



# Agenda

**Notice is hereby given of  
a Lower Waitaki South Coastal Canterbury Zone  
Committee Meeting**

**Wednesday 17 April 2019**

Commencing at 1.00pm

Waimate Event Centre  
15 Paul Street  
Waimate

[www.waimatedc.govt.nz](http://www.waimatedc.govt.nz)

**Notice is hereby given that a meeting of the Lower Waitaki South Coastal Canterbury Zone Committee will be held in the Waimate Event Centre, 15 Paul Street, Waimate, on Wednesday 17 April 2019, commencing at 1.00pm.**

**Committee Membership**

Kate White	Chairperson
Suzanne Eddington	Waihao Runanga Rep
Jakki Guilford	Councillor
Sandra Hampstead-Tipene	Arowhenua Runanga Rep
Jeremy Holding	Councillor
Barney Hoskins	Community Rep
Daniel Isbister	Community Rep
Bruce Murphy	Community Rep
Brent Packman	Community Rep
Jared Ross	Community Rep
Peter Scott	Environment Canterbury Councillor
Emily Anderson	Community Member
Kieran Whyte	Moeraki Runanga

Quorum – no less than six members

<p style="text-align: center;"><b>Lower Waitaki SCC Zone Committee Meeting</b>  <b>April 17<sup>th</sup> 2019, at 1:00pm</b>  <b>Waimate Event Centre, Waimate</b></p>				
	<b>12:15pm</b>	Zone Committee lunch and Regional Roundup		
	<b>Time</b>	<b>Agenda Item / Title</b>	<b>Who</b>	<b>Paper/Verbal</b>
<b>1</b>	<b>1:00 pm</b>	Standing items 1 Welcome, Karakia and Introductions 2 Apologies 3 Register of Interests 4 Confirmation of Previous Minutes 5 Matters Arising 6 Correspondence	Kate White	Verbal
<b>2</b>	<b>1:30pm</b>	Te Reo words for this month: tēnā koe - hello! (speaking to one person), thank you. tēnā kōrua - hello! (speaking to two people), thank you. tēnā koutou - hello! (speaking to three or more people), thank you.	Suzanne Eddington	Verbal
<b>3</b>	<b>1:40pm</b>	Facilitator's Update	Dave Moore	LWSCC Zone Committee Facilitators Update April 2019
<b>4</b>	<b>1:50pm</b>	'Improving Farming Practices on Hillslope Landscapes' Project	Matt Dodson (ECan) and MS Srinivasan (NIWA)	Improving farming practices on hillslope landscapes project
<b>5</b>	<b>2:20pm</b>	Kurow Duntroon Irrigation Collective update	Geoff Keeling and Marcus Brown	Verbal
<b>6</b>	<b>2:40 pm</b>	Oceania Dairy Expansion and Proposed Ocean Outfall	Lobo Coutinho, Babbage Consultants Ltd	Verbal
<b>7</b>	<b>3:05</b>	General Business	Kate White	Verbal
	<b>3:15 pm</b>	Close meeting & Karakia	Kate White	

---

## Order Of Business

<b>Opening</b> .....	<b>5</b>
<b>1 Apologies</b> .....	<b>5</b>
<b>2 Visitors</b> .....	<b>5</b>
<b>3 Conflicts of Interest</b> .....	<b>5</b>
<b>Minutes</b> .....	<b>6</b>
<b>4 Confirmation of Minutes</b> .....	<b>6</b>
4.1 Minutes of the Lower Waitaki South Coastal Canterbury Zone Committee Meeting held on 20 March 2019 .....	6
<b>Reports</b> .....	<b>12</b>
<b>5 General Business</b> .....	<b>12</b>
5.1 Declarations of Interest Register .....	12
5.2 Facilitator's Update .....	14
5.3 Improving Farming Practices on Hillslip Landscapes Project .....	20
<b>Meeting Closures</b> .....	<b>21</b>

**OPENING**

- 1      **APOLOGIES**
- 2      **VISITORS**
- 3      **DECLARATIONS OF INTEREST**

## MINUTES

### 4 CONFIRMATION OF MINUTES

#### 4.1 MINUTES OF THE LOWER WAITAKI SOUTH COASTAL CANTERBURY ZONE COMMITTEE MEETING HELD ON 20 MARCH 2019

**Author:** Karalyn Reid, Committee Secretary and PA to the Mayor

**Authoriser:** Karalyn Reid, Committee Secretary and PA to the Mayor

**Attachments:** 1. Minutes of the Lower Waitaki South Coastal Canterbury Zone  
Committee Meeting held on 20 March 2019

#### PURPOSE

To present the unconfirmed Minutes of the Lower Waitaki South Coastal Canterbury Zone Committee Meeting held on 20 March 2019.

