
Christchurch West Melton Water Management Zone Committee AGENDA

Notice of Meeting:

A meeting of the Christchurch West Melton Water Management Zone Committee will be held on:

Date: Thursday 22 June 2017
Time: 6.00pm
Venue: Environment Canterbury,
200 Tuam Street

If you require access to the ECan building after the meeting has commenced, please phone
Lesley Woudberg 027 706 4273

Membership

Chairperson	Arapata Reuben Tūāhuriri Rūnanga
Deputy Chairperson	Suzanne Furkert Community Representative
Members	Councillor Pauline Cotter Christchurch City Council
	Councillor Debra Hasson Selwyn District Council
	Councillor Tom Lambie Environment Canterbury
	Herewini Banks Te Hapū o Ngāti Wheke/Rapaki
	Les Wanhalla Te Taumutu Rūnanga
	Andrew Congalton Community Representative
	Chris Kelliher Community Representative
	Robert Wynn-Williams Community Representative
	Kevin Brown Community Representative
	Lance Kenyon Community Representative

17 June 2017

Principal Advisor
Diane Shelander
Senior Policy Analyst
Tel: 941 8304
Christchurch City Council

Zone Facilitator
Lesley Woudberg
Tel: 027 706 4273
Environment Canterbury

Committee Advisor
Liz Ryley
Tel: 941 8153
Christchurch City Council

To view copies of Agendas and Minutes, visit:

<https://www.ccc.govt.nz/the-council/meetings-agendas-and-minutes/>
<https://www.ecan.govt.nz/get-involved/council-and-committee-meetings/>

TABLE OF CONTENTS

1.	Apologies.....	4
2.	Confirmation of Previous Minutes	4
3.	Matters Arising from the Minutes.....	4
4.	Deputations by Appointment.....	4
5.	Identification of Urgent Items	4
6.	Identification of General Public Contribution	4

STAFF REPORTS

7.	Powerpoint - Nitrogen Contribution from Farming in the Christchurch-West Melton Groundwater Protection Zone	11
8.	Glyphosate use by Christchurch City Council.....	21
9.	Urban Contaminants	27
10.	Progress Reports - Verbal.....	31
11.	Update Working Groups - 22 June 2017	33
12.	Facilitator's Update - 22 June 2017	39

1. Apologies

Apologies were received from Councillor Hasson, Councillor Cotter, Robert Wynn-Williams and Councillor Lambie.

2. Confirmation of Previous Minutes

That the minutes of the Christchurch West Melton Water Management Zone Committee meeting held on [Thursday, 25 May 2017](#) be confirmed (refer page 5).

3. Matters Arising from the Minutes

4. Deputations by Appointment

There were no deputations by appointment at the time the agenda was prepared.

5. Identification of Urgent Items

6. Identification of General Public Contributions



Christchurch West Melton Water Management Zone Committee OPEN MINUTES

Date: Thursday 25 May 2017
Time: 6.00pm
Venue: Environment Canterbury,
200 Tuam Street

Present

Deputy Chairperson
Members

Suzanne Furkert Community Representative
Councillor Pauline Cotter Christchurch City Council – arrived at 6.08pm
Councillor Debra Hasson Selwyn District Council
Councillor Tom Lambie Environment Canterbury
Herewini Banks Te Hapū o Ngāti Wheke/Rapaki
Les Wanhalla Te Taumutu Rūnanga
Robert Wynn-Williams Community Representative
Kevin Brown Community Representative
Lance Kenyon Community Representative

24 May 2017

Principal Advisor
Diane Shelander
Senior Policy Analyst
Tel: 941 8304
Christchurch City Council

Zone Facilitator
Lesley Woudberg
Tel: 027 706 4273
Environment Canterbury

Committee Advisor
Liz Ryley
Tel: 941 8153
Christchurch City Council

www.ccc.govt.nz

To view copies of Agendas and Minutes, visit:
www.ccc.govt.nz/thecouncil/meetingsminutes/agenda/index.aspx
www.ecan.govt.nz/news-and-notice/minutes/Pages/Default.aspx

Peter Ramsden opened the meeting with a Karakia/Timatanga.

The agenda was dealt with in the following order.

Apologies

Committee Resolved CWZC/2017/00016

It was resolved on the motion of Member Banks, seconded by Member Wanhalla that apologies for absence from Arapata Reuben and Chris Kelliher, and an apology for lateness from Cr Cotter, be accepted.

Member Banks/Member Wanhalla

Carried

2. Confirmation of Previous Minutes

Committee Resolved CWZC/2017/00017

Committee Decision

That the minutes of the Christchurch West Melton Water Management Zone Committee meeting held on Thursday, 27 April 2017 be confirmed, subject to the following amendments:

- Item 11, addition of name "Charlotte O'Sullivan"
- Item 12, first indented line to read "Evan Smith of the Avon Network was keen for reinstating rubbish bins within the collection points".
- Item 12, third indented line, replace question marks with "to mitigate Port Hills fire sediment".

Councillor Hasson/Member Furkert

Carried

Councillor Cotter arrived at 6.08pm.

3. Matters Arising from the Minutes

- A sign in sheet of people attending the Zone Committee meeting was requested.
- Regarding Item 5 and a letter from the Christchurch City Council to Central Government about copper free brake pads, Lesley advised that she had email contact with MFE and MBIE about a date/time set for a workshop to discuss this. Once the workshop has been completed, there could be an opportunity to send a letter to Central Government in relation to this. Diane Shelander and Lesley Woudberg will follow up on multiple opportunities, including:
 - Letter from CCC to Central Government
 - Possible agenda item to the Mayoral Forum
 - Possible agenda item to Chief Executives' Forum
 - Workshop 29 June 2017
 - Remit to Local Government Conference
- The Committee members noted that Biodiversity Immediate Steps funding was a priority for the Port Hills fire recovery.

4. Deputations by Appointment

- 4.1** Alice Shanks and Sue Grant addressed the meeting on behalf of the Beckenham Neighbourhood Association in relation to the tree planting policy along the Heathcote River and requested a clear point of contact in the Christchurch City Council who makes decisions on the planting policy.

