

**KAIKOURA WATER ZONE COMMITTEE MEETING HELD AT 12.30PM  
ON WEDNESDAY 4 APRIL 2018 AT COUNCIL CHAMBERS, 96 WEST  
END, KAIKOURA.**

***AGENDA***

- 1. Karakia*** ***page 1***
- 2. Committee Check In and Order of Business*** ***page 2***
- 3. Apologies***
- 4. Matters of Importance to be raised as Urgent Business***
- 5. Confirmation of Minutes 07/03/2018*** ***page 3***
- 6. Public Forum***
  - Opportunity for members of the public to present to the Committee
- 7. Committee Updates*** ***page 47***
- 8. Kotahitanga mo te taiao and Landscapes – Briefing*** ***page 54***
- 9. Matauranga Whakautā Taiao, Environmental Education for Sustainability – Briefing*** ***page 56***
- 10. Urgent Business***



# KAIKŌURA WATER ZONE COMMITTEE

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



## TIMETABLE & ORDER OF BUSINESS

	12pm	<b>Lunch</b>	
1		<b>Open – Karakia</b>	
2	12.30pm	Committee check-in & Order of business	Chair – T Howard
		<ul style="list-style-type: none"> <li>• Apologies</li> <li>• Announced urgent business</li> <li>• Confirmation of previous meeting minutes</li> <li>• Te Reo practice</li> </ul>	
6	1pm	Opportunity for the public to speak	Chair – T Howard
7	1.10pm	Committee Updates	M Griffin & K Heays
		<i>An update on the committee's current priorities and actions from previous meetings including a quarterly update from ECan Zone Delivery Manager, Kevin Heays.</i>	
8	2.10pm	Kotahitanga mo te taiao and Landscapes – Briefing	AI Check (DOC)
		<i>AI Check (Partnerships Project Manager, DOC) will lead this briefing to the committee on the Collaborative Landscapes work DOC is undertaking, and how this relates to conservation in the Waiau Toa Clarence River catchment, and the Kotahitanga mo te taiao alliance.</i>	
	2.55pm	<b>Afternoon Tea</b>	
9	3.10pm	Mātauranga Whakauka Taiao, Environmental Education for Sustainability – briefing	Maria Deutsch (DOC)
		<i>This briefing from Maria Deutsch (Outreach and Education Coordinator, DOC) will update the committee on the Department of Conservation's strategy and action plan Mātauranga Whakauka Taiao (2017-2021) Environmental Education for Sustainability</i>	
10	3.55pm	General Business	
	4pm	<b>Close – Karakia</b>	



# MINUTES OF THE KAIKOURA ZONE WATER COMMITTEE MEETING HELD AT 12.47PM ON WEDNESDAY 7 MARCH 2018 AT MEMORIAL HALL KAIKOURA.

**PRESENT:** Ted Howard (Chair), Teri Sonal, Rob Roche, Gina Solomon, Aroha Boyd, Cr Steve Lowndes. Tony Blunt and Cr Celeste Harnett arrived at 2.12pm

**IN ATTENDANCE:** Nadeine Dommissie, Kevin Heays, Murray Griffin, Stephen Bragg, Hamish Graham, Kimberley Dynes, Suzanne Gabites, Peter Taylor, Jess Hill, Joe Harrison (ECan Staff)

**APOLOGIES:** Nicky McArthur, John Murray, and T Blunt, Cr C Harnett (lateness)  
***Moved by G Solomon, seconded by A Boyd and resolved that apologies be accepted.***

The committee held a minutes silence to recognise David Bedford and the contribution he made to this committee and community.

## 1. MATTERS OF IMPORTANCE TO BE RAISED AS GENERAL BUSINESS

G Solomon raised the following matters:

- Watershed Hui on 9<sup>th</sup> April 2018 (Tait Technology Centre Christchurch) travel arrangements,
- Two DOC initiatives for the committee to be briefed on,
- Te Reo practice included in zone committee meetings.

T Howard received a call from a member of public wishing to speak to the committee about IMS funding for planting on road reserves.

