

**44TH MEETING OF THE
REGIONAL WATER MANAGEMENT COMMITTEE**

Tuesday 9 August 2016 at 1:30-6pm

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

MEMBERSHIP OF THE COMMITTEE

Andy Pearce (Chair)

Community Representatives	
Hugh Canard	Hamish Cuthbert
John Donkers	Rochelle Hardy
Jane Demeter	Hugh Logan
Zone Representatives	
Matt Hoggard	Kaikoura
Michele Hawke	Hurunui-Waiau
Claire McKay	Waimakariri
Steve Lowndes	Banks Peninsula
Les Wanhalla	Christchurch-West Melton
Ron Pellow	Selwyn-Waihora
Ben Curry	Ashburton
John Talbot	Orari-Opihi-Pareora
Barry Shepherd	Upper Waitaki
Bruce Murphy	Lower Waitaki-South Coastal Canterbury
Christchurch City Council	Phil Clearwater
District Council Representatives	
Winton Dalley	North Canterbury
Angus McKay	Mid Canterbury
Peter Scott	South Canterbury
Te Rūnanga o Ngāi Tahu	Rebecca Clements
Ngā Rūnanga	Vacant
	Vacant
	Vacant
Commissioners	David Caygill
	Tom Lambie
Central Government Observer	Nick Vincent Kevin Steel
CDHB Observer	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 -
<http://ecan.govt.nz/news-and-notice/minutes/Pages/Default.aspx>

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**Environment
Canterbury**
Regional Council
Kaunihera Taiao ki Waitaha

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 43RD MEETING OF THE REGIONAL WATER MANAGEMENT COMMITTEE
HELD IN THE COUNCIL CHAMBER, 200 TUAM STREET CHRISTCHURCH
ON TUESDAY 14 JUNE 2016 AT 1.30PM**

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14.	GENERAL BUSINESS
	KARAKIA
	CLOSURE OF PUBLIC MEETING

PRESENT

Chair: Hugh Logan

Community: Hugh Canard, Jane Demeter and Rochelle Hardy

Zone Representatives: Matt Hoggard, Michele Hawke, Claire McKay, Bruce Murphy, Steve Lowndes, Ron Pellow, John Talbot, and Barry Shepherd

Christchurch City Council: Cr Phil Clearwater

Te Rūnanga o Ngāi Tahu: Rebecca Clements

Ngā Rūnanga: John Wilkie

Environment Canterbury Commissioners: Tom Lambie

Central Government Observer: Kevin Steel and Nick Vincent (MfE)

CDHB Observer: Dr Alistair Humphrey

IN ATTENDANCE

Christina Robb (Programme Manager CWMS), Barbara Nicholas (Team Leader Zone Facilitators), Ellie McNae (Senior Strategy Advisor Water), Stephen Bragg (Tangata Whenua Facilitator); Peter Ramsden (Tangata Whenua Facilitator), Dann Olykan (Principal Strategy Advisor Water), Jill Atkinson (Director Strategy and Planning), Toshi Hodliffe (Strategy Advisor), Gerard Cleary (Waimakariri District Council), Brett Mullan, Daniel Collins and Christian Zammit (NIWA), Malcolm Walker, Helen Graham and Hayley Proffit (CDHB), Ian Fox (Deputy Harbourmaster Environment Canterbury); Lesley Woudberg (Zone Facilitator), Terri Young (Strategy Advisor), and Therese Davel (Senior Administration Officer)

WELCOME

Hugh Logan opened the meeting at 1.30pm and welcomed everyone.

Peter Ramsden opened with karakia and took the opportunity to acknowledge John Wilkie's contribution to the Committee and his outstanding work.

ITEM 1 - APOLOGIES

Apologies were received from Andy Pearce, Mayor Angus McKay, Peter Scott, Ben Curry, Les Wanhalla, John Donkers, Hamish Cuthbert and David Caygill

Rochelle Hardy for lateness

ITEM 2 - CONFLICTS OF INTEREST

Conflict of interest schedules were circulated.

ITEM 3 - MINUTES OF THE PREVIOUS MEETING

Minutes of meeting of 12 April 2016

(Refer pages 5 - 20 of agenda)

Resolved:

That the minutes of the Regional Water Management Committee meeting held on 12 April 2016, be received and, subject to the following amendments:

Item 6, Page 7, Point 3

Amend 'internal audit' to read 'independent audit'

Item 6, Page 8, Recommendation 1.

Amend 'report of BEWG' to read 'report of RIWG'

Page 11

Amend 'followed in order from her on' to read 'followed in order from here on'

be confirmed a true and accurate record.

Hugh Logan / Steve Lowndes

ITEM 4 - MATTERS ARISING

None.

ITEM 5 – CORRESPONDENCE

(Refer pages 21 – 29)

Hugh Logan referred members to the correspondence and the items were taken as read.

ITEM 6 – CLIMATE CHANGE

(Refer pages 30 - 101 of the agenda)

Regional Committee members received a copy of the Royal Society Report on Climate Change in the papers for the meeting.

Brett Mullan from NIWA presented the item together with Daniel Collins. He noted the report focussed on dynamical downscaling of updated global climate models and that risk was not addressed in this particular report. This was the first report to focus on atmosphere. One of the biggest changes was wind extremes, especially on the South Island. There was an increase in dry days but also higher rainfall.

Daniel Collins spoke about the effects of climate change on freshwater, including greater alpine flows and lower sub-alpine flows. Furthermore, warmer waters could lead to more algal blooms and reduced trout habitat. The drier soil on the plains would see an increase in the demand for irrigation and Daniel also noted there may eventually be a need to review the Te Waihora lake opening regime.

There was a brief discussion about the presentation and the involvement of the Regional Committee in climate change, which was resumed at the end of the meeting (Refer Item 14).

Resolved:

That the Regional Committee:

1. *Receive the report of the Royal Society*

ITEM 7. – STORMWATER AND IMPLICATIONS FOR CWMS

(Refer page 102 - 108 of the agenda)

Gerard Cleary from Waimakariri District Council presented the item and noted the aim of the Canterbury Regional Stormwater Forum Steering Group was to improve storm water network consent outcomes in Canterbury. He mentioned that some of the issues with the network may require further funding and told the Committee another forum is intended for August / September 2016.

Gerard said the Forum had achieved a lot over the last 2 years and the three workstreams were each working on different issues. The workstreams were Technical Design; Regulation and process; and Cost and affordability.

Gerard noted two key challenges – firstly waiting on the outcome of PC4 with some of the key issues that TA's are submitting on in terms of consenting; and the second to look at how to deal with the extreme end of storm water discharge consenting. There was also a need identified to improve their engagement with the rūnanga and Ngāi Tahu.

Steve noted that it was a difficult area to achieve tangible outcomes. Councils could be required to approve consents for something which was neither practical nor cost-effective. The challenge was to match what was affordable for the community and in line with the plan. The best way to treat storm water was not to discharge contaminants in the first instance and high levels of zinc and copper are traced in the water. It was difficult to remove these elements. There was also the issue of rural vs urban and problems that stem from urban intensification.

Gerard mentioned the Forum also needed to consider how to communicate and engage with the public around these issues and it was agreed that education was necessary nation-wide in terms of how to treat storm water.

The Regional Committee would return to the issue after the Forum.

Resolved:

That the Regional Committee

1. *Receives this progress report.*
2. *Notes the progress to date in completing actions within each work stream (see Appendix Table 1)*
3. *Notes some actions are suspended pending outcomes and implementation decisions of the Proposed Plan Change 4 to the Canterbury Land and Water Regional Plan.*
4. *Notes an option to explore a 'shared services' model between Environment Canterbury and territorial authorities, which could involve the set-up of a shared resource to address stormwater compliance.*
5. *Notes this shared services approach could provide the resourcing and expertise for future enforcement and compliance associated with stormwater discharges into reticulated urban networks from new and existing high-risk activities.*
6. *Notes the opportunity to attend the stormwater forum later in 2016.*

ITEM 8 – ECOSYSTEM HEALTH AND BIODIVERSITY

(Refer pages 109 - 112 of the agenda)

Steve Lowndes presented the item noting there was no decision-making required. He referred to the background provided at the last meeting and the notes which are attached. Steve told the Committee of a field trip on 8 November to which everyone is invited. There will be a visit to OTOP, Ashburton and the group would discuss predator control during the site visits.

Steve handed out a number of papers which the Working Group discussed at its meeting prior to the Regional Committee. Steve noted that the group would work in conjunction with DOC, TA's and Ngāi Tahu as well as engaging Zone Committees to help them to identify which areas to work in. The intention is to report back quarterly. It was acknowledged that it was a huge project which could also attract a lot of publicity.

Action Point: Any comments to go directly to Steve Lowndes who will report back at the next meeting.

Resolved:

That the Regional Committee:

1. *Receives the report of BEWG.*
2. *Notes the change of the BEWG meeting date from 8 November to 7 November, and the opportunity for other members of the Regional Committee to join BEWG on the upper Rangitata field trip.*

ITEM 9 – TARGETS UPDATE

(Refer pages 113 - 127 of the agenda)

Dann Olykan presented an update on the Targets, noting he had considered 2020 targets in particular. He mentioned the team reviewed the measures to ensure they have the correct programmes / information available. They were not discarding 2010 and 2015 targets but focussing on targets which will be reported on in 2020 to consider if there was something to work towards from now on.

For each of the 34 targets the question was asked what proposed measure was in place. They focused on 10 specific targets for example looking at target 19 on selective native fish, was it sufficient to focus on long fin eel?

Dann noted more work was needed on economic indicators, e.g. how would economic progress / non-economic progress be measured in the CWMS space. Overall he found the target review a valuable process as it kept targets at the front of the minds of those working on it. Dann mentioned they wanted to report back on a quarterly basis.

There was a brief discussion around outsourcing some of the work on targets to someone at one of the universities or the Economic Unit at MPI.

The Committee advised that Dann and his team consider different options, including considering contracting out some of the work or asking Working Groups to work on the targets, with a report back to the next meeting.

Resolved:

That the Regional Committee

- 1. Notes and signs off on the proposed measures for the 2020 targets.**
- 2. Notes the specific targets that will require further input from the Regional Committee and/or the Regional Committee Working Groups and agree to progress this.**

ITEM 10 – RECREATIONAL WORKING GROUP

(Refer pages 128 – 130 of the agenda)

Hugh Canard presented the item in the absence of Ben Curry. Hugh asked for responses from the Zone Committees. The Working Group would be talking to school groups as well. He noted there may be conflict between user groups e.g. fly fishing and jet ski groups may not agree on what's best for the water they share. It is expected that the most conflict would be in areas where the water quality is worse.

As for next steps, Hugh referred the Committee to the list of work-to-date.

Resolved:

That the Regional Committee:

- 1. Receives the report of RAWG and**
- 2. Notes the steps being taken to identify**
 - (a) Gaps in understanding of recreational and amenity opportunities or understanding, and**
 - (b) Opportunities to develop flagship projects**

Afternoon tea break announced.

At this point in the meeting Hugh Logan asked the Committee to thank Christina Robb for all her guidance, support and knowledge over the past 6 years. He thanked her for what she has done for the Regional Committee which would not have functioned as effectively and smoothly as it did, if it was not for her.