This matter will be referred to the Land Drainage Team for the Christchurch City Council and Arborists for consideration and for a response to be sent back to the Beckenham Neighbourhood Association and the Zone Committee.

Committee Resolved CWZC/2017/00018

That the Christchurch West Melton Water Management Zone Committee:

1. Refers the issues raised to City Council staff for investigation and response.
2. Thanks Alice Shanks and Sue Grant for their deputation.

Member Banks/Member Kenyon

Carried

5. Identification of Urgent Items

Nil.

6. Identification of General Public Contributions

Discussion will be held about the Heathcote Estuary during the Mother of all clean ups update.

7. Verbal Updates to the Zone Committee

The Committee received verbal updates by:

- Evan Smith – Avon-Ōtākaro Network reported on the successful Mother of all Clean Ups day where over 9 tonnes of rubbish was removed. He updated the meeting on the City to Sea River Trail with a celebration of the partial opening of the trail to be held on 25 June 2017. He referred to a concept for a groundwater sourced lake for flatwater sports that had been modified to an in-river facility, and tabled documents in relation to this, “Reimagining the river for recreation and nature” and a map of the area proposed. Les noted that more indigenous plants were needed in the area also.
- Tim Joyce updated the meeting on the Port Hills fire recovery work that included sediment control and planting, completed aerial seeding of grasses and silt control. A funding request would be sought from the Christchurch City Council for the recovery. Contestable funding could potentially be administered by ECan and the Zone Committee.
- Lance Kenyon provided an update on the Mother of all Clean Ups. There was a request to support the replacement of rubbish booms. The Zone Committee welcomed the news that booms would be reinstalled in the Avon River in July.
- Lance Kenyon reported on the Ōpāwahō/Heathcote River Community meeting. A presentation from meeting will be emailed to Committee members.

8. Farming to Good Management Practice

Tami Woods, ECan provided a PowerPoint presentation to the Committee on *Farming at Good Management Practice: Stage 1 Campaign*. The campaign is to assist farmers with land >50 hectares of irrigation to have tools, systems and processes available to farm within water quality limits.

Discussion was held about nitrogen limits and the effects of nitrogen on waterways. Tami will be invited to a future Zone Committee meeting to discuss the rationale behind nitrogen levels. Lesley advised that a series of seminars would be held in the Selwyn-Waihora zone relating to water quality issues, and when the dates were available she would advise the Committee.

Committee Resolved CWZC/2017/00019

Joint Committee Decision

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the information in the report.

Member Brown/Member Wanhalla

Carried

9. Urban Contaminants - Use of Herbicides Close to Waterways

This item was deferred to the next Zone Committee meeting. The Committee requested information on the residual effect of chemicals and the current Christchurch City Council policy on the use of herbicides to be included in the report.

10. CWMS Target: Recreation and Amenity Opportunities

Priority recreation and amenity restoration sites

The Regional Water Management Committee's Recreation and Amenity Working Group sought from each Zone Committee a list of up to five of their top priority recreation or amenity restoration sites for action in their region.

Committee Resolved CWZC/2017/00020

Joint Committee Decision

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the information in the report.
2. Emails Lesley Woudberg their priority sites for restoration for amenity and recreation within the Christchurch West Melton zone.

Member Furkert/Member Banks

Carried

11. CWMS Target: Recreation and Amenity Opportunities - River and Lake Swimming in the Canterbury Region

The Regional Water Management Committee's Recreation and Amenity Working Group sought from each Zone Committee feedback on the rivers and lakes across Canterbury that have been identified

as their local freshwater swimming sites in the 'River and Lake Swimming in the Canterbury Region' draft report.

The Committee requested a map to identify the sites and to check their cultural significance. Some inaccuracies in the report will be corrected. River and estuary networks input was noted, along with information via newspaper articles, Facebook and websites.

Committee Resolved CWZC/2017/00021

Joint Committee Decision

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the information in the report.
2. Confirms accuracy of local freshwater river and lake swimming sites.
3. Provides to Lesley Woudberg details of any omissions.

Member Furkert/Member Banks

Carried

12. Update Working Groups - 25 May 2017

Charlotte O'Sullivan tabled a Draft Communications Plan 2017 at the meeting and outlined its detail. She asked for feedback on the Plan from Zone Committee members by the next meeting.

Committee Resolved CWZC/2017/00022

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the information in the report.

Member Kenyon/Councillor Hasson

Carried

13. Facilitator's Update - 25 May 2017

Lesley Woudberg tabled a document titled "Water bottling – what's the story?". The document contained a number of questions and answers relating to water consents.

Committee Resolved CWZC/2017/00023

Joint Committee Decision

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the information in the report.

Member Banks/Councillor Cotter

Carried

Peter Ramsden closed the meeting with a Karakia/Whakamutunga.

Meeting concluded at 8.07pm.

CONFIRMED THIS 22ND DAY OF JUNE 2017

**SUZANNE FURKERT
DEPUTY CHAIRPERSON**

7. Powerpoint - Nitrogen Contribution from Farming in the Christchurch-West Melton Groundwater Protection Zone

Reference: 17/640302

Contact: Lesley Woudberg Lesley.woudberg@ecan.govt.nz 027 706 4273

1. Purpose of Report

- 1.1 The purpose of this report is to provide the Committee with a PowerPoint on Nitrogen Contribution from Farming in the Christchurch-West Melton Groundwater Protection Zone.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

1. [Notes the PowerPoint on Nitrogen Contribution from Farming in the Christchurch-West Melton Groundwater Protection Zone.](#)

Attachments

No.	Title	Page
A ↓	Nitrogen Contribution Powerpoint	12

Christchurch West Melton Zone Committee

Nitrogen Contribution from Farming in the ChCh-West Melton Groundwater Protection Zone