## 2. CONFIRMATION OF MINUTES 15 NOVEMBER 2017

***Moved by R Roche, seconded by A Boyd and resolved that the minutes of the Kaikōura Zone Water Committee meeting held on 7 February 2018 be confirmed a true and accurate record.***

## 3. COMMITTEE CHECK-IN

The following points noted from the check-in:

- Cr Lowndes noted Minister Shane Jones is looking for land available for tree planting for the billion trees programme, seeding money may be available to get plans started.
- Cr Lowndes noted Minister Clare Curry (Minister for Telecommunications) wants to find any gaps in the broadband network. He suggested forwarding Mayor Winston Gray any ideas which he can take to the Mayoral Forum.  
Cr Lowndes also raised:
- ECan is currently in the Long Term Plan (LTP) process which includes a proposal to push out Kaikōura's sub regional plan to 2026/27. The cost of a sub-regional plan is anywhere from \$2-4million, instead of going through this process what implementation ideas can the committee come up with.
- The Watershed symposium for all Zone Committees – April 9<sup>th</sup>. A great opportunity to learn what other committees have done and learnt on their respective journeys, and to look ahead to the future of the Canterbury Water Management Strategy (CWMS).
- Reflected on effects on Cyclone Gita

- G Solomon acknowledged the contribution of ECan staff and especially the support the committee receives from ECan Chair S Lowndes (and previously D Bedford) and N Dommissie, as an ECan Director.

#### **4. COMMITTEE UPDATES**

Committee updates were included in the agenda, the committee discussed the following points:

Kevin Heays noted the following:

CDHB have recently lifting a health warning for the Kahutara River.

A communications plan for the year is being put together and will be provided next month for committee's input. G Solomon suggested the committee make more use of the town's Facebook page.

The odorous oily black flow in Peketa has returned, which first started just after the earthquake. T Howard suggested to let the geology department at UC know as they would probably be interested to investigate.

*Action – ECan Science to look at options for investigating this Peketa phenomenon. (H Graham)*

G Solomon noted a recent article on Stuff regarding residents at Ocean Ridge who are under a boil drinking water notice. The article said the residents don't know what's happening or when the issue might be solved. Noting one of the committee's year outcomes is to support KDC in providing safe drinking water, the committee decided to ask KDC for an update.

*Action – Update from KDC regarding Ocean Ridge drinking water. (K Heays)*

C Armour outlined the Love the Lyell Working Group meeting held the previous day, Tuesday 6 March. The old planting site that the youth council were guardians of, behind Mitre10/Gills, is on hold while funding is found to assist with remediation works to the banks. The group heard from a keen young man who is wanting to start regular clean ups of lower Lyell Creek. The Working Group will look to assist him with this, and continue to hold a bigger annual event with all the schools.

G Solomon mentioned a DOC education strategy that could be of benefit to Love the Lyell, regarding young people taking ownership of waterways. There is a presentation G Solomon would like the committee, and possibly the youth engagement leader at ECan to hear. G Solomon also outlined a funding Alliance (a DOC partnership) looking for huge projects to support where there is commitment for long term maintenance. G Solomon would like to invite them along to the April meeting.

*Action – Briefings on these two DOC initiatives to be arranged for the April Zone Committee meeting. (M Griffin)*

It was also noted the work that Nigel from Sport Tasman is working with the community and has an idea about a waka landing on Lyell Creek.

The committee discussed the current work the Kaikōura Plains Recovery Project, the stream walk of Lyell Creek and getting a catchment recovery plan written for Lyell Creek. The committee were interested to be involved with this plan as it is a long term plan and the MPI project is just three years. It was noted that it is not a good time for community input as people are still in earthquake recovery mode.



G Solomon noted the committee needs to come up with specific projects for the mahinga kai outcome. She highlighted this reflects the shift in focus within the CWMS from a high level commitment on mahinga kai as a priority to specific locations and projects.

Jodie Hoggard and Barb Mackle-Woods entered at 2pm.

T Blunt and Cr C Harnett entered at 2.12pm

#### **5. Suzanne Gabites (Hydrology Scientist, ECan) – Presentation on Water Quantity (see slides 1-10)**

S Gabites introduced the briefing by the ECan Science Team on post-earthquake water monitoring and current understanding of surface water and groundwater in the Zone.

