposed plan aims to better prevent the management of new incursions, some of which may be more likely to survive and thrive in our region with possible changes of climate.
5. Planning. Environment Canterbury's Resource Management Planning works within a framework provided by national legislation (in particular the RMA and LGA), and associated national policy statements, and national standards. In that context Environment Canterbury develops its Policy Statements and Plans. Further detail on the statutory requirements is given in Appendix 1-2.

Climate change factors are also considered in urban development planning documents such as the Urban Development Strategy (UDS) and also help to inform TA district plans around decisions for development and housing and the associated risks, plus down to things like floor heights.

In addition, central government develops non-statutory guidelines which inform decisions at regional and district level (e.g for calculating sea level rise). A National Policy Statement on Natural Hazards is on the books for 2018.

6. Science work in this area includes

- Investigations and modelling that is a part of zone-specific solutions to deliver CWMS targets. This includes modelling 'demand' that takes into account likely changes in flows, evapotranspiration and water takes in response to climate change;
- A science strategy that includes work to identify long-term trends in use and management of the natural environment. A component of this is a workshop in early 2017 on 'sustainability in dry conditions'. This will involve both internal and external people, and the outcomes will feed into the Long Term Plan 2018-28;
- Keeping in touch with relevant research at CRIs and universities, including possible impacts of climate change on biodiversity.

7. Transport. Environment Canterbury is mindful of the impact of transport on greenhouse gas emissions, and takes this into consideration in all its decisions, e.g. the inclusion of hybrid-electric vehicles in its fleet.

8. While climate change is looked at in the long term, in the short term Environment Canterbury recognises severe events that occur in our region and responds accordingly. At the moment we are ensuring that staff across our organisation, including consents, and compliance are fully aware of the drought impacts on North Canterbury.

## **RECOMMENDATIONS**

### **That the committee**

- note the various ways in which Environment Canterbury takes account of the possible impacts of climate change

## Appendix 1: Local Authority Statutory Responsibilities: Adaptation to Climate Change

### Resource Management Act 1991:

- RMA s7(i): councils shall have particular regard to the effects of climate change
- RMA s5(2): sustainable management is to enable social, economic and cultural well-being and health and safety while
  - sustaining the potential of natural and physical resources... to meet the reasonably foreseeable needs of future generations
  - safeguarding the life-supporting capacity of air, water, soil, and ecosystems...
- proposed amendments to the RMA include additions to require councils to recognise and provide for the management of significant risks of natural hazards, and the efficient provision of infrastructure, as matters of national importance
- RMA S2(1): natural hazard is defined as ‘any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment’ – references to natural hazards identification, record-keeping and management in s35(5)(j) [information] and s62 [Regional Policy Statements]

### Resource Management (Energy and Climate Change) Amendment Act 2004:

- s3(b)(i): the purpose of this Act is to amend the [RMA] ... to require local authorities to plan for the effects of climate change.

### Local Government Act 2002:

- LGA s10(1)(b): the purpose of local government includes meeting the current and future needs of communities for good-quality local infrastructure, local public services – s10(2) defines good-quality as efficient, effective, and appropriate to present and anticipated future circumstances
- LGA s11A: local authorities must have particular regard to the contribution of... (d) the avoidance or mitigation of natural hazards
- LGA Amendment Bill (No 3): includes a requirement for councils to prepare and adopt, as part of Long Term Plans from 2015, a 30-year infrastructure strategy (Clause 34).

### NZ Coastal Policy Statement 2010:

- Policy 3 requires adoption of a precautionary approach for the use and management of coastal resources potentially vulnerable to effects from climate change
- Policy 24 requires the identification of areas in the coastal environment that are potentially affected by coastal hazards, and assessment of hazard risk over at least 100 years having regard to



- a) physical drivers and processes that cause coastal change including sea level rise
- b) ... long-term natural dynamic fluctuations of erosion and accretion...
- d) the potential for inundation of the coastal environment...
- e) cumulative effects of sea level rise, storm surge and wave height under storm conditions...
- f) the effects of climate change including effects on storm frequency, intensity and surges.