1

OBJECTIVE

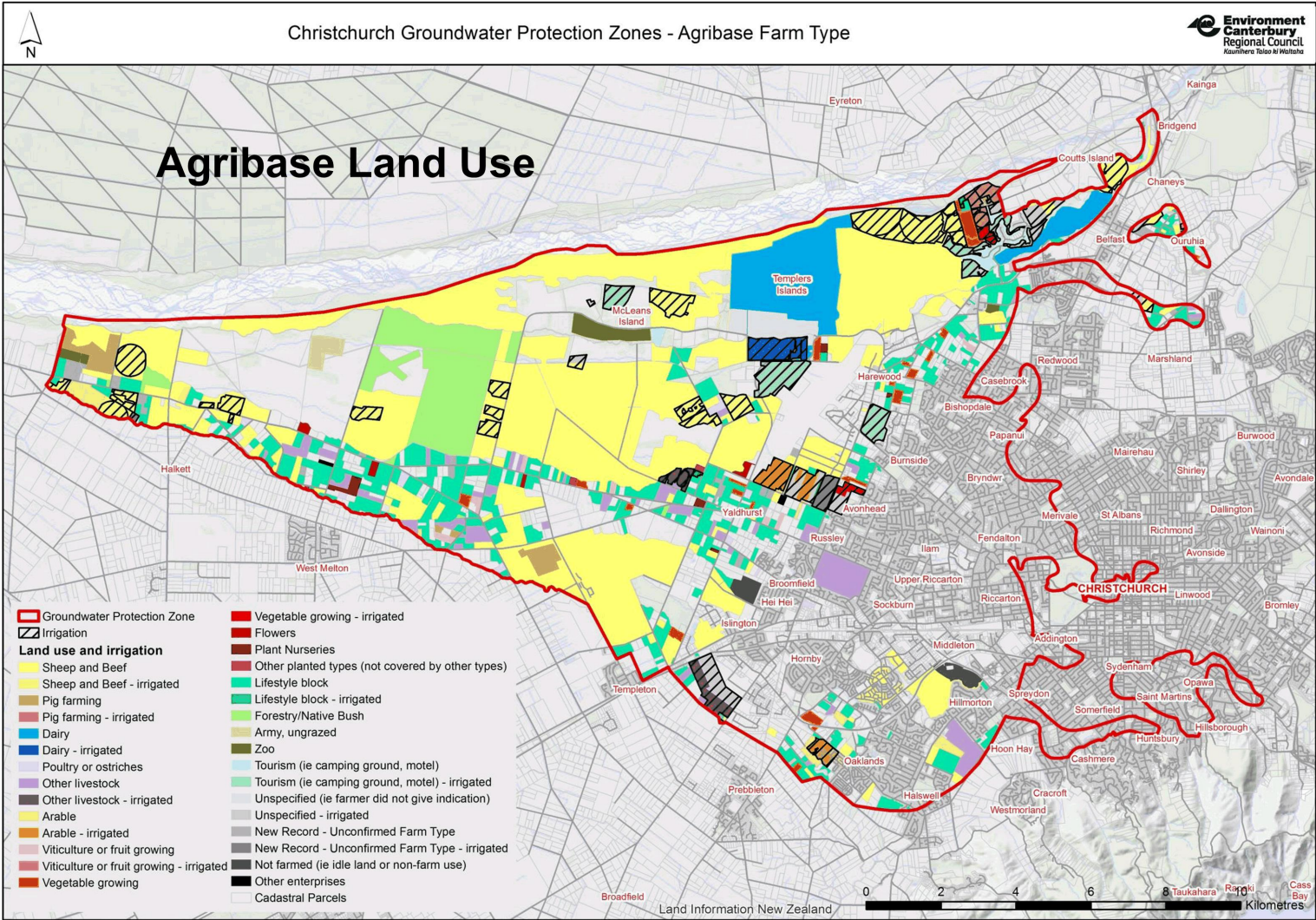
- Obtain first-cut estimate of N loss from farming within Groundwater Protection Zone
- Help answer:
 - Is N contribution significant?
 - Is further work needed to refine estimates?
 - Are existing controls adequate?
- Exclude contributions (and losses) from outside Zone