This briefing covered:

- Current surface water quantity monitoring (S Gabites)
- Current surface water quality and ecology monitoring for Waikōau/Lyell Creek and Middle Creek (K Dynes)
- Current groundwater monitoring (H Graham)

#### **Questions:**

- Explain how a site gets picked? S Gabites clarified it depends on the reason for gauging – if it is to provide a flood warning the site needs to be as high as possible. The equipment also has to be attached to something solid (like a big rock) and the site needs to be stable and beyond the effect of tides.
- Are the minimum flows right, should they be reviewed? S Gabites noted these were set fairly recently for all rivers where there are irrigation takes. Important to determine if the number of days on restriction are aligned to rainfall or to overuse.
- How many runs are needed to determine relationships between recorder sites and other streams? S Gabites confirmed ECan monitoring is aiming for 10 as a range of flows are needed, from really low to medium (not high/flood flows though).
- How many sites on the Kahutara? Three sites on the main stem and one on a tributary.
- How many on Oaro? One.

#### **Kimberley Dynes (Ecology Scientist, ECan) – Presentation on Water Quantity (see slides 11-24)**

#### **Questions:**

- With a healthy stream where should the nitrate levels be? K Dynes clarified there is no fixed level as such, in terms of toxicity thresholds the 99% level (99% of instream species survive) is at 1.95mg/l of Nitrate. However before effects of toxicity are reached there are many other detrimental impacts of excess nitrates – such as increased macrophyte growth and algae blooms. This results in smothering habitat on the stream bed. She added there is no guide on appropriate levels due to the high variability of instream conditions. The national bottom line has been set much higher, at 80% toxicity. K Dynes advised aiming for no more than 1mg/l of Nitrate as control of macrophyte growth will likely need to be at an even lower level to control for nutrients also available in sediment, not just water column.
- Is there a mahinga kai guideline value? K Dynes confirmed NIWA is working on this.
- What is the cost to track what species E-coli is from? K Dynes noted it is expensive, and has limitations as it is only a useful record for the day of sampling and could be different the next day.
- Are E.coli levels higher in summer due to more people in town? There is generally more activity around water in summer, including stock going to water if they can access it, more ducklings and more people.

- Cr Lowndes noted the Cawthron Institute have recently developed a real-time data monitoring of E.coli

*Action – investigate E.coli monitoring options and costs. (K Dynes)*

- When ECan do a river clean-up should some weed be removed and used as mulch for the trees? K Heays confirmed ECan Field Services already removes a lot of excess macrophytes, primarily for flood protection.  
Why is the Kahutara getting black mats, and what can we do to stop it? K Dynes clarified cyanobacteria needs stable flow and nutrients to grow, and phosphorous can be sourced from water or from sediment.

A Parrish arrived 3.10

### ***H Graham (Hydrogeologist, ECan) – Groundwater Presentation (see slides 25-39)***

#### **Questions:**

- What is the distance to sea level at the one bore where there has been an impact? H Graham confirmed it is 9m above sea level.
- Discussion about the water quality and the boil water notice for Ocean Ridge T Blunt advised this is associated with damage in the well lining and e.coli getting in there rather than a groundwater quality issue.
- M Griffin outlined the need to consider how to distribute this information to the wider community.

S Mackle arrived 3.15

R Mackle arrived 3.30

## **6. OPTIONS FOR ACHIEVING WATER MANAGEMENT OUTCOMES – BRIEFING A PARRISH**

A Parrish outlined the timeline including with the 2011 National Policy Statement for Freshwater Management, and the Canterbury Water Management Strategy initiated by the Mayoral Forum, to help identify those areas where we aren't achieving water quality outcomes and how we are going to address these. He highlighted ECan currently has two plans providing a regional planning framework for doing this – the Land and Water Regional Plan (LWRP) and Plan Change 5 to the LWRP (which is still subject to some appeals). The committee discussed if these plans would be enough to get them where they want to be, for example, what action needs to happen on the ground to change into a green zone before entering into another planning process. R Mackle questioned if other sectors need to be looked at beyond farming. A Parrish confirmed urban communities were also addressed by this regional planning framework. K Heays noted work currently underway around septic tanks as an example of investigating other sectors alongside farming.