Hugh handed Christina flowers and a card from the Committee.

Christina responded by saying she was leaving Environment Canterbury but not necessarily the Canterbury Water Management Strategy and she would probably still be involved in some way in the future.

She thanked the Committee members and acknowledged that their mostly voluntary time, commitment and hard work are the powerhouse which drives the Canterbury Water Management Strategy.

Jill Atkinson told the Committee that Christina's legacy would be that she is one of only a number of people who knew and understood what water was all about.

ITEM 11 – REGIONAL INFRASTRUCTURE WORKING GROUP UPDATE

(Refer pages 131 – 135 of the agenda)

Brett Painter presented the item, and in particular thanked John Wilkie for his words of wisdom and assistance in the years they worked together.

Brett noted that the messages from NIWA were consistent with previous modelling but that the level of confidence in predictions had increased. He told the Committee that there was a lot of work to do in the Infrastructure space and that his project was a 20 year multi-billion dollar project. He said that recent climate stress on lowland streams was likely to continue and that there is a need to store already consented alpine water to support lowland streams by replacing consented groundwater takes.

He spoke of the two new schemes at Waihao and Hakataramea. He said HDI was reaching a critical point in terms of confirming technical and economic viability. The Rangitata South Scheme has been in operation for a while now and Lake Coleridge is showing the ability to provide storage to an increased area.

In mid-Canterbury there was a new storage pond at Carew with potential for a further new one near the RDR intake. He also noted that CPW was at a critical decision point for designing the remainder of their scheme.

Brett mentioned that in North Canterbury there had been continued work over the years to progress and implement an integrated infrastructure for the zone. Amuri Irrigation Scheme piping was well through the design process but zone-wide storage and Hurunui Water Project scheme design were at an earlier planning stage.

There was a brief discussion about funding and augmentation concepts (in particular, Managed Aquifer Recharge and Wainono augmentation). Tom Lambie reported different models were being considered to identify the most cost-effective way to do the Wainono augmentation. John Wilkie remarked that the consent would need to allow more than one point of discharge.

Hugh Logan thanked Brett for a very useful snapshot as to where everything was at. The infrastructure diagram would be circulated to all Regional Committee members.

Resolved:

That the Regional Committee:

- ***Notes the regional infrastructure update.***

ITEM 12 – LAND USE AND WATER QUALITY

Dann Olykan presented the paper with a brief summary, noting it was for information only. Barry Shepherd made the point that some farmers were struggling to make much sense of the portal. Dann acknowledged there was upgrading done on the portal and that it should be straight forward to get into in future. Claire McKay acknowledged Leo Fietje who went to her farm to show her how to use it. She found the exercise useful and finds the portal working well.

Resolved:

That the Regional Committee:

- ***Notes the content of the briefing on tools and rules to ensure the connection is made between land use and water quality.***

ITEM 13- ZONE COMMITTEE UPDATES

(Refer pages 136 - 144)

Verbal updates were given during the meeting.

Orari-Temuka-Opihi-Pareora Zone Update (John Talbot)

(Tabled at the meeting)

John noted two items for information – phormidium update for which the McAlister report is available; and there was renewed focus on promoting catchment groups.

Ashburton Zone Update (Ben Curry)

Apology

Hurunui – Waiau Zone Update (Michele Hawke)

No report

Lower Waitaki–South Coastal Canterbury Zone Update (Bruce Murphy)

Plan change 3 for South Coastal Canterbury is still in its Hearings

Plan Change 5 Waitaki further submissions have closed and hearing dates have been set starting 22nd August in Christchurch, 6th September in Oamaru and 4th October in Omarama.

Immediate steps have seen 21 projects approved to date and 402k of the 500k has been allocated. Three more projects were approved at our last Zone meeting totalling 23k.

The Integrated monitoring framework project-this project plans to measure the effectiveness of the subregional plan using the TLI of Lake Benmore and in stream nutrient concentrations measured against limits. The monitoring framework integrates and collates the monitoring in the Waitaki catchments from numerous parties e.g. NIWA, Ecan Irrigation schemes and makes it publically accessible. This will be done by a story map website with multiple layers where you can access historical and current data from each individual test site. This website is well into the design stage and has allowed us to conduct a gap analysis of the testing regime

Waihao Wainono Catchment group held a public field day to help farmers understand GMP and practices associated with the establishment and consumption of winterfeed crops with minimal risk to the environment. On hand were some great keynote speakers and the day was very well supported by farmers.

Wainono Lagoon Augmentation. The IAG draft document is having further consultation with farmers. Hunter Downs Irrigation (HDI) has had several changes in its structure and this has been released by newsletter to its shareholders. One of the key work streams of HDI is modelling the best way to augment Waitaki Water into the lagoon and how this process improves the lagoon as a fisheries and its bird life.

Selwyn-Waihora Zone Update (Ron Pellow)

(Tabled at the meeting)

The Selwyn-Waihora Zone Committee has met twice since the regional committee meeting in April. (3 May and 7 June).

Key aspects from these meetings and related activities include:

1. State of Te Waihora / Lake Ellesmere

- a. ECAN reported on the State of Te Waihora through the 2014-15 season, providing a presentation on a number of the factors influencing water quantity and quality in the lake and surrounding area. This includes rainfall and lake-levels, the lake trophic status, water quality of the tributaries, aquatic ecosystem health, recreational water quality, lake level management in recent years and the potential impact of the Plan Change 1. Most of the data available is not from direct measurements but calculated based on raw data and describe the general condition and or trend.

2. Canterbury District Health Board – nitrate communication plan

- a. The Zone committee was updated on the CDHB communication plan regarding potentially increasing nitrate levels in ground water used for private drinking wells.
- b. CDHB has a joint work plan with ECAN. Their primary focus is awareness for mothers of new born babies who may need to bottle feed infants under 6 months of age.

3. Selwyn Waihora Plan Change (PC1):

- a. The Zone Committee, and the implementation working group continue working with ECAN staff to determine how landowners can effectively prepare for the required consent applications due in early 2017.
- b. It has been agreed land owners who wish to can apply for a land-use consent ahead of the 1 January – 30 June 2017 period if the application is for a farm that is above 15kgN-loss/ha. This will enable farmers with current Overseer data to progress their applications, rather than await future releases of Overseer to update their files prior to lodging the application in the above timeframe. Farms below 15kgN/ha will need to apply during the Jan – June time frame as they have to use the current version of Overseer to show they remain below 15.
- c. A range of factsheets continue to be prepared by ECAN staff, with particular focus currently on addressing Mahinga Kai and cultural values.

4. Work Programme and 5 year delivery outcomes:

- a. The zone committee endorsed the ECAN Zone teams work programme for 2016-17. The plan has 8 outcomes based on the agreed 5 year delivery outcomes.

5. Immediate Steps

- a. An additional four IS projects were funded, bringing the total funds committed by the SW Zone committee to almost \$500,000.
- b. These projects include springhead protection, planting to create a buffer against a science reserve and further infill planting of a wetland.

6. General:

ECAN staff provided an over view of the recreational and amenity flagship project. Strategies were discussed to aid uptake of GMP.

7. OECD group visit

As part of a five-day visit to New Zealand an OECD (Organisation for Economic Co-operation and Development) team spent a day visiting sites in Selwyn Te Waihora Zone. The visit was hosted by MPI, MfE, ECAN and members of the Zone Committee.

The OECD team was undertaking the third OECD Environmental Performance Review of New Zealand. Previous reviews were completed in 1996 and 2007. The purpose of the review is to identify areas where OECD recommendations could help New Zealand to strengthen its environmental performance, as well as good practices that could be helpful to other countries.

The review will evaluate overall progress towards sustainable development and green growth, including:

- Key environmental trends and policy measures in air emissions and pollution, climate change, waste management, resource efficiency, water and biodiversity;
- New Zealand's frameworks for environmental governance and management; and
- Market-based instruments and transition measures.

Two special topics are being examined in greater detail – Freshwater Management as a topic where New Zealand may be able to offer peer-learning to other countries and Cities and Sustainable Urban Development where we can benefit from the knowledge and experience of others.

The OECD Review team will present their findings and recommendations in a report scheduled for publication in February 2017.

Waimakariri Zone Update (Claire McKay)

Claire noted that the Ashley river was identified as an issue. The estuary shows high levels of e-coli and there's a difficult decision to be made: having healthy bird colonies or a river fit for recreation.

In the meeting:

- A) Briefed by Council staff on the Eastern District Sewerage Treatment scheme performance and the occurrence of Avian Botulism in the area.
- This was in response to public concerns to a high number of bird losses last summer and unusual sea foam occurring along the beach.
 - Advice received suggests the sea foam is a natural phenomenon of “a common bloom of marine diatoms”, and unrelated to the ocean outfall.
 - This last summer, collection of dead birds (presumably due to botulism) from the sewerage ponds every two or three days is believed to have helped reduce the incidence, due to less infected material being available as a source of toxin.
- B) The Council also outlined their approach regarding community concerns about the condition of the Kaiapoi River and its tributaries.
- One theory for die back of aquatic weeds and animal life that occurred in the previous three years, was that weed spray up stream was the cause.
 - This year the river weed grew well until mid-February when a king tide and low flows in the Waimakariri resulted in salt water intrusion.
 - Ongoing investigations have strongly supported salt intrusion as being significant.
 - Glyphosate tests show minute levels in the silt only-with no breakdown products detectable. Further advice is being sought.

The committee has scheduled workshops between each ZC meeting for briefings on interim science being collected as part of information for “State of the Zone” as part of sub regional planning.

Upper Waitaki Zone Update (Barry Shepherd)

- Two meetings have been held since the last report.
- A report on some submissions to PC5 was received. Some Upper Waitaki specific issues are:
 - Some submissions request that Biodiversity provisions be deleted and others that they be strengthened.
 - Stronger requirements for nitrogen users groups to comply with catchment load limits.
 - Create opportunities for consent holders to change NDA or trigger value consent conditions to align with provisions in the Plan.
 - Requests to remove the 1.6kg N/hect in the Haldon and mid catchment Zones and allocate to existing users and ECan manage the head room tally.
- The Zone Committee role in the Hearing process was explained.
- A compliance monitoring and Zip delivery report was received from the Zone Manager. At a previous meeting the committee expressed some dissatisfaction with the compliance reporting in the Zone. The Zone Manager explained a list of actions to improve compliance reporting including:
 - Changes to Dairy Sheds Effluent Monitoring
 - Increase in the availability of RMO's to monitor and enforce the requirements of water permits.
 - Develop monitoring guidelines that express the ZCs high level priorities for compliance and enforcement.
 - Target full compliance with the 2010 water take regulations (project underway).
 - Develop data management for water usage and follow up non-compliance (project underway).