#### RECOMMENDATION

That the Minutes of the Lower Waitaki South Coastal Canterbury Zone Committee Meeting held on 20 March 2019 be accepted as a true and correct record.



# MINUTES

## Lower Waitaki South Coastal Canterbury Zone Committee Meeting

20 March 2019

**MINUTES OF THE LOWER WAITAKI SOUTH COASTAL CANTERBURY ZONE COMMITTEE  
MEETING HELD AT THE WAIHAO FORKS HOTEL, STONY CREEK RD , WAIMATE  
ON WEDNESDAY 20 MARCH 2019, COMMENCING AT 2.00PM**

**PRESENT:** Chair Kate White, Suzanne Eddington, Sandra Hampstead-Tipene, Cr Jeremy Holding, Bruce Murphy, Brent Packman, Jared Ross, Cr Peter Scott, Emily Anderson, Kieran Whyte

**APOLOGIES:** Cr Jakki Guilford, Barney Hoskins, Daniel Isbister

**IN ATTENDANCE:** ECan staff: Chris Eccleston, Dave Moore, Hannah Duncan, Jessie Brennan, Anna Morrow, Kennedy Lange, Leo Fietje, Jayath deSilva, Tania Harris, John Benn (DOC), Lionel Hulme and Colin Hurst (Federated Farmers), Roger Small, Waihao Wainono Water Liaison Committee, Peter McIlraith (part meeting)

Karalyn Reid (Committee Secretary)

## OPENING

## KARAKIA / WELCOME

Cr Peter Scott opened the meeting with a karakia. Chair Kate White welcomed new Moeraki Rep, Kieran White, and Emily Anderson as another community member.

### 1 APOLOGIES

#### COMMITTEE RESOLUTION 2019/2

Moved: Member Suzanne Eddington

Seconded: Member Sandra Hampstead-Tipene

That apologies from Cr Jakki Guilford, Barney Hoskins and Daniel Isbister be received and accepted.

**CARRIED**

### 2 VISITORS

Nil

### 3 CONFLICTS OF INTEREST

Nil

## MINUTES

### 4 CONFIRMATION OF MINUTES



**4.1 MINUTES OF THE LOWER WAITAKI SOUTH COASTAL CANTERBURY ZONE  
COMMITTEE MEETING HELD ON 13 FEBRUARY 2019**

**COMMITTEE RESOLUTION 2019/3**

Moved: Member Bruce Murphy

Seconded: Cr Jeremy Holding

That the Minutes of the Lower Waitaki South Coastal Canterbury Zone Committee Meeting held on 13 February 2019 be accepted as a true and correct record, with the below minor amendment.

**CARRIED**

**Amendment:**

That Bruce Murphy also went to visit the Waihao Box after the meeting.

**REPORTS**

**5 GENERAL BUSINESS**

**5.1 DECLARATIONS OF INTEREST REGISTER**

There were no changes to the Declarations of Interest Register.

**5.2 CORRESPONDENCE**

**COMMITTEE RESOLUTION 2019/4**

Moved: Member Suzanne Eddington

Seconded: Member Sandra Hampstead-Tipene

That the correspondence be accepted.

**CARRIED**

**5.3 PLAN CHANGE 5 TO THE LWRP AND OVERSEER SOFTWARE**

The Committee received a powerpoint presentation from Leo Fietje. A discussion was held on alternative to overseer, particularly for cropping farmers, the costs of complying and capacity for errors. An Environment Canterbury working group has been working on irrigation and nutrient proxys and is expected to report back in May/June. There are plans to make the new Overseer simpler to use to enable farmers to be able to own and use themselves.