Cr Lowndes raised the idea of the money saved from delaying doing a sub-regional plan till 2026/27 and whether some of this money could be spent elsewhere? A Parrish suggested the committee write to ECan. N Dommissie noted she can see more value in committing resources into implementation to achieve environmental gains rather than undertaking another planning process. She stressed it isn't ECan withdrawing support from Kaikōura, but rather, seeing more value in focussing on implementation instead of further planning and more rules.

G Solomon shared her initial vision for Kaikōura when joining the Zone Committee and questioned if the committee is still on track. A Parrish agreed it would be beneficial to review the ZIP, N Dommissie added the committee need to look where there are gaps and what actions on the ground are needed.

Cr Lowndes asked M Griffin to assist T Howard and G Solomon to draft a letter to ECan which can be circulated around the committee before being submitted.

*Action – Prepare a letter to ECan in response to the deferment of the Kaikōura sub regional plan process to 2026/27. (M Griffin/T Howard/G Solomon)*

## **7. GENERAL BUSINESS**

G Solomon suggested including a 10 minute Te Reo practice at the start of each meeting. Perhaps three or four place names from the agenda practiced at the start and written on the board.

*Action – Add Te Reo practice to the meeting run sheet/agenda. (M Griffin)*

G Solomon raised the Watershed event in Christchurch on Monday 9 April. A discussion followed on co-ordinating travel and accommodation for the committee.

*Action – Co-ordinate travel and accommodation arrangements for committee members attending the CWMS Watershed Symposium on Monday 9 April in Christchurch. (M Griffin)*

### **Action list**

- ECan Science to look at options for investigating the Peketa phenomenon. (H Graham)
- Update from KDC regarding Ocean Ridge drinking water. (K Heays)
- Briefings on these two DOC initiatives to be arranged for the April Zone Committee meeting. (M Griffin)
- Investigate E.coli monitoring options and costs. (K Lynes)
- Prepare a letter to ECan in response to the deferment of the Kaikōura sub regional plan process to 2026/27. (M Griffin/T Howard/G Solomon)
- Add Te Reo practice to the meeting run sheet/agenda. (M Griffin)
- Co-ordinate travel and accommodation arrangements for committee members attending the CWMS Watershed Symposium on Monday 9 April in Christchurch. (M Griffin)

***There being no further business, the meeting closed at 4.35pm.***



<b>AGENDA ITEM NO: 7</b>	<b>SUBJECT: Committee Updates</b>
<b>REPORT TO:</b> Kaikōura Water Zone Committee	<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator – Kaikōura	

## PURPOSE

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

## COMMITTEE UPDATES

The following updates will be addressed with the Committee:

- **Working Group Updates**

An update on these Working Groups will be provided at the meeting.

- **Nutrient Management & Water Efficiency**

- An update on the Kaikōura Plains Earthquake Recovery project (KPRP) is provided below by Jodie Hoggard (Kaikōura Plains Recovery Project Manager).
- Lyell Creek Stream walk project – the information gathered will be analysed and fed into a ‘Lyell Creek’ recovery and restoration scoping study of which a suitable contractor is currently being sought. A full completed report is expected by the end of June 2018.
- Fonterra staff from across the South Island were in Kaikōura at the beginning of March completing the on-farm components of the Farm Environment Plan work. Data from the stream-walk has been incorporated and the FEPs are currently being produced by the SDA team. Cultural components within the FEPs will await the appointment of the CLMA. FEPs should be with farmers in the near future.
- A community member position is still available on the Governance Group.
- Planning is underway for years 2 & 3 of the project and reporting to MPI.
- ‘Farming in wet conditions’/irrigation efficiency’ workstream – currently an on-farm project proposal is being constructed by Fonterra that will represent a good way to utilize existing funding and see positive change on farm – “Post-quake it is essential that we move to support changes in on-farm practice which are likely to lead to more efficient water use, adoption of good management practice, and ultimately a lowering of unnecessary soil-moisture. While irrigation or effluent spreading practice itself isn’t a post-quake activity, or occurring as a consequence of the quakes, it is now taking place in a post-quake context (that is a wetter, more destabilised environment with less certainty around impact of over irrigating etc). Improving practises with regard to soil moisture, is seen as the best bang-for-buck way of adapting to farming in wetter conditions”.
- The online platform ‘Mailchimp’ is being used as a professional means of creating and distributing a quarterly newsletter from the project.
- Cultural Land Management Advisor – The project application and subsequent successful funding, allowed for the employment of a part time Cultural Land Management Advisor - This role would support the Plains Recovery Project