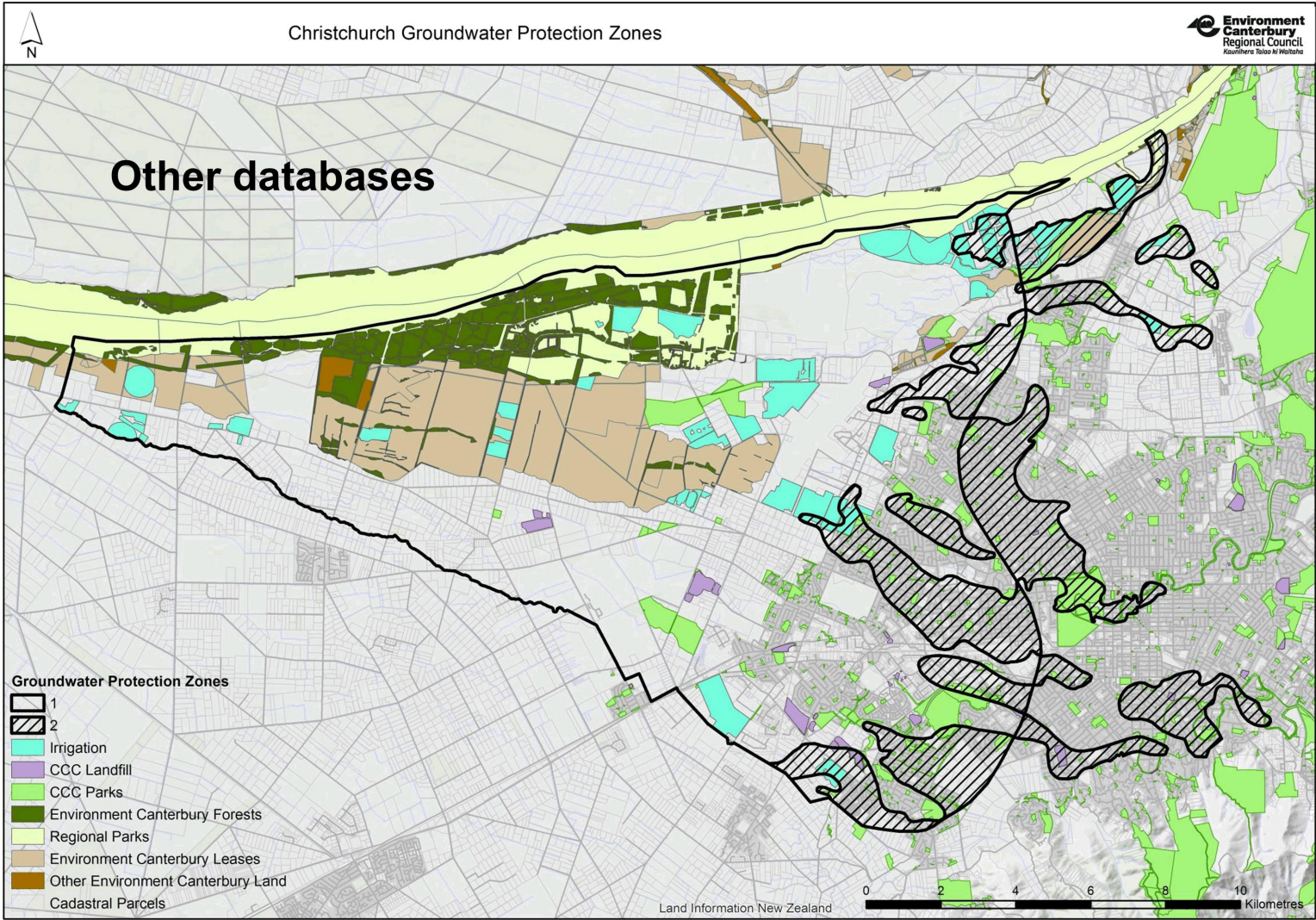
2

PROCESS

- Gather available data
 - Agribase
 - OVERSEER[®] files held by ECan for leasehold properties
 - OVERSEER[®] files prepared for similar properties outside zone in conjunction with farmer reference groups
- Field validated – thanks to:
 - Chris Kelliher
 - Kevin Brown
 - Rob Wynn-Williams

3





Total Areas

Landuse	Number	Area (ha)	N Loss/ha (kg)	Total (t)
Arable	10	121	20	2.4
Arable - irrigated	6	108	40	4.3
Army, ungrazed	1	61	3	0.2
Dairy support	3	790	8	6.3
Dairy - irrigated	1	88	100	8.8
Flowers	4	30	20	0.6
Forestry/Native Bush	6	2,309	3	6.9
Lifestyle block	540	1,785	6	10.7
Lifestyle block - irrigated	14	10	15	0.2
New Record - Unconfirmed Farm Type	16	107	5	0.5
New Record - Unconfirmed Farm Type - irrigated	5	41	20	0.8
Not farmed (ie idle land or non-farm use)	2	82	3	0.2
Other enterprises	2	9	6	0.1
Other livestock	45	485	6	2.9
Other livestock - irrigated	7	78	15	1.2
Other planted types (not covered by other types)	4	9	3	0.0
Pig farming	5	155	35	5.4
Pig farming - irrigated	9	59	45	2.7
Plant Nurseries	5	35	3	0.1
Poultry or ostriches	12	58	5	0.3
Sheep and Beef	108	6,666	6	40.0
Sheep and Beef - irrigated	64	673	15	10.1
Subdivision	1	5	3	0.0
Tourism (ie camping ground, motel)	4	87	3	0.3
Tourism (ie camping ground, motel) - irrigated	10	261	6	1.6
Unspecified - irrigated	12	200	10	2.0
Unspecified (ie farmer did not give indication)	2	147	3	0.4
Vegetable growing	19	155	20	3.1
Vegetable growing - irrigated	6	30	40	1.2
Viticulture or fruit growing	12	51	3	0.2
Viticulture or fruit growing - irrigated	1	3	5	0.0
Zoo	3	109	3	0.3
		14,805		113.8
Average loss of N for land uses listed above (kg/ha)				8

SENSE CHECK...

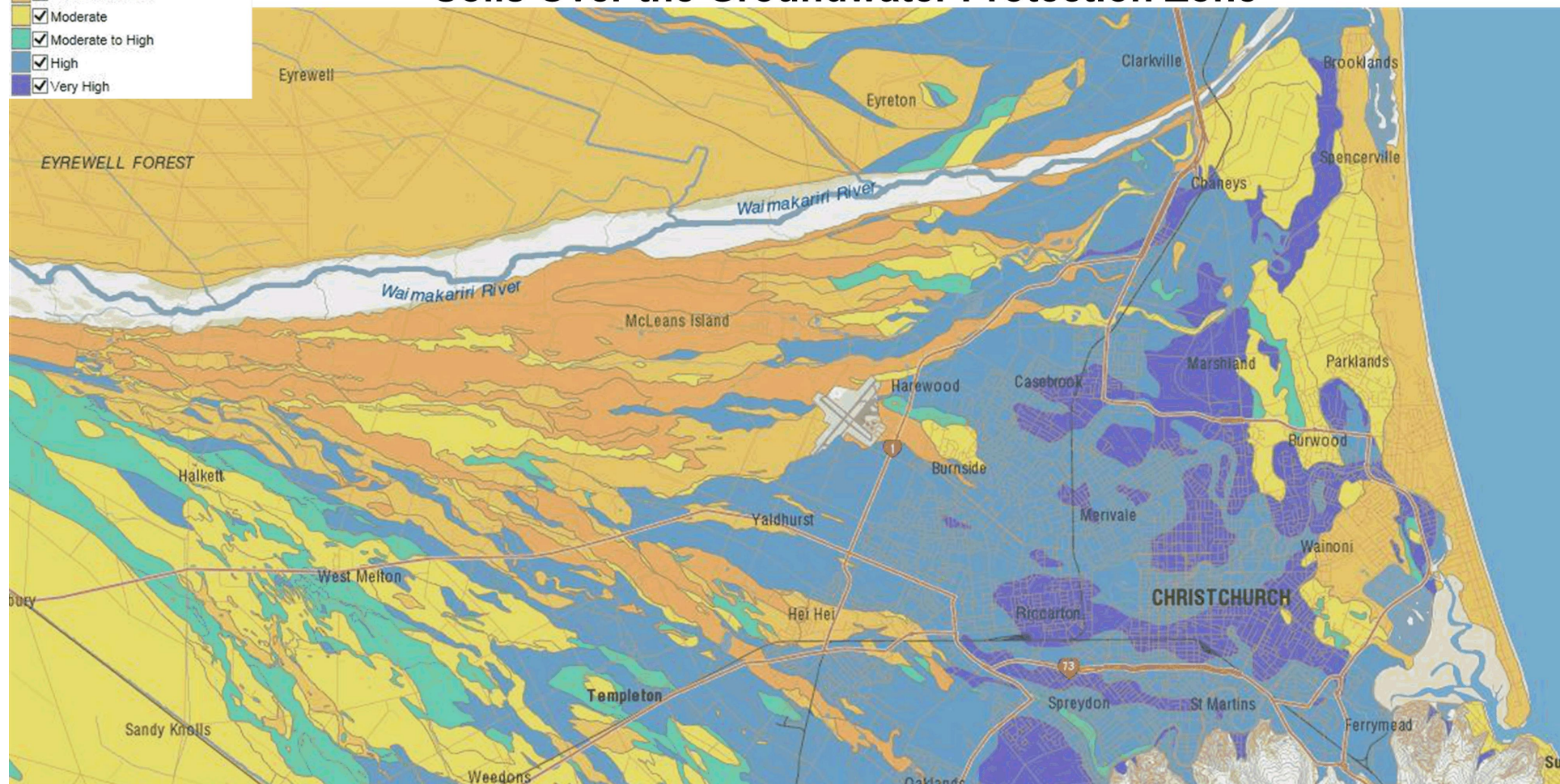
- Recharge over zone ~ 200mm/annum ~ 1 cumec
- 113.8 t/annum into 1 cumec = [N] of ~ 4.0 g/m³
- Average [N] in shallow groundwater ~ **0.4 g/m³**
- Recharge from Waimakariri ~ 10 cumecs
- Dilution 1:10 = ~ **0.4 g/m³**