There was agreement that further exploration across Canterbury is needed, but the level of frustration was accepted and noted.

A meeting is to be held on the current status, what are the choices are, looking at the management, how to get outcomes and other possible ways to do it. There was been big challenge for Regional Councils to achieve the Government's outcomes.

**COMMITTEE RESOLUTION 2019/5**

Moved: Member Bruce Murphy  
Seconded: Member Suzanne Eddington

That the Lower Waitaki South Coastal Canterbury Water Management Zone Committee receives the presentation and provides feedback.

**CARRIED**

Cr Peter Scott left the meeting at 3.00pm.

**5.4 IMMEDIATE STEPS (IMS) UPDATE**

Kennedy Lange gave some background on the IMS, which was initially to set up a fund that would be available to protect biodiversity. Around \$104,000 was made available for each area for the first five years - with approval for the programme for another five years.

A IMS review was undertaken with all partners, with the outcomes being to move away from piecemeal approach into more strategic approach. The review was parked while focusing on achieving ZIP.

Currently another IMS review has just started which will look at biodiversity priorities in order to reflect strategic direction. Braided rivers and wetlands have been identified as strategic priorities.

The criteria for funding is based on a range of values of existing biodiversity on each site, with criteria for significant biodiversity.

Chair Kate asked about utilising underspent funding. Kennedy reported the funding is not too far out and he is hoping to get MFE funding for Wainono. He will look at streamlining work, as the admin work is quite high (strutiny on projects). He is hoping move to model that will ease up on admin work.

The large amount of ongoing maintenance on earlier projects was identified and ongoing cost inceases as the programme continues.

There is still regional funding supporting Wainono project, with the Braided river additional funding.

The biodiversity work is undergoing changes in leadership, with the reviewing of the IMS, which may result in a better operating programme.

**WAINONO AUGMENTATION DISCUSSION**

A discussion was held that there is currently no leadership in working towards augmentation of Wainono. Augmentation is in ZIP addendum and instrumental to Plan Change 3.

Suzanne suggested a facilitated Hui be held at Waihao with all stakeholders.

It was agreed that basic fundamental (core scoping/options/costing) work needs to be carried out by Environment Canterbury (ECan) before this discusion/hui can occur. This has been requested by the Zone Committee and agreed by ECan. Kennedy agreed to find out where this is at and advise the Zone Committee.

Bruce Murphy commented the Hunter Downs Board will be approaching Meridian to enquire what it would take to buy part of the existing consent.

There has been enquiries received by Zone Committee members from concerned farmers.

The Committee asked for a report in the next agenda, along with timeframes in order to progress a date for the upcoming hui.

**ZONE COMMITTEE OUTCOMES**

It was agreed to leave this item until the next meeting.

**MEETING CLOSURE**

There being no further business, the Chair closed the meeting at 3.55pm. Dave Moore closed the meeting with a karakia.

The minutes of this meeting are to be confirmed at the Lower Waitaki South Coastal Canterbury Zone Committee Meeting scheduled on 15 May 2019.

.....  
**CHAIRPERSON**

## REPORTS

### 5 GENERAL BUSINESS

<b>5.1 DECLARATIONS OF INTEREST REGISTER</b>
--

**Author:** Karalyn Reid, Committee Secretary and PA to the Mayor

**Authoriser:** Karalyn Reid, Committee Secretary and PA to the Mayor

**Attachments:** 1. Declarations of Interest Register

#### PURPOSE

1. To present the Declarations of Interest Register for the information of the Lower Waitaki South Coastal Canterbury Zone Committee.
2. Members are welcome to update the attached document.