Manager while working alongside landowners and providing assistance on mahinga kai and cultural issues to help ensure cultural outcomes are being met in the Zone. Further discussions around this idea have led to a possible joint partnership with ECan and sharing a role between Kaikōura & Hurunui. ECan staff (with the support of Jodie) have developed a business case for a transitional role from now until when the role is confirmed in the Long-Term Plan (01 July 2018), which is currently being reviewed by ECan CEO, Bill Bayfield. We hope to have a decision within the next 2 weeks.

- Drainage project – site visits were carried out on three of the worst affected farms, with DairyNZ, AgResearch & AgFirst during February with the aim of rolling out drainage related trials/mitigation measures in the near future. This will allow also for dissemination of information to the wider farming community by way of field days and information produced.
- Farmer assistance with MPI option 2 funding continues, for individual property projects/needs. (\$5K/per property available from MPI over 2 years for ‘technical advice/advisory services’).

- **Love the Lyell/Waikōau**

- An update on the Lyell/Waikōau will be provided by Chloe Armour, ECan Land Management Advisor as part of the Zone Delivery quarterly update.

- **Zone Committee 5 Year Outcomes Refresh**

A short review of the refreshed 5 year outcomes (February 2018) will be provided at the meeting, to determine what next in terms of the committee’s 2018 work programme, and associated priority setting for ECan Zone Delivery.

- **Zone Delivery – Quarterly update**

Kaikōura Zone Delivery Manager, Kevin Heays, will lead a quarterly update on the ECan Zone Delivery Team priorities and achievements for the previous quarter. An overview paper for this report is provided as agenda item 7-1.

Kevin has also provided the monthly drinking water testing undertaken for KDC, this is provided as agenda item 7-2.

- **CWMS Regional Committee**

The previous Regional Committee meeting was on Tuesday 13 March. The next Regional Committee workshops are scheduled for Tuesday 15 May and full meeting on Tuesday 12 June.

Ted Howard will email the committee his summary report on the 13 March meeting prior to the 4 April Zone Committee meeting.

- **Link to all Regional Committee meetings and agenda papers –**

<https://ecan.govt.nz/data/document-library/?Search=regional+water+management+committee%2C+agenda&documentTypes=-1&pageSize=12&start=1&sortDir=desc>

- **Watershed Symposium 9 April 2018 – arrangements**  
A check in on the committee's arrangements for this CWMS event.
- **Kaikōura Water Zone Committee Annual Report 2017**  
An update on the 2017 annual report will be provided at this meeting.
- **Peketa Phenomenon – proposal from ECan Science**  
A proposal from ECan Science is provided, as agenda item 3-3, as follow up to the discussion at the previous Zone Committee meeting on the 'Peketa phenomenon'.
- **Action Points from previous meetings** – an updated action list will be reviewed at the meeting.

#### **RECOMMENDATIONS**

- The Zone Committee are asked to receive these updates for their information, and with reference to the committee's 2018 work programme priorities and 5 Year Outcomes.





<b>AGENDA ITEM NO: 7.1</b>	<b>SUBJECT: Zone Delivery Team – Quarterly Update</b>
<b>REPORT TO:</b> Kaikōura Water Zone Committee	<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator – Kaikōura	

#### **UPDATE**

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

#### **The Kaikōura Zone Delivery Team are:**

- **Kevin Heays**, Kaikōura Zone Delivery Manager
- **Chloe Armour**, Land Management Advisor, Kaikōura
- **Jess Hill**, Biodiversity Advisor, Kaikōura and Hurunui/Waiau
- **Robin Hubbard**, Resource Management Officer – Monitoring and Compliance, Kaikōura and Hurunui/Waiau
- **Peter Taylor**, Resource Management Officer – Monitoring and Compliance, Kaikōura and Hurunui/Waiau
- **Jan Crooks** – seconded, earthquake recovery
- **Marty Mortiaux** – seconded, earthquake recovery

#### **Kaikōura 5 Year Outcomes 2015 – 2020**

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

As the Zone Committee 'refreshes' these outcomes, as most recently reviewed by the Zone Committee at the 7 February 2018 meeting, the Zone Delivery Team will adapt its priority setting accordingly.