7



- ☒ Soil Moisture - Profile Available Water
- ☒ Very Low
 - ☒ Low
 - ☒ Moderate to Low
 - ☒ Moderate
 - ☒ Moderate to High
 - ☒ High
 - ☒ Very High

Soils Over the Groundwater Protection Zone



8. Glyphosate use by Christchurch City Council

Reference: 17/602052

Contact: Diane Shelander diane.shelander@ccc.govt.nz

941 8304

1. Purpose of Report

- 1.1 This report is to provide an overview of the use of Glyphosate and the Council's pest plan management practices.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

- 2.1 [Receive the information in the report.](#)

3. Key Points

3.1 Background

- 3.1.1 Staff in various teams of Council, and contractors under their direction, have been active in controlling pest plants in Christchurch's parks, waterways and road network for many years. The Christchurch City Council owns and manages around 97 Regional Parks (6750ha), 51 Garden and Heritage Parks (70ha) and 900 Neighbourhood and Sports Parks (including cemeteries) (2096ha).
- 3.1.2 Additionally, pest plant control occurs in and along waterways, road networks, around infrastructure and on other land owned by Council. Most of the pest plant control is undertaken to protect high biodiversity values, which occur predominately in Regional Parks and along waterways, but includes amenity pests and those with public health risk.
- 3.1.3 The Council has obligations under the Regional Pest Management Strategy to control a number of pest species, such as nassella, gorse and broom. The Council's Operational Pest Plant Plan also identifies a number of pest plant species for which control programmes are undertaken, including phragmites, spartina, purple loosestrife, smilax, boneset, yellow flag and sycamore amongst 15 or so plant species.

3.2 Glyphosate use reduction

- 3.2.1 In March 2016 the Council resolved to:
 - Consult with the public via the Draft Annual Plan Consultation Process on its proposal and the other options, including the proposed change to the maintenance and capital budgets required.
 - Request staff continue investigations into alternative methodologies for open space management and report back to Council within two years.
- 3.2.2 In April and May 2016 the Council consulted on the use of Glyphosate through its draft 2016-2017 Annual Plan consultation.
- 3.2.3 The Council's 2016 Annual Plan was adopted in June 2016, and included 'some limited provision for alternative weed control treatment (\$2 million)'.

3.3 Council plant pest control

- 3.3.1 The Parks Unit undertook an initial change to the Neighbourhood and Regional Parks budgets to add \$200,000 for the Neighbourhood Parks Glyphosate Reduction and Regional Parks Glyphosate Reduction packages effective August 2016.
- 3.3.2 This was followed by a subsequent addition of \$1.7million in December 2016 for a suite of projects:
- 3.3.2.1 Cemeteries Glyphosate Reduction.
 - 3.3.2.2 Garden and Heritage Parks Glyphosate Reduction
 - 3.3.2.3 Sport Parks Glyphosate Reduction
 - 3.3.2.4 Neighbourhood Parks Glyphosate Reduction
 - 3.3.2.5 Regional Parks Glyphosate Reduction
- 3.3.3 In addition to the budget allocation and creation of new projects for the reduction of Glyphosate, the Council Parks Unit also developed a Glyphosate request form (see Attachment A) for use in public spaces maintained by that Unit. Use of Glyphosate has been limited to sites closed to the public and for the control of pest plants where no other method is practicable. Approval for Glyphosate use must be obtained from the relevant Team Leader or Contract Manager.
- 3.3.4 The land drainage operations and maintenance programme uses Glyphosate where and when other methods are not appropriate. For example, mechanical weed removal can adversely affect bank stability allowing sediment to run into the adjacent water body. Where 'weed whacking' can be effective, and not affect bank stability, this method is used. The alternative fatty acid-based herbicide is not registered for use in or near water bodies and is therefore not used in applicable locations.
- 3.3.5 Additional information about Glyphosate use and Council weed control is provided in Attachment B.

Attachments

No.	Title	Page
A ↓	Parks Unit Glyphosate Approval Form template	23
B ↓	Council pest plant control FAQs	25

Signatories

Author	Diane Shelander - Senior Policy Analyst

Glyphosate use on Christchurch City Council land

A decision was made by Council to change how herbicides containing the chemical glyphosate are used in spaces controlled by the Christchurch City Council. The policy came into effect at the beginning of the 2016 financial year.

The decision: To use a combination of alternative physical and Fatty Acid herbicide techniques to significantly reduce glyphosate use in public spaces.