**LOWER WAITAKI SOUTH COASTAL CANTERBURY ZONE  
COMMITTEE DECLARATIONS OF INTEREST REGISTER**

<b>MEMBER</b>	<b>DECLARATION</b>
<b>Emily Anderson - Community</b>	
<b>Suzanne Eddington – Waihao Runanga</b>	
<b>Cr Jakki Guilford – Waimate District Council</b>	Waimate District Councillor
<b>Sandra Hampstead-Tipene – Arowhenua Runanga</b>	
<b>Cr Jeremy Holding – Waitaki District Council</b>	Waitaki District Councillor
<b>Barney Hoskins - Community</b>	
<b>Daniel Isbister - Community</b>	Farmer - McKirdy Ventures Ltd Shareholder – Fonterra Shareholder – Lower Waitaki Irrigation Company Councillor – Fish & Game Central South Island Councillor – NZ Fish and Game Council Steering Committee – North Otago Sustainable Land Management (NOSLaM)
<b>Bruce Murphy (Deputy Chair) - Community</b>	Farmer Director – Murphy Farms Ltd Trustee – Waimate Vet Trust Shareholder – Fonterra Shareholder Councillor – LIC Member – Otaio Water Users Group Director – Hunter Downs Irrigation
<b>Brent Packman - Community</b>	
<b>Jared Ross - Community</b>	Farmer Director – Home Creek Holdings Ltd Director – Kurow Duntroon Irrigation Company Federated Farmers North Otago Dairy Chairman Central South Island Beef and Lamb Farmer Council
<b>Cr Peter Scott – Environment Canterbury Councillor</b>	Environment Canterbury Councillor Orari Temuka Opihi Pareora Water Zone Committee member (temporary) Farmer – Dirragh Farm Ltd Ballance Shareholder Ravensdown Shareholder Silver Fern Farms Shareholder
<b>Kate White (Chair) - Community</b>	Shareholder in the Kurow and Duntroon Irrigation Company Ltd (KDIC)
<b>Kieran Whyte – Moeraki Runanga</b>	

**5.2 FACILITATOR'S UPDATE**

**Author:** Karalyn Reid, Committee Secretary and PA to the Mayor  
**Authoriser:** Karalyn Reid, Committee Secretary and PA to the Mayor  
**Attachments:** 1. Omnibus Plan Change 2019

<b>HUI/MEETING:</b> Lower Waitaki South Coastal Canterbury Zone Committee	
<b>AGENDA ITEM NO:</b> 3	<b>KAUPAPA/SUBJECT:</b> Facilitators Update
<b>KAITUHI/AUTHOR:</b> Dave Moore, Zone Facilitator	<b>WĀ/MEETING DATE:</b> 17 April 2019

**PURPOSE**

1. To update the Committee on actions from the previous meeting, relevant information and upcoming engagement opportunities.

**UPDATE**

**Braided Rivers Seminar 26 June 2019**

2. Thanks to funding from Environment Canterbury, BRaid will once again be hosting a free full-day braided rivers' seminar, where professionals, interested amateurs and volunteers in this sector come together to share their knowledge and the results of their work over the past two years.
3. A stronger focus has been placed on braided rivers and their unique ecology since our previous seminar in 2017, so they anticipate strong interest this year.
4. While the event is free, BRaid is a charitable trust, so donations are always welcome.
5. The full programme and registration details are available here - <https://braid.org.nz/seminar-2019/>.

**Treaty of Waitangi Workshop**

6. A two-day Treaty of Waitangi workshop for Zone Committee members will be held at Environment Canterbury's Timaru Office on Monday 10 June, 10am-5pm and Tuesday 11 June, 9am-4.30pm. Please RSVP to Dave Moore.

**Omnibus Plan Change Update**

7. Please see attached Omnibus 2019 update paper.

**Wainono Augmentation Update**

8. Environment Canterbury are not yet in a position to give a formal report on the core scoping/options/costing work that needs to be carried out by Environment Canterbury (ECan). However, Dennis Jamieson, Project Lead Water Infrastructure CWMS will attend the Zone Committee meeting and will be able to discuss the anticipated process.

**RECOMMENDATION**

That the Lower Waitaki South Coastal Canterbury Zone Committee receive the update.

<b>AGENDA ITEM NO:</b>	<b>SUBJECT MATTER: OMNIBUS PLAN CHANGE 2019</b>
<b>REPORT:</b> Lower Waitaki South Coastal Canterbury Zone Committee	<b>DATE OF MEETING: 17 April 2019</b>
<b>REPORT BY:</b> Andrea Richardson, Environment Canterbury Senior Planner	

**PURPOSE**

1. To update the Zone Committee on progress of the Omnibus 2019 plan change to the Canterbury Land and Water Regional Plan (*LWRP*).