#### **Progress against the committee's 5 Year Outcomes and Milestones**

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

#### **RECOMMENDATION**

That the Water Zone Committee receive this Zone Delivery Team quarterly update for their information, and in considering the committee's 2018 work programme priorities and 5 year outcomes 2015 – 2020.



<b>AGENDA ITEM NO: 7-2</b>	<b>SUBJECT: KDC Drinking Water Supply Report (March) – update</b>
<b>REPORT TO:</b> Kaikōura Water Zone Committee	<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Kevin Heays, ECan Zone Manager – Kaikōura	

The following is an excerpt from the KDC meeting agenda for 28 March 2018.

### **Boil Water Notices**

Boil water notices (BWN) are put in place when there is an elevated risk of contamination of the supply or routine testing results show that acceptable limits for contaminants have been exceeded.

At the date of this report BWNs are in place for the Peketa, Ocean Ridge, Kaikoura Suburban and the East Coast (Clarence) Supply Schemes.

Ocean Ridge BWN was put in place on 27 December 2017 and Peketa BWN was put in place on 16 March 2018. East Coast BWN and Suburban BWN have been in place since the November 2016 earthquake.

The details around each of these follows.

### **Suburban Kaikoura Water Supply**

There is limited protection to the Suburban scheme which was impacted by intake damage and source changes as a result of the earthquake. Suitable protection would be provided by intake improvements, storage and treatment. All of these measures are to be considered in the draft Three Year Plan. Once improvement works undertaken and consecutive complying test results are received lifting the BWN can be considered but is subject to agreement by Canterbury DHB.

### **East Coast Water Supply**

There is limited protection to the East Coast scheme. After the earthquake there were failed monitoring tests and consequent investigations. The result of these investigations highlighted the limited protection to what is essentially a very large rural supply used predominately for stock. Due to the extent of the scheme it would not be practical or efficient to treat the entire scheme. Discussions with the scheme committee have been held recently to identify potential solutions that would provide reliable potable water to all homes within the scheme at an affordable cost.

Discussions are underway with Canterbury DHB to assess the feasibility of classing the scheme as a Rural Agricultural Supply that would influence the solution for a safe supply to all homes. Once improvement works undertaken and consecutive complying test results are received lifting the BWN can be considered but is subject to agreement by Canterbury DHB.

### **Ocean Ridge Water Supply**

The results of testing undertaken on the 20 December 2017 identified contamination of the supply in the reticulation. As soon as Council was notified of the test results chlorine treatment of the scheme was initiated on 22 December 2017 at the reservoir.

Residents were notified on 27/28 December by mail drop to properties and communications portals (website and facebook). The mail drop was complicated by the lack of post boxes that meant some residents did not receive the mail drop notice. UV treatment is applied to the bore water that is delivered to the reservoir but due to the manner that UV treatment works there is no protection should contamination occur after the treatment process. Subsequent

investigation has shown the contamination to have most likely occurred in the reservoir that was subject to emergency repairs post-earthquake. The investigation has determined the need for further remedial work to the reservoir and liner. Once consecutive complying test results are received and remedial works undertaken lifting the BWN can be considered but is subject to agreement by Canterbury DHB.

### **Peketa Water Supply**

The results of testing undertaken on the 15 March 2018 identified contamination of the supply. Inspection and repairs were initiated on 17 March 2018 as soon as Council was notified of the test results.

Residents were notified on 17 March by mail drop to properties and communications portals (website and facebook). In addition, access for residents to a drinking water supply tank at the Peketa Road SH1 closure gate was agreed with NCTIR.

UV treatment is applied to the bore water that is delivered to the scheme but due to the manner that UV treatment works protection is reduced if there is a bulb failure. Subsequent investigation has shown the contamination to have most likely occurred from a combination of the UV bulb failure, filter process and poor quality bore water. The investigation has determined the need for improvements to the treatment process.