- 51 complaints were received for the Zone, one abatement notice was issued; other complaints were resolved through other means – education / advice.
- The ZC is supporting integrating actions with other organisations in its delivery of restoration / rehabilitation projects. The Group Sustainable Coast Lines Org has expressed a strong interest in being involved and is assisting to raise funds from the Community Environment fund (MFE) for the Love your Lakes and Willowburn Rehabilitation projects.
- Application for funding has been accepted by MFE. Over the last four years sustainable coastline has had considerable success throughout NZ in public motivation, tree planting and rubbish removal projects.
- Immediate steps funding of \$10k was approved for the fencing of Twaddles Swamp to exclude stock from the swamp and spring head which provides significant habitat for Big Nose Galaxid and Long Fin Eels. This takes total immediate steps funding to \$581,930.00 in the zone.
- The integrated monitoring framework project to make water quality information more easily available and complete has proposed the Omarama Stream Catchment be used as a pilot to access the information available and test its suitability. A gap analysis has also been completed.
- The ZC has resolved to sue the Mackenzie agreement to inform its work and give effect to the agreement where possible. The Chairman and the Facilitator addressed the two day workshop to inform the Trust where it could achieve synergies to both groups.
- The ZC received a report from Mackenzie District Council re Freedom Camping. They reported that they are part of a group working through this process but are not at a stage yet to be able to report any progress. MDC are reviewing its freedom camping rules and have held workshops with Fairlie, Tekapo and Twizel Community Boards and sought feedback from the wider public. That feedback is now being considered as part of the strategy review being completed on behalf of the Council. The ZC has identified priority sites for new or upgraded toilet facilities in the Zone.
- Large road side signs regarding the social issues around the Love your Lakes Campaign have been discussed and it is proposed to personally approach the land owners of the three selected sites as a first step.
- The annual report was presented to the Waitaki and Mackenzie District Councils and Environment Canterbury.
- Water level recordings for 15/16 were presented. The Ahuriri River and the Omarama Stream had their lowest April flow ever recorded.

Kaikoura Zone Update (Matt Hoggard)

(Tabled at the meeting)

Nutrient Management Group

100% of Kaikoura Dairy Farmers now have now done a Farm Environment Plan! Local farmers did the Dairy NZ version of a FEP – Sustainable Milk Plan and all had time with a consultant funded by Dairy NZ. The personal generosity of Commissioner Bedford marked this milestone at the Kaikoura Dairy Awards.

Lyll Creek / Waikoau

Successful planting day occur for Lyell Creek, as part of the Love the Lyell campaign. The next section Lyell Creek is being prepared for a future spring planting event.

Discussions are still occurring with Fish and Game and other key stakeholder about fishing in the lower section of Lyell Creek. Trout are frequently watched and fed by locals and tourists between footbridges within the Kaikoura township.

Clarence River / Waiau-toa

The importance of the area has further been publicised by the Nature Heritage Fund in its new book which celebrates 25 years of the Nature Heritage Fund.

<http://www.nzila.co.nz/news-items-roll/news-item-list/nature-heritage-fund.aspx>

As an aside public submissions are open until Friday 26 August 2016 on a proposal to alter Clarence River to a dual name, Clarence River / Waiau Toa, based on the equal significance of both names additional details can be found here <http://www.linz.govt.nz/regulatory/place-names/place-name-consultation/14197>

Banks Peninsula Zone Update (Steve Lowndes)

Te Roto o Wairewa / Lake Forsyth

The Committee was updated on the sad state of Te Roto o Wairewa / Lake Forsyth. This year has seen one of the most prolonged cyanobacteria blooms for a long time and comes after 4-5 years of improvements. The current cyanobacteria bloom is thought to be related to the lack of rain last winter meaning the lake has been at low levels throughout summer. The committee has approved funding of up to \$60,000 for a sediment management trial to reduce the phosphorous rich sediment from collapsed stream banks entering the lake. The committee also set the policy context for Plan Change 6 (Wairewa) of the *Land and Water Regional Plan* that introduces stricter controls on stock access to the rivers along the valley floor. Hearing on Plan Change 6 is completed and decisions pending. Work to determine the effective a feasibility of a sediment retention basin is continuing.

Waste Water Trial – Duvauchelle

Committee members visited the Lincoln University / Christchurch City Council waste water disposal trial at Duvauchelle. It is still early days but the native plants being irrigated by treated waste water are doing noticeably better than others. There was no indication that the trial used treated waste water apart from the information board. The Committee has been an advocate of land based disposal options for waste water and will continue to take an interest in this trial on the Peninsula.

Whakaraupō Integrated Catchment/Harbour Management Plan

An outcome of the Lyttelton Port Recovery Plan was a direction to prepare an integrated catchment/harbour management plan. Te Hapu ō Ngāti Wheke / Rapaki, Christchurch City Council, Environment Canterbury, Te Rūnanga ō Ngāi Tahu and the Lyttelton Port Company are working together to prepare the a plan. The Committee received a briefing on the nearly completed stocktake of scientific and cultural information that will form the foundation of the plan. A web based resource has been developed to present information on catchment and link back to state of the environment monitoring programmes. The link is under development but you can access the test site by following this link

<http://test.canterburymaps.govt.nz/webapps/StoryMapSeries/lhc.html>

5 Year Outcomes

The committee has signed off on its 5 Year Outcomes.

Christchurch-West Melton Zone Update (Les Wanhalla)

Stormwater

The Committee was briefed by Paul Dixon (CCC) about the challenges to improve the quality of stormwater discharges and the need to think differently. Some actions such as alternatives to copper lined brake pads will need to be tackled at a national level, others by way of council infrastructure and others by community and individual actions. CCC has since asked staff to work with other councils and government to see if some national measures can be introduced to phase out such products where there are alternatives.

Communities can do a lot to reduce some contaminants entering waterways in the first place. CCC estimates only \$1,000 was spent last year on community awareness of the importance to reduce contaminants before entering the infrastructure.

Addington Brook is one of the priority catchments for the Committee as it is the most polluted tributary leading into the Avon River. A recent study found that 30 tonnes of suspended sediment enters the Brook over the course of the year. Car parks contribute 14 tonnes, 9 tonnes from roads and 7 tonnes from roofs. The next largest contaminant load is zinc with 340kg, 66% from galvanised roofs and copper contributes 17kg per year mainly from roads and industrial car parks. With this information the committee is working with staff to talk to occupiers of land in the area and trial the effectiveness of various actions such as additional road sweeping and replacing and painting galvanised roofs.

Groundwater

The Committee received a report from Professor Bryan Jenkins, Waterways Centre for Freshwater Management Lincoln University, on the low levels of groundwater in the Christchurch West Melton area. Professor Jenkins considers current low levels of spring fed streams are caused by the hot dry weather, less rainwater infiltration because of hard surfaces, and water takes (water takes in the area include drinking water supply 45%, industrial use 31% and agriculture/horticulture 22%). Increasing stormwater infiltration and managing demand were suggested as part of the solution. The zone committee will be workshop some of the possible management options suggested.

5 Year Outcomes

The committee has signed off on its 5 Year Outcomes.

Resolved:

- ***That the Regional Committee accept verbal updates from representatives.***

ITEM 14 - GENERAL BUSINESS

Hugh Logan noted that two people were stepping down from the Regional Committee. They were Hamish Cuthbert and John Wilkie.

Hugh thanked Hamish in his absence, for his thoughtful and deliberate presentations.

Hugh thanked John on behalf of the Committee for his contributions and the ability to bring both detail and broad strategy to the table. Hugh presented John with a gift from the Committee.

John Wilkie responded to say that it was a sad day for him. He remembered the day he first met Dame Margaret when she spoke at the Rakaia Gorge. He said he felt happy on the day

and 'wanted to get on that bus'. It was a pleasure to work with Environment Canterbury and the Regional Committee and he thanked staff for being helpful. He thoroughly enjoyed working on the Regional Committee and all the sub-committees he had been part of.

Hugh referred the Committee back to the issue of climate change as per Jane's request. There was a brief discussion on ways to keep the conversation alive, particularly in the work the Regional Committee does.

Steve Lowndes thought the NIWA presentation was interesting but that it was weak in communicating the urgency of the matter. He noted we were already in a period of consequences and proposed a small unit of people to start brainstorming the issue. When something major does happen, there will be plans and policies in place to deal with it.

The question was also asked whether Environment Canterbury planning and policy staff were considering climate change in all of their work. Hugh Logan told the Committee that Environment Canterbury staff were very aware of climate variability and potential changes and do take these issues into account.

Jane Demeter made the point that the Regional Committee was an advisory group and as such should send a signal to weave climate change and awareness into all policies, plans and activities. Hugh Canard agreed, noting that river minimum flows may need to change in future and that could pose a challenge for planners.

Action Points:

- Environment Canterbury should ensure that it was signalling clearly to stakeholders now that climate change impacts will need to be factored into the next round of policies and rules. This was because (1) The science was becoming increasingly definite about the nature of impacts, making predictions more reliable; and (2) should it not be clearly communicated, Environment Canterbury could risk the type of stakeholder reaction that Christchurch City Council had encountered over policy and rule changes in the New Brighton area, arising from future sea level rise.
- A short report on initiatives within Environment Canterbury in terms of climate change will be submitted for the next meeting.

CLOSURE

The meeting closed at 4.55pm.

Peter Ramsden closed with karakia.

Date: _____

_____ **Chairperson**

AGENDA ITEM NO: 6	SUBJECT MATTER: DRINKING WATER UPDATE
REPORT: Regional Water Management Committee	DATE OF MEETING: 9 August 2016
REPORT BY: Ellie McNae, Environment Canterbury	

Purpose

To provide the Regional Committee with an update on drinking water related activities and issues.

Key issues: high nitrate levels, low groundwater levels in wells, the impact of continued drought.

Low Groundwater Levels in Community Wells

- Community drinking water wells, and some private bores, in some areas reported low groundwater levels over the past summer. In some cases this has meant that bores have had to be deepened to ensure a secure supply of water.
- Environment Canterbury and the Canterbury District Health Board have now initiated work around this issue to better understand the causes, and potential responses.
- As part of this, Environment Canterbury is looking into likely groundwater levels under various climate scenarios across Canterbury. At present this information is only available for a couple of catchments.

Nitrate Levels

- Christchurch City Council recorded nitrate levels well above the Maximum Allowable Value in an Addington bore in November 2015 and February 2016. Neither incident was reported to senior officials at the Christchurch City Council, nor to the Canterbury District Health Board, as per regulatory requirements. This breakdown in communication being investigated and addressed.
- This bore has been taken off line.
- The Canterbury District Health Board and the Christchurch City Council worked together to quickly address the issues and communicate any risks to communities. They have kept Environment Canterbury informed throughout this process.

Nitrate Communications Plan:

- Through the joint work programme with the Canterbury District Health Board, Environment Canterbury has engaged in range of outreach and communication activities advising pregnant women and parents of bottle-fed babies to have their groundwater wells tested for nitrates. A key point is that nitrate doesn't appear in breast milk.
- Canterbury District Health Board is building on communications from 2014 and 2015, adding alerts on nitrate risk areas into Health Pathways and providing information to midwives and GPs. These alerts mean that a GP or midwife will be reminded to ask pregnant women if they are on their own drinking water supply, and to suggest options to get any at-risk supplies tested.
- Information on the updated Nitrate Communications Plan has been presented to Selwyn-Waihora and Ashburton Zone Committees. Updates are scheduled to be given to other Zone Committees in the coming months either by presentation or by a written update.