**BACKGROUND**

2. The Omnibus 2019 plan change covers a range of issues to ensure the *LWRP* responds appropriately to new directives from central government, emerging environmental issues, and changes in matters that are strategic priorities for Environment Canterbury. The region-wide topics include managed aquifer recharge, commercial vegetable operations, increased habitat protection for a number of freshwater species and better recognition of tangata whenua values. The Omnibus 2019 plan change also includes sub-region changes to give effect to the Hinds Drains Working Party recommendations.
3. The Omnibus 2019 plan change will form one part of proposed Plan Change 7 to the *LWRP*. Plan Change 7 is structured in three parts and includes Omnibus (Part A), a Waimakariri sub-region component (Part B) and an Orari-Temuka-Opihi-Pareora sub-region component (Part C). Key milestones for Plan Change 7 include the first stage of consultation required under the Resource Management Act (Schedule 1 consultation) with including Te Runanga o Ngai Tahu, local authorities, Ministers) on the draft plan change in April 2019 and public notification of the proposed plan change in mid-2019.

**UPDATE ON PROGRESS**

4. Development of planning solutions for each Omnibus topic has occurred at a slightly different pace as each is generally distinct from the others. Recently the Council decided not to progress the Braided Rivers topic in this plan change, but wait for the Court of Appeal decision on the legal extent of a braided river.
5. We have sought feedback from key stakeholders and staff on the proposed policy direction for each topic and are now in the process of writing planning provisions. We will seek feedback on these draft provisions from Schedule 1 parties in April/May 2019. Attachment 1 of this report provides a brief overview of each plan change topic and an update on progress.

**Attachment 1: Update on Omnibus 2019 topics**

	Omnibus topic description	Policy direction
<p><b>1</b></p>	<p><b>Improvements to rules to address Tangata Whenua values</b></p> <p>A number of LWRP controlled and restricted discretionary rules do not include specific recognition of Māori cultural and customary activities and associated values in their matters of control or restricted discretion. The purpose of this topic is to identify which controlled and restricted discretionary rules in the plan inappropriately constrain the ability of decision-makers on resource consent applications to consider the effects on Tangata Whenua values.</p>	<p>A number of rules will be amended to add a requirement to consider Māori cultural and customary activities and associated values in resource consent applications. The iwi entities have provided examples of relevant tangata whenua values.</p> <p><u>Examples of rules that may be amended:</u></p> <ul style="list-style-type: none"> <li>- Wastewater &amp; greywater discharges to land</li> <li>- Pit toilet discharges to land</li> <li>- Excavation of material over an aquifer</li> </ul>
<p><b>2</b></p>	<p><b>Braided Rivers</b></p> <p>This topic sought to clarify for plan users the policies and rules that apply to activities within, and adjacent to, the bed of a braided river, and to halt the loss of braided river systems and their values.</p>	<p><b>Council has determined that the Braided Rivers Topic should not be included in this plan change due to uncertainty about emerging caselaw.</b></p>
<p><b>3</b></p>	<p><b>Increased protection of indigenous freshwater species and habitats</b></p> <p>This topic seeks to increase protection of indigenous freshwater species and their habitats, including critically endangered species and valuable but declining mahinga kai. The work is informed by a science report that outlines the habitat, threat status and migratory requirements of all Canterbury indigenous freshwater fish and two freshwater invertebrates (crayfish and mussels).</p> <p>The second aspect of this topic is the incremental loss of instream habitat quality and quantity that may occur through re-alignment, piping, and reclamation of drainage channels and streams.</p>	<p>Methods to increase protection in the plan may include:</p> <ul style="list-style-type: none"> <li>- identification of certain indigenous freshwater species habitat and their protection from activities that may damage these areas</li> <li>- For migratory fish, enabling the removal/reconstruction of fish passage barriers such as weirs or perched culverts</li> <li>- Restrict the permanent realignment or piping of waterways</li> <li>- Restrict diversions that would cause the loss of water from any</li> </ul>