Suitable protection would be provided by treatment process improvements (including consideration of chlorination) and bore upgrade. All of these measures are to be considered in the draft Three Year Plan.

Once consecutive complying test results are received lifting the BWN can be considered but is subject to agreement by Canterbury DHB.

<b>AGENDA ITEM NO: 7-3</b>	<b>SUBJECT: Peketa Phenomenon – update</b>
<b>REPORT TO:</b> Kaikōura Water Zone Committee	<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator - Kaikōura	

## PROPOSAL

- Following the 14 November 2016 Kaikōura earthquake (magnitude 7.8) there has been periodic discharge of groundwater with a pungent smell (see Figure 1 for location details).
- Faecal source tracking determined that the E. coli contamination identified was ruminant with possible avian (avian was not tested with PCR markers).
- The community have brought the issue to the zone committee who have requested that further investigation be undertaken to better understand what might be causing the smell.
- We are hoping to work with Gina Solomon (Zone Committee member and Peketa resident) and Kevin Heays (Zone Manager) in undertaking this investigation.
- A site visit and groundwater and surface water sampling will be undertaken by the Groundwater Science team to investigate what might be causing the smell. Water quality samples will be taken to complete a geochemical analysis. Land owner permission will be attained for property access where required for sampling (we are hoping Gina may be able to help facilitate this).
- Results will be presented back to the zone committee.



<b>AGENDA ITEM NO: 8</b>	<b>SUBJECT:</b> Kotahitanga mo te taiao and Landscapes – Briefing
<b>REPORT TO:</b> Kaikōura Water Zone Committee	<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator – Kaikōura	

### Purpose

The purpose of this briefing is to inform the committee on the Collaborative Landscapes work DOC is undertaking, and how this relates to conservation in the Waiau Toa Clarence River catchment, and the Kotahitanga mo te taiao alliance.

### By Who

This briefing will be led by Al Check – Partnerships Project Manager, DOC.

### Background

The Kotahitanga mō te Taiao Alliance grew from a concept involving collaboration in delivering landscape scale conservation projects across the Nelson and Tasman Regions. The first meeting of this group (then known as Te Tau Ihu Alliance), was held on 30 September 2016, and was focused on leveraging off Waimea Estuary, MRFP Wilding Conifers, Nelson Nature and Project Janszoon. By July 2017, the project had grown to the point that it now involves discussion between four Councils, nine iwi, and the Department of Conservation. The organisations now involved in the Alliance include:

- Nelson City Council
- Tasman District Council
- Marlborough District Council
- Buller District Council
- West Coast Regional Council
- Kaikoura District Council
- Ngāti Apa ki te Rā Tō Trust
- Te Pātaka a Ngāti Kōata Trust
- Te Rūnanga o Ngāti Kuia Trust
- Te Rūnanga o Ngāti Rārua
- Ngāti Tama ki Te Waipounamu Trust
- Te Rūnanga o Toa Rangatira Inc
- Te Atiawa o Te Waka-a-Māui Trust
- Rangitāne o Wairau Settlement Trust
- Te Rūnanga o Ngāti Waewae
- Te Rūnanga o Kaikōura
- Department of Conservation – Te Papa Atawhai

A Memorandum of Understanding (MoU) was drafted in 2017 based on the considerable benefits of collaboration to achieve significant conservation gains across the Buller, Marlborough, Nelson and Tasman Regions. This MoU provides a way to formalize and record the vision, scope, and principles that the parties expect to underpin their ongoing relationship with each other. Not all involved have signed the MOU at this point. The focus now is developing a Strategic Plan that identifies and prioritises landscape scale projects for collaborative implementation.

The underlying aim of the Alliance is that by working collaboratively across the region at a landscape scale, additional funding can be sought and efficiencies can be gained by aligning work. It has been highlighted that a number of philanthropic organisations encourage big scale thinking when considering potential funding, for example Predator Free 2050 (\$20 million over 4 years), NEXT Foundation (\$100 million over 10 years), The Nature Conservancy (\$1.4 billion), and MPI Wilding Conifer Fund (\$16 million this year).