The use of glyphosate in space controlled by the CCC is now limited to sites closed to the public, e.g. to facilitate capital works programmes, and for the control of pest plants where no other method is practicable, e.g. when killing an established pest plant either by digging it out or by using a different herbicide would be ineffective or inconsistent with the conservation of biodiversity values.

See HPE: 16/81387 for further detail on the decision made.

This document has been created to ensure staff and contractors are aware of the Council policy and follow a consistent approach for glyphosate use and recording.

These guidelines are based on taking all reasonable steps and measures:

- to minimise environmental impacts
- to avoid exposure of the public to glyphosate
- to minimise exposure of the applicator and other staff to glyphosate

Requirements

Approval is needed to use glyphosate from your Team Leader/Contract manager (using the attached request form).

The control efforts must be reported to your Team Leader/Contract Manager within 2 months following control.

EPA conditions for glyphosate must be met.

The manufacturer's guidelines must be followed.

Applicators are to have valid GrowSafe Introductory Certificate – and follow GrowSafe guidelines.

Measures to mitigate health and safety concerns

Investigation of alternative methods completed before request.

Avoid park visitor contact

- Specified signage to exclude public
- Fencing with barriers (until herbicide has dried) to exclude public
- Fencing with tape (until herbicide has dried) to exclude public

Minimising exposure to herbicide applicator

- PPE (e.g. Overalls, masks, protection eyewear)

Glyphosate Request Form

This request form is to be used to apply for approval from Team Leaders or Contract Managers for the use of herbicide containing glyphosate on space controlled by Christchurch City Council. If approval is obtained, reporting of the control must be supplied to the “approver” within 2 months of control.

This form as well as the relevant ‘reporting of control’ document is to be saved into HPE: **FOLDER17/298 - Glyphosate Approval Forms**

Name:

Date:

Site:

Size:

Control Dates/Times:

Herbicide formulae, herbicide volume and the proposed method of application:

Rationale for use:

Measures that will be met to mitigate health and safety concerns:

Were alternative methods investigated (explain)?

Will signage be used (describe)?

Will fencing be used (describe)?

What PPE gear will be worn (explain)?

Approved/Declined by

Position:

Date

Christchurch City Council Pest Plant Control

What guidelines does the Council follow for the application of Glyphosate herbicide on Council owned land?

All staff that apply chemicals are required to be fully qualified in the application of these chemicals. This is a qualification which is gained over several days of training with a qualified assessor. The first stage of the training is to complete the Growsafe qualification.

All agrichemical application is done according to NZS 8409:2004 - New Zealand Standard - Management of Agrichemicals.

What other weed control methods does the Council use?

- ☐ alternative herbicides
- ☐ hand pulling
- ☐ cutting
- ☐ swabbing with herbicides
- ☐ weed eating
- ☐ hose and gun spraying, knapsack spraying
- ☐ hand spraying (<5L sprayer)
- ☐ drill/fill treatment
- ☐ cut/stump treatment
- ☐ aerial spray application by helicopter (rarely; for areas that are otherwise inaccessible; well away from inhabited areas)
- ☐ gas flame (very rarely used as it is inefficient)

Does the Council allow the use of Glyphosate in areas that children play?

No. The Council does not permit spraying of any herbicide within children's playgrounds

Does the Council use steam weeding and if so what percentage of weed control is steam weeding?

No. It has been previously trialled and impractical.

What quantity of glyphosate herbicide does the Council purchase each year?

- ☐ Regional Parks used 154.9 litres of glyphosate in 2014 - 2015. Average annual use would be approx. 100 to 120L.
- ☐ Botanic Gardens 20 to 40L

What are other herbicides used?

Alternatives may include the following. Note that their use is restricted.

- ☐ Fatty Acids - Fatty acid herbicides are not registered with EPA for use around waterways. They are harmful to aquatic life and cannot be used where they may enter waterways directly e.g. spraying bank side vegetation or indirectly; e.g. storm water runoff from roads or river banks.
- ☐ Garlon360 - dicot specific, for woody species e.g. grey willow, works well in mixed vegetation less damaging to non-target species. EPA approved for use around waterways, requires a permit from EPA is required, CCC does not a permit.
- ☐ Xtree Basal Spray - carrier oil toxic to aquatic organisms, works well, suitable for dry areas only.

What are the requirements for herbicide application?

Herbicides, surfactants and application methods must comply with the conditions listed in resource consents issued to the Council (e.g. CRC074020) and comply with the Land and Water Regional Plan Rule 5.225.

Warning signs are installed when herbicide spraying is undertaken.

Contractors are required to keep herbicide diaries and comply with New Zealand Standard Management of Agrichemicals NZS 8409:2004.

What is the no spray register?

Property owners can apply to have their property added to the yearly No Spray Register, which is managed by the Council's contractor.

The Council needs to control weed growth including moss on the footpath and concrete channel to prolong their life and ensure the free flow of water in the channel. By registering on the No Spray Register property owners are undertaking to control the weeds in the roadside channel and on the footpath adjacent to your property so the Council's Contractor will not need to spray the property's frontage.

9. Urban Contaminants

Reference: 17/640300

Contact: Lesley Woudberg Lesley.woudberg@ecan.govt.nz 027 703 4273

1. Purpose of Report

- 1.1 This report provides the Committee with a copy of a runsheet for a Technical Workshop on Searching for Solutions - Copper and Zinc Contamination in Urban Streams.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

1. [Notes the runsheet for a Technical Workshop on Searching for Solutions - Copper and Zinc Contamination in Urban Streams.](#)

Attachments

No.	Title	Page
A ↓	Runsheet Technical Workshop	28

CHRISTCHURCH WEST MELTON ZONE COMMITTEE

TECHNICAL WORKSHOP

**SEARCHING for SOLUTIONS
COPPER AND ZINC CONTAMINATION IN URBAN
STREAMS**

29 Thursday

10am – 3pm

Environment Canterbury
200 Tuam St

PURPOSE:

1. Identify effective and cost efficient solutions to copper and zinc contamination in urban streams.
2. Identify what is stopping us implementing some solutions.
3. Identify the next steps and who takes them.

BACKGROUND

Zinc and copper are key contaminants in urban streams. High levels of these metals have harmful effects on aquatic life. Currently many of the urban streams in Christchurch do not meet zinc and copper concentration standards for receiving environments as set out in the *Land and Water Regional Plan*.