Managed Aquifer Recharge

- The MAR pilot project aims to test whether the augmentation water can be tracked, and also what level of impact this augmentation water has on groundwater levels and quality in the target area. Understanding the potential of diluting this groundwater while balancing other potential benefits and risks is crucial to developing its future water management role in the Ashburton-Hinds catchments.
- Consents for the pilot project (up to 5 years duration) have been granted and funding is being provided through community contributions, as well as from central and local government.
- [The official opening was held on 3 June.](#)

Limit Setting Processes

- A number of zones have already progressed through the limit setting process with the most recent being the Hinds Plains, which was notified on 13 February 2016
- Ensuring that the public health perspective is incorporated from the outset is particularly important. For this reason, Canterbury District Health Board and Community and Public Health are very involved in the limit-setting process– both in the scientific and community stages. They are currently contributing to the scientific elements of the Waimakariri process.

Community Drinking Water Protection Zones

- Schedule 1 of the Land and Water Regional Plan states that “in any resource consent application for a new group or community drinking-water supply take and replacement of any existing group or community drinking-water supply take, the need for, and extent of, a specific protection zone will be considered”.
- Environment Canterbury has facilitated this by updating the information held on the location and details of groundwater wells and surface water intakes. This information is now visible map layers on the Canterbury Maps website. Environment Canterbury and Community and Public Health are committed to continuing to share information on the location of any new community water supplies.

AGENDA ITEM NO: 7.	SUBJECT MATTER: BIODIVERSITY AND ECOSYSTEM HEALTH WORKING GROUP
REPORT: Regional Water Management Committee	DATE OF MEETING: 9 August 2016
REPORT BY: Barbara Nicholas, Environment Canterbury	

PURPOSE

This paper updates the regional committee on the work of the Biodiversity and Environmental Health working group (BEWG).

BACKGROUND

BEWG met on 12 July 2016. Two items were on the agenda. (See meeting notes attached.)

1. Measures for biodiversity targets

Dann Olykan presented a paper requesting advice on appropriate measures to report on progress against some of the CWMS targets for biodiversity (as raised at the last regional committee meeting).

The following advice was offered.

a. Trend in diversity and abundance of fish populations

The macro invertebrate index (MCI) provides the history of a waterway, but important to also measure the presence (or otherwise) of fish themselves.

Advice is to work with zones to identify and prioritise particular waterways for fish monitoring, and/or monitor impact on fish populations where there are initiatives to improve things.

b. Protection of wetlands

It was agreed that it is important that reporting

- serves to identify where action is needed
- should be weighted towards those wetlands that play an important role or are a site for an important specie
- is linked to level of protection provided (e.g. under RPS, via plan rules, covenanted area, fenced etc).

c. Increased length of waterways with appropriate riparian management

Information that is already available should be used to report on what is 'appropriate', with available data used to set 2-10 baseline.

d. Protect significant habitat for full range of indigenous braided river flora and fauna

There was a wide ranging discussion about the impact of tenure review on high country land use, and the distinction between 'natural character' of braided rivers, what flora and fauna is specific to braided rivers (there being many different habitats), and what else needs to happen (e.g. pest/predator control, flows, managing encroachment).

2. Compensatory funds to fund environmental enhancement projects

In response to an early request from the working group, Ali Bower presented a paper on how monies are allocated for environmental enhancement as a result of ECan consenting and enforcement processes (paper attached).

Following discussion, the committee agreed to

- request the regional committee to ask for an update from various funds that were reviewed, plus reports from irrigation companies with environmental levies
- suggest the regional committee host a hui with parties funding environmental work

- explore various models for supporting community initiatives and enabling administration and spend on environmental projects.

Other matters

1. Russell Lupins

Merino NZ has also provided an update on their current position on the use of Russell Lupins as a fodder crop.

While they await the outcomes of the Regional Pest Management Plan review process they

- have taken the decision to minimise any further plantings
- no longer promote the cultivation of Russell Lupins as a forage crop and are not advocating any further plantings
- have removed from their website all material that advocates their propagation.

They are happy to keep working with Environment Canterbury on the appropriate direction going forward and appreciate the approach that Environment Canterbury has taken to date.

The Ministry of Primary Industries have informed MerinoNZ that they will endorse any decisions made by Environment Canterbury relating to Russell lupins which would include endorsing a protocol describing the circumstances under which Russell lupins should be cultivated, if Environment Canterbury decide this is an appropriate course of action.

2. Regional biodiversity 5-year work programme

The regional biodiversity 5-year work programme is nearing completion. This includes a stocktake of biodiversity action across the region. The stocktake is being compiled of current work being undertaken across the region across the ten five year regional outcomes. At the meeting, Chris Keeling will present on the types and locations of projects that Environment Canterbury is involved in. Over the next couple of months, activities being undertaken by other agencies will be added to the map to provide a more complete picture of on-the-ground biodiversity work. The results of the stocktake will help inform the development of the regional work programme, helping identify gaps and opportunities. To support this, staff will attend zone committee meetings in September to explore local opportunities in each zone.

RECOMMENDATIONS

That the regional committee:

- Receive the report of BEWG
- Support BEWG's recommendations on measures to report progress on specified target areas
- Agree to request an update from parties on environmental initiatives funded through requirements of consent conditions or restorative justice.
- Notes the current work profiled in the regional biodiversity stocktake.

ATTACHMENTS

Meeting notes and papers from 12 July BEWG meeting

BEWG meeting notes July 2016

Present: Steve Lowndes, John Talbot, Peter Scott, Hugh Cannard, Michelle Hawke, Les Wanhalla, Tom Lambie.

Staff: Ali Bower, Tim David, Dann Olykan, Barbara Nicholas

Advice on targets

Dann introduced his paper (attached) – and identified two issues for discussion

- a. Are the measures appropriate, and
- b. Does the work programme advance the targets?

1. Target: trend in diversity and abundance of fish populations

Some monitoring happening

- Regular MCI and ecosystem health
- Water quality
- Fish – not a regular monitoring programme, but various studies by DOC, ECan and F&G. Some data in native freshwater fish database, but ‘no data’ can mean, no fish, data but not in database, or no data available.

Is MCI an appropriate measure? Was noted:

- Applies only to some types of rivers (but many of these are found in Canterbury) – and will be required under NPS. May be good to identify those rivers where it does not apply and work with zone committees for other measures.
- Need to count the fish themselves. MCI a diagnostic tool, and a measure of ecosystem health but ‘no fish’ requires need for further analysis. And good to link with mahinga kai outcomes
- Need to prioritise rivers and where best to do measures (noting we are going into a dry cycle)

Could work with zones to identify and prioritise particular waterways for fish monitoring and/or monitor in areas where doing positive things.

i.e.

- a. MCI provides history**
- b. Work on monitoring that is already happening – count fish**
- c. Drill down to zones to see where more monitoring can be usefully done.**

2. Protection of wetlands: what to report on?

- Significance important. Agree that be weighted towards those that play an important role or site for particular species. Plus level of risk.
- FENZ dataset provides low resolution national overview of wetlands. Regional work programme to register all wetlands (but will be difficult to get perfect!). 2 zones completed, SW next
- Vision to protect them all, but report on different levels of protection – RPS, plan rules, covenanted area, fenced...
- But issue about how to use this data, and how widely to be used. Would like over time for this to be as public as possible
- Need to be able to be used to identify where action is required.

le In next year: what is a wetland, and what level of protection.

3. Increased length waterways with appropriate riparian management
 - 'appropriate' can be reported back on on basis of info already available
 - Co-ordination of available data can be used to set 2010 baseline [Note MPI has commissioned report on economic impact of riparian planting – not yet peer reviewed. Fonterra also working on this, and developing technology for mapping issue. Synlait and DNZ may also have data.]
4. Protect significant habitat for full range of indigenous braided river flora and fauna
 - Tenure review intensifying land use in high country – a issue for water quality and encroachment on rivers. But note that is some places people are thinking about whole farm and balance of use in different areas. Exploring options for farm management to protect environment.
 - Issue about protecting 'natural character'. An on-going challenge. How do we report 'character'
 - Can we do flora and fauna specific to braided rivers? (Note that larger alpine rivers are boundaries of zones.) Not much happening for hill braided rivers?
 - What more do we need to do? It's pest/predator control; flows; managing encroachment. ...
 - We are creating what the community wants.
 - Policies & rules/projects/

Compensatory funds used to fund environmental enhancement projects

Ali Bower talked through her paper on how money is allocated for environmental enhancement as a result of Environment Canterbury consenting and enforcement processes. The focus is on mechanisms which transfer larger sums of money (> \$10,000) for environmental offsets or mitigations. The compensatory mechanisms investigated are as follows:

1. Conditions of Consent for a new or renewed water take consent for irrigation schemes
2. Amendment to a Water Conservation Orders
3. Restorative Justice resulting from prosecution
4. Alternative Environmental Justice an alternative to prosecution

People queried if there is an opportunity for co-ordination between the various trusts, to reduce the admin costs. What could be the mechanisms that could be used within consent requirements for money to be used for environmental purposes? Alison acknowledges that some things are beyond Environment Canterbury's control (i.e. Restorative Justice) and alignment to the objectives and targets of CWMS and other regional directions is the first consideration in all allocations of funds regardless of the mechanism of delivery.

Some interventions are at a particular scale/location such as those associated with irrigation schemes consents. Other mechanisms may be used for regional priorities, although currently this is not the case.

Agreed that

- Request the regional committee ask for update from the various funds reviewed in the paper, plus reports from irrigation companies with environmental levies
- Suggest regional committee host a hui with parties funding environmental work
- Explore various models for supporting community initiatives and enabling admin/spend on environmental projects.

AGENDA ITEM NO: 1	SUBJECT MATTER: REVIEWING THE CWMS TARGETS FOR 2020 - MEASURES & INDICATORS.
REPORT: BEWG	DATE OF MEETING: 12 July 2016
REPORT BY: Dann Olykan	

PURPOSE

Guidance from BEWG on how we measure and report progress on four important targets.

SUMMARY

The next CWMS progress report is due in June 2017 where we will begin to focus on the 2020 targets.

To ensure we are well prepared, we have undertaken a review of CWMS targets – specifically the measures and indicators that need to be in place to report progress on the 2020 targets.

REVIEW

The CWMS has some 146 distinct targets from 2010 to 2040.

The 2020 targets were assessed against a standard set of criteria for appropriateness using a ‘SMART’ approach. Targets were assessed for;

- Simplicity – clearly defined and focused?
- Measurability – can it be measured or should an ‘indicator of progress’ be used?
- Action-ability – can the work be done and; Is the data already Available?
- Relevance – is the measure relevant to the CMWS Target Area?
- Timeliness – will data be available for the 2017 report and to meet the 2020 target?

The review found that of the 34 targets for the 2020 time period, 11 were short in most ‘SMART’ areas.

Of these 11 targets there are 4 relating to Biodiversity and Braided Rivers where we seek some advice from the Biodiversity and Ecosystem Health Working Group.