## Appendix 2: Environment Canterbury Policies and Plans in relation to climate change

### Environment Canterbury Policies and Plans:

As the regional council, we have a broad **regional leadership** role, and a mandate to focus on the wider region and work in collaboration with TAs, Ngāi Tahu, key groups and communities to develop strategies and programmes for Canterbury as a whole.

In 2007, Environment Canterbury undertook an *Analysis of the policy considerations of climate change for the Review of the Canterbury Regional Policy Statement*. This study surveyed change at global, national and regional levels, and assessed the effects on Canterbury's natural resources (land, coastal and marine areas, freshwater, indigenous biodiversity, pest species, production systems, and air) and effects on physical resources.

The 2013 *Canterbury Regional Policy Statement* (CRPS) acknowledges the implications of changing weather for our region and the sustainability of natural systems and communities:

*The future well-being of the region is dependent on the community being able to adapt to these changes. Building resilience into development is crucial to ensuring the foreseeable needs of future generations are provided for... Where there is insufficient information, a precautionary approach is needed (Canterbury RPS 2013, p 7).*

The CRPS includes provisions for:

- appropriate **design and location** of development (Issue 5.1.2, p 29)
- ensuring the abstraction and use of **fresh water** for economic well-being, to respond to projected changes in weather patterns, rainfall, river flows and temperature (Issue 7.1.4, p 53)
- **harvest and storage of water** to provide resilience to the impacts of climate change on Canterbury's productivity and economy (Policy 7.3.10, p 67)
- improving knowledge of the **coastal environment and resources**, as the base for assessing the effects of change and identifying areas and resources at risk (Issue 8.1.1 and Policy 8.3.1, pp 72 and 78), and assessing the effects of climate change and coastal erosion (Issue 8.1.7, p 75)
- taking into account the effects of coastal erosion, climate change and sea level rise in the management of **regionally significant infrastructure** in the coastal environment (Policy 8.3.6, p 83)

- an integrated management approach for Canterbury's **indigenous biodiversity** that anticipates effects from increased extreme weather events, temperature changes, sea level rise, changed species distribution and increased threats from pests and disease (Policy 9.3.3, pp 93-94)
- preparedness for the impacts of extreme weather events, climate change and sea level rise (Chapter 11, pp 110-122), in particular:
  - recognising and providing for the effects of climate change, and its influence on sea levels and the frequency and severity of **natural hazards** (Issue 11.1.5, p 112, Objective 11.2.3, p 113, Policy 11.3.8, p 120)
  - avoiding inappropriate development and critical infrastructure in **high hazard areas** (Policies 11.3.1, p 114, and 11.3.4, p 117)
- taking account of more frequent droughts, extreme weather events and changing climate in the protection of Canterbury's **soils** from erosion and degradation (Issues 15.1.1 and 15.1.2, Objectives 15.2.1 and 15.2.2, pp 146-148).

The 2014 Canterbury *Land and Water Regional Plan* also acknowledges increasing demand for water for irrigation, and for harvesting and storing water, in response to changes in rainfall patterns and reduced groundwater recharge (p 1-3).

The *Regional Coastal Environment Plan* (RCEP) is being reviewed, and this includes consideration of methods to address coastal hazards and give effect to the NZCPS requirements for identifying and managing coastal hazard risk.

#### Reports of interest

Society for Local Government Managers (SOLGM), August 2016. *Building Community Resilience*. [http://www.solgm.org.nz/Category?Action=View&Category\\_id=1258](http://www.solgm.org.nz/Category?Action=View&Category_id=1258)

SOLGM, August 2015. *Climate change: Local government can make a difference*. [https://12233-console.memberconnex.com/Attachment?Action=Download&Attachment\\_id=552](https://12233-console.memberconnex.com/Attachment?Action=Download&Attachment_id=552)

#### Appendix 3: Local Government NZ

Local Government NZ has undertaken a number of recent initiatives to support New Zealand councils and communities in responding to climate change and its impacts.

In April 2016 LGNZ announced that it will be developing a new climate change position statement to update the 2009 position statement (see text below). The new position statement is expected later in 2016.