	Omnibus topic description	Policy direction
	<p>A third aspect is the ecological impacts of diversion of braids of a river. Principally, the loss of water from a braid, or de-watering, causes mortality to fish and invertebrates and sediment suspended during the activity impacts the downstream receiving environment.</p>	<p>braid or river reach</p>
<p><b>4</b></p>	<p><b>Schedule 17 Salmon Spawning Sites</b></p> <p>The plan restricts a number of activities that may damage salmon spawning sites, including stock access, vegetation clearance and gravel extraction. This topic seeks to add new salmon spawning sites to Schedule 17 of the LWRP.</p>	<p>Potential amendment to Schedule 17 to include new sites in consultation with Fish and Game.</p>
<p><b>5</b></p>	<p><b>Schedule 6 – Areas of Rivers or Lakes Commonly used for Freshwater Bathing</b></p> <p>The plan prohibits the disturbance of waterways by any farmed cattle, farmed deer or farmed pigs within 1km upstream of a Schedule 6 area. Schedule 6 currently lists 28 areas on rivers and lakes commonly used for freshwater bathing, and this topic seeks to add additional freshwater bathing areas.</p>	<p>Potential amendment to Schedule 6 to include additional areas, developed from three information sources:</p> <ul style="list-style-type: none"> <li>- Environment Canterbury’s recreational health monitoring programme;</li> <li>- River Values Assessment System report; and</li> <li>- Canterbury Water Management Zone Committee feedback.</li> </ul> <p>Refer to Attachment 2</p>
<p><b>6</b></p>	<p><b>National Policy Statement for Freshwater Management updates</b></p> <p>The LWRP was developed under the 2011 version of the National Policy Statement for Freshwater Management. Recent amendments to the NPS-FM in 2014 and 2017 have introduced new requirements for Councils including establishment of limits to achieve freshwater outcomes in accordance with a National Objectives Framework.</p>	<p>Potential amendments to LWRP Tables 1a and 1b (freshwater outcomes for rivers and lakes) and Schedule 8 (region-wide water quality limits).</p>

Omnibus topic description		Policy direction
7	<p><b>National Environmental Standards for Plantation Forestry</b></p> <p>The National Environmental Standards for Plantation Forestry (NES-PF) came into effect in May 2018 and prevails over LWRP rules except where the NES-PF specifically allows more stringent regional plan rules. This topic proposes to ensure plantation forestry industry activities meet the current LWRP requirements (where applicable) in addition to the NES-PF.</p>	<p>Consolidate existing rules into one new rule for plantation forestry activities that will address:</p> <ul style="list-style-type: none"> <li>- Discharge of sediment into a surface waterbody</li> <li>- Potential damage and disturbance to indigenous freshwater species habitat including inanga spawning habitat</li> <li>- Potential damage to wetlands</li> <li>- Replanting and planting within any Flow Sensitive Catchment</li> </ul>
8	<p><b>Commercial vegetable operations</b></p> <p>This topic seeks to better provide for the management of nutrient discharges from commercial vegetable operations. Crop rotation and lease-hold arrangements are typically undertaken by commercial vegetable growers to avoid soil-borne diseases, and compliance with the LWRP farming rules and access to lease land with sufficient nitrogen load is challenging for growers as the nitrogen loss limit that applies to the land is restricted by the crop type grown (or other land use) during the nitrogen baseline period.</p>	<p>Potentially new definitions (baseline commercial vegetable growing area; commercial vegetable growing), new policies and rules.</p>
9	<p><b>Managed Aquifer Recharge</b></p> <p>This topic will develop region-wide provisions to provide for Managed Aquifer Recharge to assist with improvements to water quality and/or water quantity in the receiving environment. The purpose is to accelerate the achievement of environmental outcomes (i.e. reduction in contaminant concentrations, groundwater replenishment and/or increasing flows in hydraulically connected waterways).</p>	<p>Potentially a new policy and new rules for MAR, including the take and use of surface water, the discharge into groundwater, and related construction activities.</p>

**Attachment 2: LWRP Schedule 6: Areas on rivers or lakes commonly used for freshwater bathing (existing and proposed)**

Table 1. Proposed list of areas on lakes and rivers commonly used for freshwater bathing for inclusion in Schedule 6 of the LWRP. Existing Schedule 6 sites (highlighted in grey) and new site additions are included.