They four targets with particular challenges are;

Target No.	Target Area	Theme	Target	Challenge
19	Ecosystem Health/ Biodiversity	Freshwater species and their habitat	By 2020: An upward trend in diversity and abundance of native fish populations	Limited coordinated data on native fish species diversity and abundance.
20	Ecosystem Health/ Biodiversity	Wetlands	By 2020: Protected all existing wetlands	Agreement on wetland protection level and need to set priorities through assessment of significance
22	Ecosystem Health/ Biodiversity	Lowland streams	By 2020: Increased the length of waterway with riparian management appropriate to aquatic ecosystem protection by 50% from 2010 figures	Limited coordinated data on riparian planting location or quality (appropriateness). No baseline set for 2010.
42	Natural Character of Braided Rivers	Ecosystems, habitats and species	By 2020: Protected significant habitat for a full range of indigenous braided river flora and fauna	Agreement on protection level. Focus to date has been on reporting loss (500 ha per ann. since 1990). Braided River Surveys often characterised by partial river coverage, different methods used, limited reporting on outcomes and large temporal gaps between surveys

OBJECTIVE

From the 12 July workshop we seek guidance on gaining agreement from the Regional Committee on a practical approach to reporting on each of these four targets and seek guidance on the work programmes and projects that will allow us to report on progress.

THE TARGETS

Some additional detail is provided for consideration prior to the workshop here:

Biodiversity and Ecosystem Health Working Group (CWMS Regional Committee)

Targets for Discussion

Target Area: Ecosystem Health/Biodiversity Target No: 19

Target Theme: Freshwater species and their habitat

By 2020: An upward trend in <u>diversity and abundance</u> of native fish populations			
Proposed Indicator	Measured By	Suggested Work Programmes	Discussion Points
<p>Percentage occurrence of selected native fish populations with consideration of increasing elevation and distance inland.</p>	<p>Native fish population counts, by species at regularly monitored locations, habitats;</p> <ul style="list-style-type: none"> - Diversity: number of species and their relative abundance - the <u>number of species</u> in the community (species richness), - the <u>relative abundance</u> of species, (species evenness) <p>OR</p> <p>Revert to other indicators – The Macroinvertebrate Community Index (MCI) is widely accepted as a measure of tolerance or sensitivity to organic pollution, where an average score of all taxa present is calculated using a qualitative sampling method.</p> <p>Aquatic Ecosystem Health (AEH) measures, 2010 baseline. (AEH Grade, by Location)</p>	<p>Strategy & Planning/ Science Team Review regional activity in native fish monitoring/surveying and coordinate.</p> <p>Biodiversity Team/Science Team Investigate the viability/feasibility of an ECan native fish monitoring programme</p> <p>Regional Committee/BEWG Agree an approach to measuring this target</p> <p>Science Team Provide MCI/AEH data for nominated sites as proxy for Ecosystem Health.</p>	<p>Initial scan indicates there is limited coordinated or regular monitoring work. Some native fish surveying work has been done in Canterbury but it is not regular enough to show trends.</p> <p>Work could be done to coordinate work from across contributing agencies such as NIWA, DoC and ECan.</p> <p>Native fish population monitoring/surveying begun now is unlikely to show '<u>upward trend</u>' by 2020.</p> <p>The target specifies a need to focus on '<u>diversity and abundance</u>' with this in mind, is choosing an indicator species such as Mudfish or Long finned Eel a viable option?</p> <p>Other regional councils are beginning formal fish monitoring – could this fit and add value to Canterbury's monitoring framework</p> <p>What is a value in fish population monitoring; is there a link to Mahinga Kai targets?</p>

Target Area: Ecosystem Health/Biodiversity; Target No: 20

Target Theme: Wetlands

By 2020: Protected all existing wetlands

Proposed Indicator	Measured By	Suggested Work Programmes	Discussion Points
Change in number and area of naturally occurring wetlands.	Total number, location and area of wetlands since 2010. (Number, Location, area)	Regional Committee/BEWG - Agree threshold/level expected for of ' <u>protection</u> ' and ' <u>restoration</u> '.	This target is an extension of the 2010 Target: 'Prevent further loss of area of naturally occurring wetlands' and 2015 Targets: 'Protected all and restored at least two significant wetlands in each zone'.
AND		Biodiversity/Science –	
Change in the number of wetlands restored and protected.	Number of wetlands protected since 2010. (Number, Location, area)	Catalogue of all wetlands and protection status. 2010 as a baseline.	We have previously reported change in wetland coverage AND the number of immediate steps projects related to wetlands in an attempt to report a combination of CURRENT STATE and ACTION taken. This does not do enough to report protection.
AND		Zone Committee -	
Change in regional policy and planning provisions that have provided increased protection levels since 2010.	Number of wetlands restored since 2010.(Number, Location, area) Number and type of policy and planning provisions since 2010. (by Zone, by Catchment)	Identified/Nominated significant wetlands by zone Planning – A summary of the planning provisions that provide greater protection levels since 2010. Strategy & Planning – ensure reporting is synchronised with State of the Environment Reporting.	A national database of inland freshwater wetlands has been developed recently. However not <u>all</u> wetland areas have been mapped. http://canterburymaps.govt.nz/webapps/canterburywetlands/ Is there a need to focus on <u>significance</u> and then on levels of protection? Under CWMS should <u>significance</u> be weighted towards wetlands that play an important hydrological, biological or ecological role in the natural functioning of a river or coastal system? Therefore do some significance criteria need to be set under CWMS associated with guidelines that ensure correct interpretation, and that appropriate thresholds are used in different parts of the region to prioritise for protection? In terms of <u>protection</u> : in the past we have considered Planning rules, and wetland projects (Immediate Steps) as forms of protection. IS this sufficient Should there be an agreed CWMS scale or levels or protection? Wetland values can be protected by placing a <u>legal covenant</u> over a property, which effectively stops anyone making changes to the 'named values' of the place. Should we be solely focused on the process of gaining <u>legal protection</u> only where significance has been determined as 'very high?' Is this a better measure catalogue of progress? Would this overlook other on-the-ground work to achieve protection?

Target Area: Ecosystem Health/Biodiversity Target No: 22

Target Theme: Lowland streams

By 2020: Increased the length of waterway with riparian management appropriate to aquatic ecosystem protection by 50% from 2010 figures

Proposed Indicator	Measured By	Work Programmes (To Do)	Discussion Points
<p>Number and location of lowland streams ecosystems identified for protection, including area protected.</p> <p>AND</p> <p>Trends in surface water quality and ecosystem health for selected lowland and spring-fed streams and selected lowland lakes, including proportion with very good aquatic ecosystem health.</p> <p>AND</p> <p>Length of waterway with appropriate riparian management compared to 2010 baseline.</p>	<p>Lowland streams identified for protection by zone since 2010. (Number/Priority)</p> <p>Length of lowland waterways planted, (Km, Area, Location, Date, No of Plants)</p> <p>Aquatic Ecosystem Health (AEH) measures, 2010 baseline. (AEH Grade by Location)</p>	<p>Regional Committee/BEWG – Agree '<u>appropriate</u>' riparian management</p> <p>Biodiversity Team – Standardise and aggregate data from organisations involved in riparian planting and monitoring (Combine data from (for e.g.) Fonterra, Immediate Steps and other organisations)</p>	<p>Measuring progress in riparian management has been a challenge with many organisations involved in planting and fencing but with no shared platform on which to share data.</p> <p>For example as part of their on-farm management programme/technology, Fonterra have established a GIS database for all Fonterra farms, riparian planting and fencing.</p> <p>With regard to this target achieving a baseline is essential. We could approximate a baseline for 2010 based on information from a number of sources. This work could be a great precursor to establishing an on-going and shared dataset between the various groups/organisations involved in riparian management. This work would need to be scoped and resourced.</p> <p>In the longer terms, there needs to be a way in which all agencies and community groups can share data and report progress/success in this area. In terms of “riparian management <u>appropriate</u> to aquatic ecosystems ecosystem” What is <u>appropriate</u>? There are many information sheets and guidelines available. Examples of guidelines will be provided at the workshop. Data sets of riparian planting may not be detailed enough to provide an indication of <u>appropriateness</u>.</p>

Target Area: Natural Character of Braided Rivers Target No: 42

Target Theme: Ecosystems, habitats and species

By 2020: Protected significant habitat for a full range of indigenous braided river flora and fauna

Proposed Indicator	Measured By	Work Programmes (To Do)	Questions
<p>Change in the number and type of protection/ restoration projects for braided river bird habitat.</p> <p>AND</p> <p>Change in the area of usable braided river habitat for selected indigenous species compared with 2010.</p> <p>AND</p> <p>Change in the abundance/ distribution/ range of selected braided river habitat indigenous species.</p> <p>AND</p> <p>Change in flow regimes via regional policy and planning provisions that have improved habitat protection since 2010.</p>	<p>Change in land use in lowland braided river margins that were undeveloped and/or in river protection since 2010 (Hectares)</p> <p>Projects to protect flora and fauna. (Number, by Type, Funding and Location), 2010 as baseline.</p> <p>Number and type of policy and planning provisions since 2010. (by Zone, by Catchment)</p>	<p>Biodiversity/Science – Catalogue of the range of projects underway across braided rivers</p> <p>Regional Committee/BEWG – Agree threshold/definition and/or scale of 'significant, protection and restoration'.</p> <p>Planning Team – A summary of the planning provisions that provide greater protection levels since 2010.</p>	<p>For the 2015 target we reported that <i>since 1990 12,000 ha of formerly forested or undeveloped braided river margins land on the plains have been converted to intensive agricultural use. A similar pattern of development is now underway in high country valleys. Extending the monitoring into the upper catchments would help quantify land use change in high country areas.</i></p> <p>We should continue to use and report on, Environment Canterbury data set on 'change in land use in lowland braided river margins that were undeveloped and/or in river protection with 1990 baseline. Significant habitat is difficult to define for Braided Rivers.</p> <p>Habitat tends to move as the river moves. Unlikely to be able to be quantified or set. "Braided Character" of the river as includes, flow regime, sediment/substrate, river bound/margin, weed and pest control.</p> <p>IS this a case of agreeing a methodology and agreeing also that we can only use the 'best available information' while recognising the limitations of the data, reliability and other issues would be noted in the data</p> <p>Braided river projects tend to have pest/weed predator control or bird population focus. Surveys often characterised by partial river coverage, different methods used, limited reporting on outcomes and large temporal gaps between surveys.</p> <p>One approach could be to build on the work already completed on significance: http://www.lincoln.ac.nz/Documents/LEaP/Chap-10-Part-A-NativeBirdlifeCanterbury.pdf</p>

AGENDA ITEM NO:	SUBJECT MATTER: BIODIVERSITY AND ECOSYSTEM HEALTH WORKING GROUP
REPORT: Regional Water Management Committee	DATE OF MEETING: 12 July 2016
REPORT BY: Alison Bower and Frances Schmechel	

PURPOSE

This stocktake is intended to determine how money is allocated for environmental enhancement as a result of Environment Canterbury consenting and enforcement processes. The focus is on mechanisms which transfer larger sums of money (> \$10,000) for environmental offsets or mitigations. The compensatory mechanisms investigated are as follows:

5. Conditions of Consent for a new or renewed water take consent for irrigation schemes
6. Amendment to a Water Conservation Orders
7. Restorative Justice resulting from prosecution
8. Alternative Environmental Justice an alternative to prosecution

Each mechanism has a different origin, pathway and approach to achieving the same objective, which is to offset damage to the environment as a consequence of human activity. This paper is an initial attempt at understanding more fully the pros and cons of each approach. In doing so, we need to acknowledge that some things are beyond Environment Canterbury's control and alignment to the objectives and targets of CWMS and other regional directions is the first consideration in all allocations of funds regardless of the mechanism of delivery.