In December 2015 LGNZ presented the *Local Government Leaders Climate Change Declaration*, signed by Mayors of 31 NZ councils (<http://www.lgnz.co.nz/assets/Mayors-Climate-Change-Declaration-Dec.pdf>). The *Declaration* acknowledges the importance and urgent need

to address climate change for the benefit of current and future generations, and outlines key commitments for councils to respond to the opportunities and risks posed by climate change. These commitments include action plans to support resilience, and working with communities and central government. The *Declaration* is guided by 7 Principles: Precaution; Stewardship / Kaitiakitanga; Equity / Justice; Anticipation (thinking and acting long-term); Understanding; Cooperation; and Resilience.

The LGNZ *Leaders Position Statement on Climate Change* was published in 2009 (<http://www.lgnz.co.nz/assets/Uploads/Our-work/NH-Local-Govt-Leaders-Position-Statement-on-Climate-Change.pdf> )

## LOCAL GOVERNMENT LEADERS POSITION STATEMENT: CLIMATE CHANGE (2009)

### ***Our Position on Climate Change:***

We recognise that we must respond to both the actual and potential physical impacts of climate change.

We understand that there are challenges, risks and opportunities for local communities in responding to and managing the impacts of climate change.

We recognise that action now will reduce the future threats and costs of climate change. We know we must plan ahead.

Solutions to climate change challenges will not be a matter of “one size fits all” and we recognise that climate change impacts on communities will vary around New Zealand.

Councils will individually show leadership and environmental responsibility by adopting mitigation and adaptation practices that fit with their community’s needs and aspirations.

We have an active interest in shaping Central Government’s mitigation policy. We will assist Central Government help local communities to prepare for climate change.

We will work with Central Government to make sure information and research is accessible to our communities. It should help them make informed choices about responding to climate change risks and opportunities.

### ***Our Position on Adaptation to Climate Change:***

We have a responsibility to help our communities prepare for and to adapt to the physical effects of climate change.

We will build on the existing work of Councils and communities – recognising that “business as usual” will not get us to where we need to be and that a community-wise effort will be needed to address the impacts of climate change.

Councils will support and actively engage with initiatives that provide guidance and expert advice on adaptation that can be applied at the regional and local level.

We will seek Central Government’s support for the development of climate change information and modelling that delivers “local numbers” for local use.

We acknowledge that we will often need to lead on developing engineering and resilience responses to climate change impacts.

Councils will ensure that Resource Management and Local Government legislation is used to encourage adaptation to climate change – particularly when dealing with land-use change.

### ***Our Position on Climate Change Mitigation:***

It is Central Government’s role to engage internationally on climate change and to lead mitigation action on behalf of New Zealand.

We have an active interest in providing advice to Central Government on the local consequences of, and the opportunities presented by, international and national policies to reduce greenhouse gas emissions.

Councils will choose their own mitigation projects to meet Central Government requirements and to assist in delivering New Zealand's emission reduction targets.

Councils will support individuals, communities and businesses to lower their emissions and will advocate for Central Government to develop tools that will assist the development of low carbon options for goods and services.

#### Appendix 4: Ngāi Tahu responses to climate change

##### Iwi Management Plans

*Mahaanui* is the 2013 Management Plan prepared by six Papatipu Rūnanga of Ngāi Tahu (Ngāi Tuāhuriri Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki), Te Rūnanga o Koukourārata, Ōnuku Rūnanga, Wairewa Rūnanga and Te Taumutu Rūnanga). It includes (p 71) the rūnanga policy on Climate Change, noting that climate change could have significant impacts on the relationship of Ngāi Tahu and their culture and traditions with their ancestral land, water, sites, wāhi tapu and other taonga.

*Mahaanui* Policy R3.3 states a requirement that 'local authorities recognise and provide for the potential effects of climate change on resources and values of importance to Ngāi Tahu, for example:

- a) effects of sea level rise on coastal marae and coastal wāhi tapu, including urupā
- b) increased salination of rivers and hāpua, affecting mahinga kai resources and customary use
- c) warming of oceans and effects on marine ecosystems, including those on the sea floor
- d) changes to the amount of rainfall, and effects on aquifer recharge
- e) lake management regimes, including the opening of Te Waihora and Te Roto o Wairewa to the sea, and
- f) changes to the habitats of indigenous flora and fauna, including taonga species.'