Stormwater is the major conveyer of zinc and copper to Christchurch streams.

Common sources of zinc include vehicle tyre wear, runoff from roofs, metal processing and waste water plants. Common sources of copper include architectural surfaces, vehicle brake linings and fungicide use in stormwater.

How can we meet the zinc and copper concentration standards?

What are the options?

How effective are some of these options likely to be?

What strategy might we use to address zinc and copper contamination?

TIME	TOPIC	LEAD	BACKGROUND PAPERS
9:30	Tea/Coffee		
10:00 10:10	Introductions Focus – Zinc and Copper Purpose of the Workshop	Suzanne Furkert Christchurch West Melton Zone Cmtt	<i>Copper&Zinc Aquatic Toxicity Q&As NIWA</i> <i>CCC Annual surface water monitoring</i>
10:10 10:20	Context – Case Study Addington Catchment – old, urban/industrial, highly developed	Jenny Watters ECan	
10:20 10:30	A Stormwater Engineer's Dilemma	Paul Dickson CCC	Presentation
10:30 11:15	MEDUSA Model * Modelling discharges from different urban surfaces * Modelling management scenarios	University of Canterbury	Presentation
11:15 12:15	So What? <i>What are the options?</i> (individual, local, regional, national, international scales) <i>Likely Impact?</i> <i>Costs and benefits?</i> <i>Who?</i>	All	Workshop
12:15 12:45	Lunch		
12:45 12:50	Recap – where are we up to?	All	Workshop
12:50 1:20	Top 10 actions	All	Workshop
1:20 2:00	Next Step for each of the top 10	All	Workshop
2:00 2:15	So what are we going to do?	All	Workshop
2:15 2:30	Closing comments	Suzanne Furkert Christchurch West Melton Zone Cmtt	
2:30 5:00	Fielded visit – Bells Creek stormwater treatment plant, Linwood Fields	TBC	

10. Progress Reports - Verbal

Reference: 17/640299

Contact: Lesley Woudberg Lesley.woudberg@ecan.govt.nz

027 706 4273

1. Purpose of Report

1.1 This report will provide the Committee with verbal progress reports on:

- Avon/Ōtākaro recreational opportunities (Kerr's Reach workshop)
- Heathcote River – Beckenham Residents' Association (tree planting)
- ECan Urban Campaign
- Annual Plan decisions.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

1. Notes the verbal progress reports.

Attachments

There are no attachments to this report.

11. Update Working Groups - 22 June 2017

Reference: 17/640291

Contact: Lesley Woudberg Lesley.woudberg@ecan.govt.nz 027 706 4273

1. Purpose of Report

- 1.1 This report updates the Committee on the activities of each Working Group over the last month and the next steps each group are working on.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

1. [Receives the Update Working Groups report.](#)

3. Report

Urban Contaminant Working Group – Andrew Congalton

Priority catchments: Addington, Riccarton and Haytons

What are we trying to achieve in 5 years (2020)

- Addington Brook improve catchment health – contact recreation by 2020 and swimmable by 2030 (linking to ZIP's)
 - Meets agreed standards as set out by the 5 year 'living' Integrated Catchment Management Plan to be developed by June '17
- Riccarton Stream improve catchment health (linking to ZIP's)
 - Meets agreed standards as set out by the 5 year 'living' Integrated Catchment Management Plan to be developed by 2018
- Haytons Brook improve catchment health (linking to ZIP's)
 - Meets agreed standards as set out by the 5 year 'living' Integrated Catchment Management Plan to be developed by 2018

What have we done since we last met?

- Continuing work in the Hayton's catchment.
- Continuing to work with others to build agreement on planned action to pull together a catchment management plan for Addington.
- Respond to letter concerning hazardous substances/chemicals 25 May ZC agenda – CCC report agenda 22 June
- Planning urban contaminants workshop with MBIE, MFE, University of Canterbury, and council staff facilitated by the zone committee 29 June – Runsheet attached.

Next steps

- Prepare electronic “storyboard” of Addington catchment and catchment plan by 30 June 2017.
- Continue to work with land owners/occupiers in the Haytons catchment.
- Expert workshop on zinc and copper, hosted by the ZC with central government agencies (MBIE and MFE) and the University of Canterbury (29 June).
- Develop a multi-pronged approach to tackle zinc and copper contamination (inc letter to central govt, Mayoral forum/CE forum, Stormwater TLA group, workshop, Local Govt. conference, raising awareness etc)

Rural Catchment Working Group – Arapata Reuben

Priority catchment – Cashmere

Cashmere Catchment Working Group – Arapata Reuben

What are we trying to achieve in 5 years (2020)

- Reduce sediment getting into Cashmere Stream (and therefore the Heathcote/Ōpāwaho and Avon-Heathcote Estuary/Ihutai)
- Improve ecosystem health

What have we done since we last met?

- Port Hills Fire Recovery Plan
http://christchurch.infocouncil.biz/Open/2017/06/CNCL_20170608_AGN_1290_AT_SUP.PDF
- Erosion and Sediment Control Tool Box
<http://escscanterbury.co.nz/>

Next steps

- Fire Recovery – funding decisions CCC Annual Plan 20 June
- Cashmere Stream Care Group planting day Saturday 24 June
- Application to Freshwater Improvement Fund for assistance with fire recovery work – feedback expected by July

Groundwater /Drylands Working Group – Chris Kelliher

What are we trying to achieve in 2 years (2018)?

- Know how much water is available for use.

- ✓ Understand the landownership pattern within the protection zone.
- Understand the threats to Christchurch's groundwater system.
- Identify how we can protect this resource for future generations.

What have we done since we last met?

- Estimation of nitrogen contribution from farming in the Groundwater Protection Zone
- Farming to Good Management Practice, letters, drop in days, consents
<https://www.ecan.govt.nz/your-region/information-for-farmers/>

Next steps?

- Understand the threats to Christchurch's groundwater system.

Communication and Engagement – Arapata Reuben

What are we trying to achieve in the next 5 years (2020)?

- Raise awareness
 - State of the waterways, their values and issues
 - Actions individuals and groups can take
 - Individual and groups doing good stuff
- Inspire action

What have we done since we last met?