ENVIRONMENTAL ENHANCEMENT FUNDING MECHANISMS

- 1) **Consent Requirement-** Some new water take consents to establish an irrigation scheme have a condition to establish an environmental enhancement fund to be used by the consent holder to fund, firstly, environmental mitigation required as a result of the effects of the operation of the irrigation scheme which is not otherwise required by the individual Farm Management Plan or specific consent conditions and secondly, other environmental management projects within the area affected by the operation of the Scheme, including fund management and structure. Funds are usually seeded by the scheme and a levy is placed on members to re-pay the scheme overtime. The fund is activated when shareholders start receiving water, which is typically several years after the consent is granted.

Priority uses of funds by consent holder is defined in the consent condition. Here is an example taken from Waihao Downs consent:

- i) Physical protection of, stock exclusion from, and indigenous vegetation planting along the riparian margins of rivers and streams;
- ii) Wetland enhancement and wetland creation, including the development of wetlands along intermittent streams;
- iii) Permanent protection of wetland areas that could contain mudfish.

Table 1. Irrigation schemes that are required to set up an Environmental Enhancement Fund (EEF).

Consent holder	Consent Duration	EEF Date	Fund Name	Current Sum	Growth	Status
Waihao Downs Irrigation	2010-2045	2016	Scheme Environment Management Fund	\$7,000	\$2 per hectare of irrigated land per yr	Fund established and will start accumulating funds when water

					(3,500ha)	charges are implemented. *
Hunter Downs Irrigation	2013-2045	2018-2019 estimate	Scheme Environment Management Fund	0	\$2 per hectare of irrigated land per yr (40,000ha)	Ngai Tahu Liaison Grp-oversight
Central Plains Water	2015-2020+	2015	Environmental Management Fund	\$300,000 loan to be re-paid by levy	\$0.40 per 2 water rights shares per yr (\$157,600/ yr after first 4 years)	Sustainability Protocol finalised Update requested 4/7/2016

*A further update on Waihao Downs:

"The fund will be open to applications from May next year. A procedure written up for the management and allocation of the fund. MGI as a scheme is also committed to this work and while it does not have a consent requirement to do so also sets aside/allocates funding for research and extension projects. This is a very positive approach and it is great to have the opportunity and resources to do this. So far there haven't really been any barriers or challenges to setting up the fund – it will be interesting to see how implementation of it goes, but initially it is not going to be huge and we have hopefully put together a robust process." pers. com. Judith Nelson- Environmental Manager for MGI

- 2) Amendment to National Water Conservation Order-** Water conservation orders can be amended but this is a laborious process administered by the Environment Court. We have one Order on the Rakaia River which was amended to allow water to be stored in Lake Coleridge to enable a reliable supply for the Central Plains Water irrigation scheme. Included in the conditions of the amendment was the establishment of three funds the first dating back to 1998 as part of consent agreements for the Lake Coleridge power station.

Table 2. Amendments to Rakaia River Water Conservation Order that have required the establishment of funds.

Responsible party	Date	Fund Name	Purpose	Current Sum	growth ¹	Status ²
Electric Corporation of New Zealand	1998-2031	Lake Coleridge Habitat Enhancement Trust	Lake Coleridge environmental protection focus on weed and pest control	Investment assets \$399,842	Dividend and other investment income ~ \$18,000	Trust has new Chair and Coordinator in 2016 No record of spending found.
Trust Power	2014-2032	Rakaia Enhancement Fund	To fund projects within the Rakaia and Selwyn River catchments that are designed to enhance	\$350,000	\$100,000 annual payment	Incorp Soc. Formed. Two meeting held. ECan has seat on the

¹ CPI adjusted- Consumer Price Index inflation adjusted

² Accountability not monitored by Environment Canterbury

			the cultural, ecological and biological health and recreational opportunities			board. No funds distributed to date
Trust Power	same	Hapu Management Fund	To assist Environment Canterbury with the management of the Rakaia River hapua	TBA	\$2,500 annual payment	Paid to ECan river engineers to relocate river mouth from time to time

- 3) Restorative Justice-** This is an approach to justice that focuses on the needs of the victims and the offenders, as well as the involved community. This contrasts to more punitive approaches where the main aim is to punish the offender, or satisfy abstract legal principles.³ Restorative Justice is administered by the Court. Environment Canterbury is typically not the beneficiary of the funds, rather the funds pass through our books in the form of a grant to a community based organisation that is working in the community impacted. There have only been few cases and generally range between \$10,000 -\$100,000.

Table 3. Shows grants distributed through the Restorative Justice process.

Prosecution	Date	Funds recipient	Sum	Status ⁴
Aidanfield storm water	2005	Cashmere Stream-care Grp	\$20,000	Spent on catchment management plan and research on sediment removal
Waimakariri DC	2002	Cam River Enhancement Fund Subcommittee	\$192,645	Henry Hudson report with recommendations
Ivan Royce Court & Birchbrook Ltd	2011	Lincoln University to research nitrogen in groundwater	\$1,500	Spent as required by Lincoln University on groundwater research
Walnut Creek	2015	Banks Peninsula Conservation Trust	80,000	Conservation and habitat protection on Banks Peninsula

- 4) Alternative Environmental Justice-** This is basically the same process as Restorative Justice in that Environment Canterbury can make recommendations and a Judge makes final decision. The difference is that Environment Canterbury manages the process in which a remediation plan is developed which addresses how and when remediation is to occur. All agreed conditions must be able to be completed within the adjournment period and preferably within 6 months. Environment Canterbury is not the beneficiary of the funds, rather the funds pass through our books in the form of a grant to a community based organisation that is working in the community impacted. This programme started in 2012, there was only one case in 2014/15.

Table 4. Shows grants distributed through the Alternative Environmental Justice process

³ en.wikipedia.org

⁴ Accountability monitored by the Court

Prosecution	Date	Funds recipient	Sum	Status ⁵
Knight Stream	2014	Whakora Te Waihora	65,000	Planting in Halswell/Huriti catchment

Note- There may be some for 2016 that are not yet available for reporting purposes

SUMMARY

Each of these mechanisms has pros and cons. The requirement to set up an environmental enhancement fAaund as a condition of consent or amendment to a conservation order is a proactive approach to dealing with environmental concerns. The progress is slow due to a number of factors including the administrative burden of creating an incorporated society or charitable trust to manage the fund. This sits outside an irrigation scheme's core business and therefore requires a lot of upskilling. Input from external volunteers is also a time consuming but necessary component as the capacity and/or capability may not be readily available. In the examples where an Environmental Manager has been hired, then the fund establishment process seems to be going faster and following a more robust process.

From a regional and strategic perspective, there are inefficiencies in re-inventing the wheel each time. An opportunity for cross-learning and to share administration between entities may be beneficial. Another challenge is the ability to be strategic and fund the projects that give the biggest biodiversity value from a regional perspective as the scope of potential projects is limited to the area connected to the consent, which may not be where the biggest environmental gains can be made.

The consent is monitored for compliance, but there is no results based accountability. There is an opportunity to incorporate accountability into the reporting requirements for the fund, but this is a management decision and sits outside Environment Canterbury.

Compensatory funds distributed directly to Community Based Organisations through the justice mechanisms (restorative and alternative environmental) have better results in terms of money being spent quickly and going to an organisation that has a good track record of getting projects on the ground. The overhead and administration costs are minimal and timeframes are set for transfer of funds by the court. The opportunity for regional or strategic biodiversity outcomes is limited, like in the above example, because outcomes are focused at the local level. Accountability is managed by the court and sits outside Environment Canterbury.

AREAS FOR IMPROVEMENT

The focus here is on areas where more work can be done, but recognising there are real constraints intrinsic to the compensatory processes.

- Greater transparency
- Better communication
- Results based accountability
- Consider regional biodiversity outcomes
- Improve efficiencies through information sharing and reduced duplication
- Clear line of responsibility
- Clear timeframes for spending the money

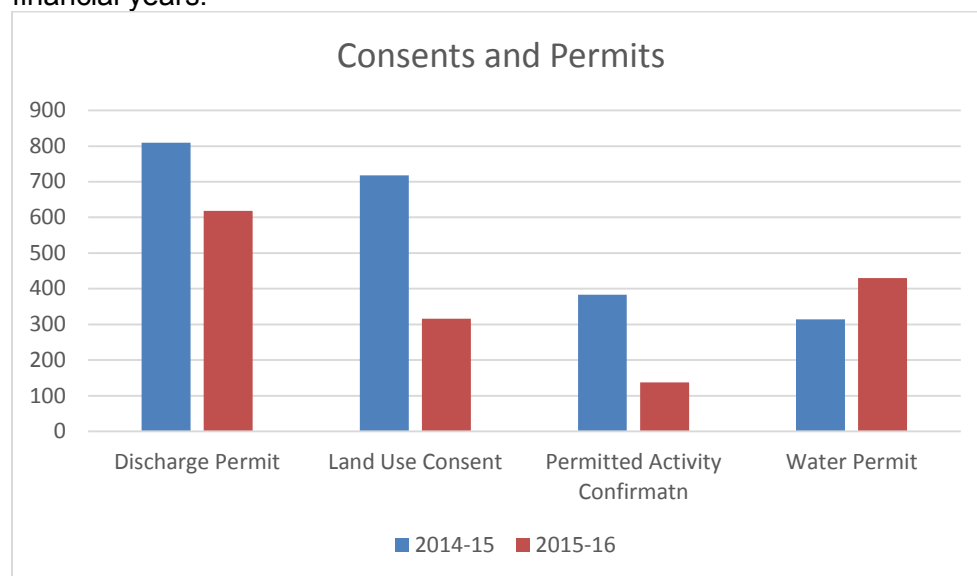
OPPORTUNITY IDENTIFIED

There seems to be a positive perception in the farming community of a fund available to help shareholders implement environmental project and it does have the potential to be vehicle for improved education and environmental stewardship for farmers in the scheme.

The potential to expand this approach to fund environmental enhancements is worth further investigation. It is quite complicated and legal implication would need to be thoroughly considered. Below is a graph of the number of consents granted by Environment Canterbury in 2014/15.

⁵ Accountability monitored by the Court

Graph 1. Shows the number of consents/permits granted by largest category for the last two financial years.



Note* It should be kept in mind that this graph is for discussion purposes only. It does not reflect all categories of consents and permits nor does it reflect the environmental impact of the consented activity.

This report is limited in scope to the mechanisms used by Environment Canterbury, there are however other examples out there for the management and distribution of compensatory funds. One such example is Project River Recovery. Established in 1990, recognising the impacts of hydroelectric development on braided rivers and wetlands. The project is funded through a compensatory funding agreement with Meridian Energy Limited and Genesis Energy and managed by DOC. Project River Recovery's work includes intensive weed control, predator control, construction of wetlands, and research and monitoring programmes. Potential for funding biodiversity outcomes through the consenting process is an area that might be useful to explore.