Policy R3.4(a) and (c) provide for 'urban planning to reduce transport emissions' and 'improved farming practices to reduce emissions.'

Policy R3.6 requires that 'restoration planning for wetlands and lagoons must take into account the potential for future sea level rise associated with climate change.'

The 2011 Synthesis Report on *Kaitiaki Targets* (Tipa & Associates) with recommendations to the CWMS Strategic Framework notes (p 13):

The current situation is made more complicated and urgent by the impacts of a changing climate. [NIWA] research notes that flows in Alps-fed streams are likely to increase in winter and spring and decrease in summer and autumn. Flows in lowland streams in the east are likely to decrease with the drier local climate. This highlights the need to manage the seasonal and spatial variability of water resources of Canterbury.

<b>AGENDA ITEM NO: 9.</b>	<b>SUBJECT MATTER: REGIONAL COMMITTEE ANNUAL REPORT 2016</b>
<b>REPORT:</b> Regional Water Management Committee	<b>DATE OF MEETING: 14 February 2017</b>
<b>REPORT BY:</b> Barbara Nicholas, Environment Canterbury facilitator	

## **PURPOSE**

To approve the annual report of the regional committee to the Regional Council.

## **BACKGROUND**

The Regional Council's Long Term Plan requires the CWMS zone and regional committees to provide an annual report on their activities.

The attached draft has been reviewed by the chairs of the committee and its working groups and is now presented to the committee for final review.

## **RECOMMENDATIONS**

That the committee

- Agree that the annual report be approved for submission to the Regional Council.

## **ATTACHMENTS**

Regional Committee report to the Regional Council





# Regional Committee Annual Report 2016

## Regional Committee function and roles

Established in 2010 under the Local Government Act (2002), the Canterbury Water Management Strategy (CWMS) Regional Committee is a sub-committee of Environment Canterbury. The purpose and function of the Regional Committee is to:

- Monitor implementation of the CWMS across the Canterbury Region; and
- Provide advice to Environment Canterbury on regional issues associated with implementation of the CWMS.

The membership reflects these functions, and includes representatives of the Regional Council (2), Christchurch City Council (1), Territorial Authorities (3), Te Rūnanga o Ngāi Tahu (1) Ngāi Tahu Rūnanga (3), the wider community (7), and one from each zone (10).

There are also central government observers from the Ministry of Primary Industries and Ministry for the Environment, and an observer from the Canterbury District Health Board.

The committee published its Regional Implementation Programme in 2012. Its work is currently structured around the following priorities:

- Infrastructure development
- Regional biodiversity
- Recreation and amenity values
- Liaison between zone committees

A work focus of Kaitiakitanga is woven through these areas. In addition, the committee has been asked for comment on the review of the CWMS Targets, and for advice on public funding of infrastructure for environmental benefits.

## Key achievements 2016

- Facilitated the sharing of information related to the Water Management Strategy across the region
- Developed five-year work priorities for protection and enhancement of regional biodiversity values
- Continued investment of Immediate Steps funding into flagship projects for regionally significant biodiversity in Te Waihora, Wainono Lagoon and the Rakaia and Rangitata braided rivers
- Advised on investment of CWMS funding in the Biodiversity Regional Initiatives programme (fish habitat restoration, wilding trees, braided river habitat, and Hunter Hills pest management pilot project)
- Developed a regionally integrated approach to infrastructure that reflects the CWMS targets
- Provided advice to Environment Canterbury on the use of Environment Canterbury funding for the public benefit element of infrastructure and projects
- Improved understanding of the recreational use of waterways in Canterbury.



# Biodiversity and Ecosystem Health

The committee continued the Immediate Steps funding of three regional flagship biodiversity projects – Te Waihora, Wainono, and the Braided River Flagship in the Upper Rakaia and Rangitata catchments.