Area	Site name	NZTM Easting	NZTM Northing	The distance upstream of site where stock are excluded from the river or lake (m)
Waitaki catchment	Lake Alexandrina at bottom huts	1395022	5128346	1,000
	Lake Tekapo at Camp Beach	1396597	5125237	1,000
	Lake Tekapo at Lillybank Rd Beach	1399399	5124575	1,000
	Lake Wardell	1370054	5102273	1,000
	Lake Poaka	1368259	5101180	1,000
	Loch Cameron	1364728	5099491	1,000
	Twizel River at picnic area	1368788	5096088	1,000
	Lake Ruataniwha at camping ground	1366191	5093619	1,000
	Lake Middleton	1348609	5092818	1,000
	Pond at Old Iron Bridge Rd	1367794	5092249	1,000
	Upper Ohau River	1356756	5091947	1,000
	Wairepo Arm	1366720	5090733	1,000
	Kellands Pond	1365981	5090705	1,000
	Omarama Stream at Omarama	1358382	5069524	1,000
	Hakataramea River at SH8 bridge	1401259	5044411	1,000
	Lake Benmore – Ohau C	1367237	5092651	1,000
	Lake Benmore at Haldon	1378843	5085854	1,000
	Lake Benmore at Falstone	1377045	5080251	1,000
	Lake Benmore at Glenburn	1365949	5065940	1,000
	Lake Benmore at Pumpkin Bay	1367185	5064766	1,000
	Lake Benmore at Sailors Cutting	1368493	5063512	1,000
	Lake Aviemore at Loch Laird	1376237	5060738	1,000
Lake Aviemore at Te Akatarawa camp	1384179	5057651	1,000	
Lake Aviemore at Waitangi	1385954	5057611	1,000	
Lake Waitaki at Fishermans Bend	1390823	5050698	1,000	

**5.3 IMPROVING FARMING PRACTICES ON HILLSLOPE LANDSCAPES PROJECT**

**Author:** Karalyn Reid, Committee Secretary and PA to the Mayor  
**Authoriser:** Karalyn Reid, Committee Secretary and PA to the Mayor  
**Attachments:** Nil

<b>HUI/MEETING:</b> Lower Waitaki South Coastal Canterbury Zone Committee	
<b>AGENDA ITEM NO:</b> 4	<b>KAUPAPA/SUBJECT:</b> Introduce the 'Improving farming practices on hillslope landscapes' project
<b>KAITUHI/AUTHOR:</b> Matt Dodson (Environment Canterbury) and MS Srinivasan (NIWA)	<b>WĀ/MEETING DATE:</b> 17 April 2019

**PURPOSE**

1. To introduce the 'Improving farming practices on hillslope landscapes' project, currently under development and to gain feedback.

**REPORT**

2. We are currently scoping the 'Improving farming practices on hillslope landscapes' project and we are attempting to secure fund from the Ministry for Primary Industries ([Sustainable Food and Fibre Futures fund](#))<sup>1</sup>. This project will complement an existing Environment Canterbury project, which aims to estimate groundwater recharge through loess soils.
3. The project is in the very early stages and we are seeking feedback from the Zone Committee around our approach, who we should engage with, and identifying key research questions.
4. The project aims to work with local stakeholders to develop irrigation management guidelines for irrigators on hillslopes. Our current approach is to engage with relevant stakeholders, collect data and field verify, then undertake scenario modeling with stakeholders in order to develop usable and appropriate guidelines.
5. Along with the Zone Committee, we are talking to Morven Glenavy Ikawai Irrigation Scheme staff and to DairyNZ. We intend to talk to Irrigation NZ as well.
6. We have identified several questions, many of which were identified by the community during the South Canterbury Coastal Stream process. Some of these questions relate to irrigation events causing flow in nearby gullies, the need to apply irrigation 'little and often', and defining on-farm of irrigation management zones.
7. The project team is currently made up of researchers from NIWA, AgResearch, Manaaki Whenua – Landcare Research, Plant and Food Research, and the soils department of Lincoln University.

**RECOMMENDATION**

That That the Lower Waitaki South Coastal Canterbury Water Management Zone Committee receives the presentation and provides feedback

<sup>1</sup> <https://www.mpi.govt.nz/funding-and-programmes/sustainable-food-and-fibre-futures/>

**MEETING CLOSURES**