RECOMMENDATIONS

That BEWEG request updates from each fund identified in this paper to better understand their programme. It is recommended to also look at alternative models to managing compensatory funds (e.g. Project River Recovery, Kate Valley), and explore any potential role for BEWG and/or Zone Committees in these processes and make recommendations to Environment Canterbury where appropriate.

AGENDA ITEM NO: 8	SUBJECT MATTER: RECREATION AND AMENITY WORKING GROUP UPDATE
REPORT: Regional Water Management Committee	DATE OF MEETING: 9 August 2016
REPORT BY: Ellie McNae, Environment Canterbury	

PURPOSE

To update committee on the work of the Recreation and Amenity working group.

BACKGROUND

The Working Group hosted a workshop with recreational user groups on 25 July. 17 representatives (not including the working group members) from the following recreational interest areas attended: dragon boating, 4 wheel driving, rowing, mountaineering, tramping, kayaking, waka ama, salmon and sport fishing, triathlon and Fish and Game. The purpose of the meeting was to:

1. start the identification and quantification of the diversity of recreational opportunities and values in Canterbury, and
2. inform the development of a regional work programme to protect and enhance recreational opportunities in the region.

Participants began by discussing some of the factors that distinguish recreation in Canterbury. Common themes were:

1. Diversity of experiences available – from beginner to expert, solitude and wilderness to local and group activities
2. Outstanding, unique, diverse and relatively unspoiled landscapes
3. Ability to attract international events
4. Broad appeal of recreational activities – crossing age and socio-economic factors
5. Spiritual dimension
6. Mountains to sea – that you can experience both in Canterbury
7. Collegiality and friendship within the recreation community
8. A sense of stewardship and kaitiakitanga

Participants then split into groups where they identified key sites that encompassed particular characteristics/values that were important to their groups. These were put onto maps and the group then came together to identify common important values across the sites. These included:

1. The quality and quantity of the water at a site, and the variability of flow
2. The presence of facilities and the capacity of a site (e.g. toilets, accommodation)
3. Accessibility – need for a range of both convenient and remote sites
4. Cultural significance
5. Low cost
6. Absence of hazards
7. Scope of experiences available – also linked to white, flat or frozen water
8. Sporting history/legacy – both at a site, and across the region
9. The natural character of a site – presence of gorges, outstanding landscapes, biodiversity etc.

Participants then added some final dots to the maps to signify other key sites for their groups.

NEXT STEPS

RAWG has agreed to continue to involve the recreational groups in the process of developing the regional work programme, both through engagement with Environment Canterbury staff and the Zone Committees.

The next step involves Environment Canterbury staff compiling the information from the workshop and developing said work programme. This work programme will include the identification of key projects or sites within each Zone. Staff are scheduled to run workshops with the Zone Committees to identify these projects in September. In addition, the Work Programme is also likely to include a project to address information gaps – similar to that proposed by Fish and Game representatives in May 2016.

RECOMMENDATIONS

That the committee:

- Receive the report of RAWG
- Note RAWG's intent to develop a Regional Work Programme, engaging recreational groups and the Zone Committees.

AGENDA ITEM NO: 9	SUBJECT MATTER: LAND USE AND WATER QUALITY WORKING GROUP (LUWQ) UPDATE
REPORT: Regional Water Management Committee	DATE OF MEETING: 9 August 2016
REPORT BY: Barbara Nicholas, Environment Canterbury	

PURPOSE

To update committee on the work of the Landuse and Water Quality working group

BACKGROUND

The Working Group met on 13 July. The purpose of the meeting was to review ECan's work programme in relation to land use and water quality, and to identify if further work directions are needed.

Dann Olykan presented his paper on the current workstreams to address land use and water quality (see attached meeting notes and papers) and an extensive discussion was had.

The working group concluded:

- There is a sound LUWQ framework, now moving into implementation – many farmers need consent, and they will be audited within year of consent
- Measurement of what is happening is important in order to be able to report on success at getting all farmers to GMP by 2020
- By 2020 enforcement will be required, and ECan needs to be in a position to answer
 - Are we on track to achieve GMP in all farms?
 - What is the trajectory of catchment loads? And are there discernible trends?
- Will need defensible data on nutrient discharge and Nutrient loads by catchments. (There is a need to firm up what is needed: relative load – do we have means to measure this? or absolute load, and rate of travel? Nos farmers meeting auditing A/B grades?)
- ECan needs to continue to facilitate/work with industry to improve capacity working with farmers to have tools to achieve GMP.

RECOMMENDATIONS

That the committee note:

- Receive the report of LUWQ
- Note the feedback to ECan on its land use and water quality work.

ATTACHMENTS

LUWQ meeting notes, July 2016

LUWQ meeting notes 13 July 2016

Present: Clare MacKay, Tom Lambie, David Caygill, Hugh Logan, Alistair Humphrey. Ron Pellow

Staff: Dann Olykan, Barbara Nicholas

Purpose of meeting: to identify key LUWQ issues that need further work.

Dann introduced his paper (see attached).

Following community engagement, planning structures and systems and tools are in place but implementation is next step. Have

- Overseer (continuing improvement)
- FEPs, and how to be folded into consents
- Farm audit programme – manual, certification of auditors
- Lots of work with zone and industry work programmes

FEPs and audits will give a measure of progress.

Now have 'good management practice' – but how do we get this to be so on the ground. How do we ensure industry continues to own the process of getting to GMP?

Challenges:

- Information management
- industry capacities and capabilities
- setting consistent standards
- balancing auditing with authority
- support/integrate industry programmes

General discussion noted:

- 'getting all farmers to GMP' important, needs to be industry led, so that this issue is GMP rather than compliance. Note: 2200 farms are covered by schemes
- ECan needs to have role in getting information out – what is expected?
- 'getting all farmers to GMP' needs to be vision that ECan holds – continue to triage where effort is put: irrigation companies, particular sectors or areas etc
- ECan will be examined for how much it ensures and *knows* there is compliance with plan changes
- Membership of industry group has obligation to be compliant, and ask for help from their industry group. Schemes have recognised this and responding proactively. Would other industry groups not also be interested?
- Industry going to be struggling for capacity. What role for ECan in this space? Need engagement with groups to assist them develop capacity and capability
- How to measure success (or lack of)? Nutrient number really important for community confidence. Audits also useful but may not be as useful as nutrient nos.
- Need transparency between now, and by 2020 when people need to be compliant. Need compliance strategy.
- Want to work more on implementation eg in Selwyn, making consenting eas, and then finding what needs to happen via auditing.
- While the focus is on GMP and FEPs it was noted that it would be important to maintain (and increase) emphasis of riparian protection and management.

Summary to Regional Committee

- Have a sound LUWQ framework, now moving into implementation – many farmers need consent, and they will be audited within year of consent
- By 2020 enforcement will be required, and want to be in position for ECan to answer
 - Are we on track to achieve GMP in all farms?
 - Catchment loads (What is the trajectory of catchment loads? And are there discernible trends?)
- ECan facilitate/work with industry to improve capacity working with farmers to have tools to achieve GMP.
- Measurement of what is happening is important in order to be able to report on success at getting all farmers to GMP by 2020 (Don't want to have another repeat of the perceptions that have arisen around water take measurement and reporting)
- Will need defensible data on nutrient discharge and Nutrient loads by catchments (e.g. Firm up what is needed: relative load – do we have means to measure this? – or absolute load, and rate of travel? Nos farmers meeting auditing A/B grades?)

Chair: noted need more attention is needed to urban water quality on the grounds of

1. Equity with rural communities
2. Public expressed desire for swimability

AGENDA ITEM NO:	SUBJECT MATTER: GETTING FARMERS TO GOOD MANAGEMENT PRACTICE
REPORT: Land Use and Water Quality Working Group	DATE OF MEETING: 13 July 2016
REPORT BY: Dann Olykan	

BACKGROUND

A number of tools and rules have been developed with industry to ensure that the connection between *land use... and... water quality* is made and that implementation of the Land and Water Plan is focused on *getting to Good Management Practice by 2020*.

The intention of the **Preferred Approach** of conjunctively Setting Limits and Managing To Limits is being realised firstly through a community engaged in the planning process and secondly through the mix of tools and methods we have developed in conjunction with industry.

Implementation is the next big challenge, developing the partnerships with industry and measuring progress across the different players to, in the short term, *get all farmers to GMP by 2020*.

An update on the connected components will be provided at the workshop. They are;

A. Plan Change 5

The LWRP planning framework (Plan Change 5) sets expectations for farmers to get to Good Management Practice (GMP).

Farms over 10ha will be required to register with the Farm Portal.

Any farms over 20 ha winter grazing OR over 50ha of irrigation will be required to submit overseer baseline nutrients budgets and actuals.

The Farm Portal will adjust these Overseer files to provide *baseline losses at GMP* which will need to be met by June 2020. Farmers will need to prepare a Farm Environment Plan within which they will identify risks and demonstrate how they intend to move towards achieving *baseline losses at GMP*.

Our aim is to provide simple and practical tools and to support industry to allow farmers to demonstrate progress towards GMP.

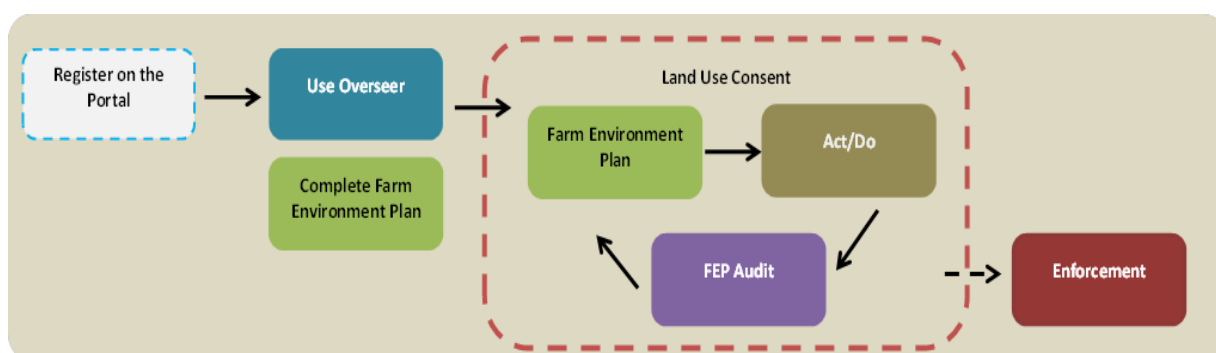


Figure 1: Basic overview of farm planning tools

B. Good Management Practices

Although there is widespread support for the implementation of GMP across primary industries, until April 2015, there had been no commonly agreed definitions of GMP, nor a good understanding of the nutrient losses that occur on farms operating at GMP. In April 2015, Federated Farmers released its and Environment Canterbury's *industry-agreed Good Management Practices* relating to

Water Quality. These were developed and endorsed by FAR, NZ Pork, Dairy NZ, Beef & Lamb NZ, Horticulture NZ and Deer Industry NZ.