The committee remains concerned with the threat to the high country of lupins as a fodder crop, and welcomes that the Pest Management Plan review is considering lupins to be a ‘pest’.

This year the committee also identified regional biodiversity priorities for the next five years. In addition to supporting community-based organisations, weaving biodiversity into the working landscape and taking a regional approach, the following priority areas were identified:

- Support protection and maintenance of braided rivers and wetlands
- Sustainable management of Mahinga Kai, supporting longfin eel/tuna and fish passage
- Put in place management plans for ecologically significant habitats, key sites and corridors
- Support protection, maintenance and restoration of coastal lagoons, river mouths and spring-fed coastal streams
- Support management of invasive weed and pests in areas of biodiversity value

## Committee welcomes tuna protection decision

Following consultation with a range of interested parties in 2015, the regional committee made a submission to the Minister of Primary Industries in support of separate management of South Island long and short fin eel stocks.

The committee welcomed the Minister’s decision in May 2016 to do so, and also the subsequent Ministerial decisions on the allowable catch that effectively eliminates the commercial catch of longfin eel – the most vulnerable species – in Canterbury.

These decisions align well with the committee’s priority to develop and implement a regional eel habitat project.



## Braided River Flagship Project protects bird breeding

The Regional Committee’s Braided River Flagship (BRFS) programme invested \$108,000 of Immediate Steps funding this year in weed and predator control and fencing projects (to protect spring-fed springs and streams and for wetlands). This is to enhance the health of the braided river ecosystems in the upper catchments of the Rakaia and Rangitata Rivers.

Maintaining the health of these precious ecosystems is one of the key CWMS goals and a strategic priority of a number of groups. For 30 years, the Landcare group has provided community leadership in the upper Rangitata, and collaboration between Landcare, DOC, LINZ, Environment Canterbury and landowners has enabled the shared use of resources and had an effect in reducing weeds.

Successful bird breeding in the region is been monitored by DOC and Contact Energy. The breeding birds are, however, severely affected by predation, and a new project commenced in 2015 to manage pests in the catchment. An extensive trapping project is now underway across the catchment, with the equivalent of one trap every 100 metres all the way from Hornby to Geraldine. Between June 2015 – February 2016, the traps caught 93 cats, 67 stoats, 76 ferrets, 97 rats, 24 weasels, 61 possums – and 798 hedgehogs!



## Significant infrastructure decisions progressed

The Regional Committee continues to play the role of providing a “clearing house” for the sharing of infrastructure information. The Regional Committee Infrastructure Working Group (RIWG) leads regionally significant infrastructure conversations on behalf of the Regional Committee.

Previous RIWG achievements included playing a leading role in the Canterbury Regional Infrastructure Model project and providing the key infrastructure content for the Regional Implementation Programme.

In addition to continuing to champion and refine a regional ‘big picture’ for infrastructure, RIWG has provided oversight of the development of regionally significant components.

This year has seen the advancement of concepts to address a water supply shortage to South Canterbury, and the progression of pilot projects to test the potential of Managed Aquifer Recharge (MAR) and Targeted Stream Augmentation (TSA) concepts.

Potential integration of stock water and drinking water into new and existing infrastructure is another regionally significant issue for continuing RIWG involvement.

With early results from the MAR and TSA pilot projects showing promise, RIWG will have an on-going role in the implementation of these concepts across Canterbury. RIWG will also play an important part in addressing the water supply shortage to South Canterbury, where developments could include re-distribution of currently consented water from multiple alpine rivers through many CWMS zones.



The Hinds/Hekeao MAR pilot site

## MAR infrastructure delivers multiple benefits

The Hinds/Hekeao Managed Aquifer Recharge Pilot provides an excellent example of the integrated approach to environmental infrastructure being taken by the Regional Committee Infrastructure Working Group.

The project, led by the Ashburton Water Zone Committee in conjunction with the community and to run over five years, aims to give nature a helping hand by reducing the amount of nitrates in groundwater, increasing aquifer levels and improving flows in lowland streams.

A leaky pond near Ashburton recharges the groundwater aquifer with high quality unused stock water from the Rangitata River.