The timeframes for responding to funding opportunities are often very tight so one aim of the Alliance is to have “investment ready” projects. The types of projects that the Alliance discussed being involved in are: Predator Free 2050, freshwater issues via an integrated catchment management approach, and wilding conifer control. Marine focused projects are another possible area where shared goals can be aligned.

Iwi groups have also expressed a wish that the Alliance delivers social, cultural and economic outcomes for whanau. This relates to potentially increased opportunities for training and employment if a broader range and scope of conservation work is funded in the region.

### **Recommendation**

The Zone Committee receives this briefing and consider the scope and aim of this Alliance, with specific regard to the ongoing collaboration on integrated weed and predator management in the Waiau Toa Clarence River catchment.



<b>AGENDA ITEM NO: 9</b>	<b>SUBJECT: Mātauranga Whakauka Taiao, Environmental Education for Sustainability – briefing</b>	
<b>REPORT TO:</b> Kaikōura Water Zone Committee		<b>DATE OF MEETING:</b> 4 April 2018
<b>REPORT BY:</b> Murray Griffin, CWMS Facilitator – Kaikōura (ECan)		

## Purpose

The purpose of this briefing is to update the committee on the Department of Conservation’s strategy and action plan Mātauranga Whakauka Taiao (2017-2021) Environmental Education for Sustainability.

## By Who

- This briefing will be led by Maria Deutsch – Outreach and Education Coordinator, DOC.

## Background

The following excerpt is from the Foreword to the Strategy and action plan is provided to give the committee an overview of the document.

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Ko te manu e kai ana i te miro, nōna te ngahere. Engari, ko te manu e kai ana i te mātauranga, nōna te ao

The one who partakes of the flora and fauna, that will be their domain. The one who engages in education, opportunities are boundless

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“This new Environmental Education for Sustainability Strategy refreshes the Government’s approach across agencies to ensure we equip our young people with the understanding, skills and motivation they need to help address New Zealand’s many environmental challenges. We are proud to have produced the first strategy in 1998 but this renewal is required to reflect new priorities and approaches. We are putting more emphasis on practical, hands on environmental education. We want stronger linkages with the Government’s agenda on science and innovation.

It is a more inclusive approach, reflecting the growth in Te Taha Māori. We also want to build a more collaborative culture among New Zealanders to help find solutions to our environmental problems.

The Strategy focuses on the key environmental challenges of climate change, water quality, biodiversity protection and waste. It recognises that informed and active communities are essential if we are to find lasting solutions. To reach a low greenhouse gas emissions future, each one of us needs to work on ways to cut our emissions. To retain our unique biodiversity, we need to engage nationwide in predator and pest control. To enhance water quality, we need both town and country to reduce pollutants getting into our waterways. To reduce waste, we need community commitment and innovative technologies.

We want to acknowledge and enable tangata whenua in their role as kaitiaki. We recognise the scale of the work and activity that is happening across New Zealand in recognising and growing the Māori perspective in environmental education. We aim to build on this to encourage more collaboration and action and create space for Māori wisdom and knowledge to grow.

Implementation of this strategy will help the Government achieve its environmental goals. Our agencies will be working together to focus on key overarching aspirational environmental goals, such as Predator Free New Zealand, as ‘rallying points’ for New Zealand’s environmental efforts. As a nation, we need to recognise the key challenges we must face together and where we can effectively take a global leadership position.

The Government is only part of the picture. We encourage individuals, communities and organisations to think about the part they can play in creating a healthy environment and prosperous society in which we can all thrive.

Environmental education for sustainability requires a uniquely Aotearoa New Zealand approach that will grow future environmental leaders and active environmental stewardship in this country. This document sets out a 4-year plan to support a longer term vision.

Through this Strategy and Action Plan, we are committing to working together and with others to help all New Zealanders learn how they can take action to address the sustainability challenges we face locally and globally.

(Page 1, Mātauranga Whakauka Taiao Strategy and Action Plan)

**Link to the plan document:** <http://www.doc.govt.nz/Documents/getting-involved/students-and-teachers/environmental-education-for-sustainability-strategy-and-action-plan.pdf>

## **Recommendation**

The Zone Committee consider this briefing with regard to the committee’s 2018 work programme and engagement priorities, and refreshed 5 year outcomes 2015 – 2020.