C. Matrix of Good Management Project

The Matrix of Good Management (MGM) project aimed to quantify the typical nutrient losses that are expected to occur from the range of farming systems, soils and climates across Canterbury when managed to GMP.

To date there are two major outputs from the MGM Project;

1. **A summary document of GMPs** which was launched in May 2015. The document goes beyond a list of practices that are good for water quality and outlines a suite of GMPs that all farmers, regardless of sector, are expected to achieve.
2. **An online Farm Portal** which allows farmers to register online to determine what the expectations are of operating at GMP on their farm type, under their soil and climate profile. By logging into the portal and uploading their OVERSEER® nutrient budget farmers will be able to compare their nutrient losses against MGM values, and receive a Farm GMP Report on the appropriate practices.

•

D. OVERSEER® Nutrient Budgeting

OVERSEER® is still a vital tool for farmers to develop their baseline and actual budgets. Nutrient budgets can be used to determine GMP through the portal. The modelling behind the Matrix of Good Management (MGM) is dependent on OVERSEER®. Updates from OVERSEER® will be incorporated into the MGM biennially.

E. The Farm Portal

By logging into the portal and uploading their OVERSEER® nutrient budget farmers will be able to compare their nutrient losses against MGM values, and receive a **Farm GMP Report** on the appropriate practices. Phase II of the portal development is to be completed by late 2016 and involves confirming login details, and refining the **Farm GMP Report** to show where the farmer should focus attention in order to achieve GMP.

F. Farm Environment Plans

The **Farm GMP Report** should provide a good guide for the Farm Environment Plan (FEP) – by providing guidance on practices and information to help identify risk areas. The farmer must clearly identify – in their FEP – how and when the assigned industry ‘good practices’ and/or property nutrient allowances will be achieved.

G. Farm Environment Plan Auditing

A farm auditing programme has been established. The programme has been developed to ensure that auditing of FEPS is robust and credible. If a Farm Environment Plan is required through a consent then it is expected this will be audited. The audit programme includes a manual to provide guidance to FEP Auditors. Some 40+ participant have been through the introductory courses in September/October this year.

H. Consents and Compliance (The Regulatory Backstop)

There is still a role for the traditional tools of Consenting and Compliance. Land Use Consents will be required for individuals, not part of an irrigation scheme, who exceed the thresholds (20ha Winter Grazing OR 50ha Irrigation). We are looking into ways to streamline the consenting process given the emphasis on Farm Environment Planning and Auditing. Enforcement will be required where there are regular audit results are C or D grade.

DISCUSSION

- A. Does this connected system reflect what was intended of the Preferred Approach?
- B. Having defined *industry-agreed Good Management Practice*, and incorporated this concept into both rules and tools, how do we maintain industry commitment and leadership to;
1. maintaining and keeping alive the concept of agreed GMPs
 2. implementation of GMP on the ground;
 3. researching and developing innovative methods/practices,
 4. encouraging the uptake of new technologies,
 5. supporting a farm and business planning culture and reporting progress to the community?
- C. *The industry-agreed Good Management Practices* have national applicability. Does central government have a role in leading/facilitating what we have done in Canterbury to ensure it is not duplicated across other regions?
- D. “All farms at GMP by 2020” is a key axiom driving an increasing client focus (farmer focused engagement) within Environment Canterbury. At the same time there is a need to ensure strong industry commitment to this vision of getting to GMP. What is the mechanism to get all sectors to adopt this goal?
- E. Land Use and Water Quality objectives are not explicitly expressed within the CWMS Targets but are reference twice under Drinking Water and Ecosystem Health and Biodiversity target areas. The targets state:
- - *by 2020, Achieved nutrient efficiency targets for the zone on all new irrigated land and 80% of other land in major rural land uses (pasture, major arable and major horticulture crops), and have 100% of rural properties working towards those targets (and of properties within urban boundaries that apply nutrients over significant areas)*
 - Will the regular (every 2-3 years) collection of OVERSEER Nitrogen Loss number s and Audit Grades from 5,300 farms provide sufficient comfort to the Regional Committee that the said nutrient efficiency targets are being met?

AGENDA ITEM NO: 10	SUBJECT MATTER: REGIONAL INFRASTRUCTURE WORKING GROUP UPDATE
REPORT: Regional Water Management Committee	DATE OF MEETING: 9 August 2016
REPORT BY: Barbara Nicholas, Dennis Jamieson, Brett Painter – Environment Canterbury	

PURPOSE

To update committee on the work of the Regional Infrastructure working group activities

BACKGROUND

The Working Group met on 13 July. There were two items on the agenda

1. Regular updates on CWMS infrastructure activities and opportunities
2. Supply and demand opportunities in central/south Canterbury.

The committee noted in relation to central/south Canterbury

- Model and understanding of the physical system has been developed
- Future directions will be shaped by human behaviour, and
- Experiments are underway to model a range of potential demand, from bold to conservative

RECOMMENDATIONS

That the committee note:

- Receive the report of RIWG

ATTACHMENTS

RIWG meeting notes, July 2016

RIWG meeting notes 13 July 2016

Present: John Donkers, Barry Shepard, Brent Isbister, Hamish Cuthbert, David Caygill, Peter Scott, Clare MacKay, Murray Doak, Ben Curry. Tom Lambie (from 10.40)

Apologies: Andy Pearce, Bruce Murphy, Jane Demeter

Staff: Dennis Jamieson; Brett Painter, Barbara Nicholas

Regular updates

Brent presented the pre-circulated update document for discussion. Various additional verbal updates.

Central Plains Stage 2+originally 33k ha, but scaled back design to 25K, uptake around 16K. Three issues:

- Economic conditions
- Better soils and less demand from dairy than originally thought
- Still disappointing uptake from farmers with existing groundwater, who seem prepared to take risk that world will not change (tho many with deep and/or unreliable wells)

In Sheffield considerable uptake (4500 ha). Awaiting hearing decision on storage pond.

Stage one gone well, collected good data on water use. Exploring if there is more capacity in current pipelines? Indications that people are moving to stored water from ground water.

Is this a good case study?

RDR making consent application this Friday. Conversations with Arowhenua, and with F&G re fish screens.

South Canterbury Noted some concern that storage happening in Ashwick Flat above the lake whereas there had been a community understanding at time for Opuha that this would not happen.

Supply and demand in central/south Canterbury

Brett Painter presented model framework for the area. Noted

- work has developed the model and understanding of the physical system
- now recognising directions will be shaped by human behaviour
- experiments being worked on looking at a range of potential demand, from bold to conservative

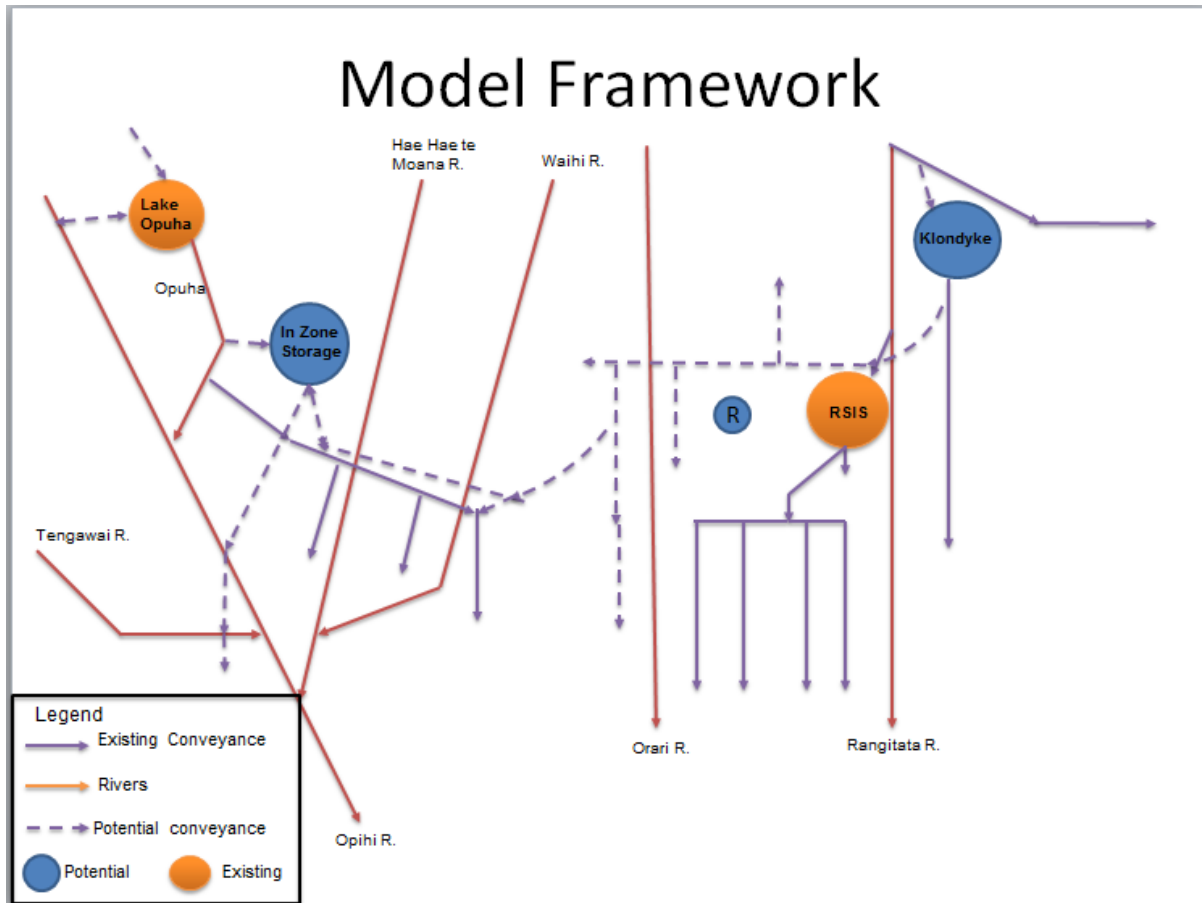
Need to look at options for delivering Rangitata water – via pipes that are partially integrated with Rangitata South Scheme or not.

3 supply options being explored

- Rangitata south
- Klondyke
- Use of additional A consent (400 l/sec) held by Gary Rooney

Noted:

- Changes in stream depletion rules in LWRP. But in some areas there are considerable deep ground water takes in some areas, not all of which may be used. Also, Opuha scheme may already be providing water to compensate for those who are currently affecting flows (but not currently seen as 'connected')
- Usefulness of the greatly improved understanding of the area.



3 sets of modelling experiments being run:

1. OTO North modelling: with Geraldine Water Solutions co
2. OTO South (Opuha/Opihi river system)
3. Integration of OTO North and South combinations

Will complete 'experiments', talk with community so can then look at potential costs. Will distribute detailed modelling results when confirmed.

Other

MAR

Updated where understanding is getting to on MAR, particularly that there is no evidence yet for using high value water. Not season dependent when water is added to aquifer.

Infiltration at the top of catchment will not necessarily fix challenges at bottom of catchment – will need TSA or like as well.

Crown Investment

Agree to invite them to join RIWG discussions