For the local zone committee, there was no doubt the MAR pilot project would be a success.

“Success is getting life back into these streams more often so they’re not going dry, and getting nitrate levels down to a level that’s acceptable,” says Ashburton Water Zone Committee member Gordon Guthrie.

The MAR Pilot Working Party is keeping a close eye of the monitoring results to date. The project involves a comprehensive monitoring regime, including state of the art nitrogen tracking equipment, to measure its success.

The monitoring results are showing promising improvements in groundwater quantity and quality levels. For example, levels of nitrate nitrogen in nearby bores are showing noticeable reductions. It is hoped that over time it will also boost flows in some of the lowland streams.

## Funding infrastructure’s public benefit elements

During the year, the Regional Water Management Committee provided advice on how a project with a combination of public and private benefits might properly be funded with a mixture of public and private funds. The process to agree on the appropriate criteria for such funding was lengthy, but resulted in the approval of the following criteria at the April committee meeting:

“While public funding should be a last resort, there could be a case for Environment Canterbury to provide public funding (through a rate) to contribute to only the public benefit elements of an infrastructure project, if the criteria are satisfied.”

The criteria are that the project:

1. Delivers significant, demonstrable ecological, social and cultural benefits over and above the alternatives
2. Requires only a one-off capital investment
3. Is a cost-effective way to achieve goals;
4. Benefits a group wider than the immediate users
5. Environment Canterbury should not help underwrite private gain
6. Contributes to the achievement of other public policies or strategies
7. Has obtained resource use consents that may be required.

During the process, the committee adopted the terminology of “public benefit elements” to capture social and cultural benefits in addition to environmental benefits.

# Recreation and Amenity work programme advanced

2016 saw the reinvigoration of the Regional Committee's Recreation and Amenity Working Group, with the group's key focus being the advancement of the regional recreation and amenity work programme.

The key strands of this work programme include increasing and sharing knowledge, and identifying and supporting initiatives to protect or restore recreational opportunities throughout the region. This work programme incorporates initiatives that

are underway at the zone level, and insights from a range of recreation and amenity interest groups.

The public profile of recreation and amenity issues has increased in 2016, with significant attention being focussed on the availability and quality of swimming sites. Recognising this, the Regional Committee requested that Environment Canterbury commission research into swimming values in Canterbury. This research, conducted in conjunction with Lincoln University, included a

regional survey and visits to a number of schools. The results clearly demonstrate how much our community values swimming in Canterbury's rivers and lakes, while also identifying key characteristics of those precious swimming sites.

The report will be available in the first quarter of 2017, and will be invaluable in supporting efforts to protect or restore swimming sites throughout the region.



## Future work programme

In 2017 the committee plans to:

- Further develop the recreation and amenity programme
- Progress the exploration and development of the integrated infrastructure options, with a focus on South Canterbury
- Enhance liaison between zone committees

### Zone Committee Members

**Independent chair**  
Andy Pearce

**Environment Canterbury Councillors**  
Claire McKay  
Rod Cullinane

**Christchurch City Council**  
Sara Templeton

**North Canterbury District Council**  
Winton Dalley

**Mid-Canterbury District Council**  
Sam Broughton

**Te Rūnanga o Ngāi Tahu**  
Rebecca Clements

**Rūnanga Representatives**  
David Higgins  
Riki Lewis  
Nigel Harris

**Community Representatives**  
Jane Demeter  
Hugh Cannard  
Cole Groves  
Nicky Hyslop  
Vicky Southworth  
Ross Millichamp  
Andrew Mockford

**Ashburton**  
Ben Curry

**Banks Peninsula**  
Vacant

**Christchurch West Melton**  
Vacant

**Hurunui Waiau**  
Michelle Hawke

**Kaikoura**  
Matthew Hoggard

**Lower Waitaki**  
Bruce Murphy

**Orari Temuka Opihi Pareora**  
John Talbot

**Selwyn Waihora**  
Ron Pellow

**Upper Waitaki**  
Barry Shepherd

**Waimakariri**  
Vacant

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