- Port Hills fire recovery – planting days 25 May, 27 May, 10 June, 14 June, 17 June, 22 June
- Report to Environment Canterbury council meeting (15 June)
- Urban campaign <https://www.youtube.com/watch?v=NCdINYfomsQ>
- West Melton Forest – flood protection <https://www.youtube.com/watch?v=Q4nbNyAdi8k>

Next steps

- Implement CWM “Wonderful Waterways” communications strategy
- Port Hill fire recovery
 - Planting days 24 June, 29 June, 1 July, 15 July, 29 July, 5 August

Biodiversity – Immediate Steps Funding – Lance Kenyon

What are we trying to achieve in the next 5 years (2020)?:

- Increase indigenous species diversity, abundance and improved ecological health by providing funding to individuals, landowners and community groups.
- Raise awareness of biodiversity and ecological values of the Christchurch West Melton zone
- Prioritise Immediate Steps funding to Port Hill fire affected catchments

What have we done since we last met?

Next steps

Regional Committee – Lance Kenyon

The Regional Committee meeting 13 June

Discussion was focused around the top 10 difficult regional CWMS targets and providing input for the report. Expected completion by August for presentation to the Mayoral forum 25 Aug.

Zones and working group updates - of particular note were: updates to regional communication plan;

- update on www.canterburywater.org.nz with short video and information;
- Map of Enviro schools within our Zone; and,
- Stage 1 Report from Havelock North drinking water incident. Stage 2 expected to be completed by Dec 17.

Selwyn-Waihora ZC is hosting 7 seminars at Lincoln University (starting next week) around water issues. See attached snapshot or visit facebook page.

Presentation - River and Lake swimming in the Canterbury region:

7 of 10 zone committees had replied regarding the swimming locations request.

To answer some of the questions from our last ZC meeting: The report was only focused (and funded) on freshwater sites not the estuaries or coastal swimming areas. Coastal areas were generally covered under the RMA. That said, if ZC can identify a site that it considered should be included, with justification, it would be added to master table information.

Why are whole river systems being looked at? While acknowledging the need to improve whole systems, one of the intents was to provide information and opportunity to improve swimming areas or identify those areas that are no longer used/why not and if anything could be done to affect change. By identifying areas it added to the master table of swimming locations previously not known, and assisted agencies to focus funding, improving signage and providing suitable facilities (if necessary). Copy of report available.

Liaison with community groups – Suzanne Furkert (supported by Shelley Washington)

What are we trying to achieve in 5 years (2020)?

- Ensure we complement and build on each other's work to improve the health of Christchurch's water resources.

What have we done since we last met?

Next Steps

Planning community group workshop to discuss CCC's proposed Water Partnership programme 3
August 9:00 – 1pm Fendalton Library.

Attachments

There are no attachments to this report.

12. Facilitator's Update - 22 June 2017

Reference: 17/640292

Contact: Lesley Woudberg Lesley.woudberg@ecan.govt.nz

027 706 4273

1. Purpose of Report

1.1 This report is to inform the Zone Committee of:

- Upcoming events
- Media
- Papers for information.

2. Staff Recommendations

That the Christchurch West Melton Water Management Zone Committee:

1. Receives the Facilitator's report and notes the upcoming events.
2. Receives the report from the Whaka Inaka project team and **notes with appreciation** the level of excitement and engagement that this project generated within the community.

3. Report

a) Upcoming Events

Event	Audience	Comment
Cashmere Stream – Planting 24 June	Landowners, friends and Community	2 nd project site above Sutherlands Road
Port Hill Fire Recovery – Planting 24, 29 June and 1, 15, 29 July and 5 August	Community	Present CWM ZC 2016 Annual Report to ECan council
Zinc and Copper Workshop 29 June	Technical experts from Central and Local Government and University of Canterbury	Focusing on solutions
Next Zone Committee meeting 27 July		
NGO Networking meeting + discussion on proposed Water Partnership initiative 3 August 9-1pm Fendalton Library	NGO community	

b) Media

Attachment

Christchurch Mail 25 May "Volunteer effort aids planting project"

Press 10 June "Ecan to get tougher on farmers"

ECan Press release 15 June "Nutrient Management and Waitaki Plan Change"

Poroporo for the Port Hills – Coffee Culture recycle coffee cups for native seedlings

c) For Information

Whaka Inaka Email and Report
Havelock North Drinking Water Enquiry – Regional Zone Cmtt paper 13 June
Map Canterbury Region – EnviroSchools
Map Christchurch West Melton – EnviroSchools
Seminar Series - Selwyn

Item 12

Attachments

No.	Title	Page
A ↓	Media Release - Nutrient Management	41
B ↓	Whaka Inaka Email and Report	47
C ↓	Havelock North Drinking Water Enquiry - Regional Zone Committee Paper 13 June 2017	53
D ↓	Map Canterbury Region EnviroSchools	56
E ↓	Map Christchurch West Melton EnviroSchools	57
F ↓	Seminar Series - Selwyn	58



MEDIA RELEASE

June 15, 2017

Nutrient Management and Waitaki Plan Change recommendations accepted

Environment Canterbury announced today that it had accepted the recommendations of independent hearing commissioners on the Nutrient Management and Waitaki Plan Change, Plan Change 5 to the Land & Water Regional Plan.

The Plan Change seeks to deal with the effects of land uses, particularly farming activities, on water quality at a region-wide level, and to ensure the effective management of water quality in the Waitaki catchment.

When operative, the nutrient management rules will apply in catchments not currently the subject of sub-region plans. With some minor exceptions, the rules in Plan Change 5 do not take legal effect until the Plan Change is made operative.

Councillor Peter Skelton said the Plan Change sets industry agreed "Good Management Practice" as the minimum standard for all farming activities. "If the Plan becomes operative in its current form, resource consent, including audited Farm Environment Plans, will be required if the area of winter grazing or irrigation on a property exceeds permitted limits," Professor Skelton said.

"The nutrient management rules are intended to address the effects of changing land use and promote improved water quality outcomes throughout the region. With this in mind we need to be clear about what constitutes Good Management Practice on farm. Industry groups have now described what this means for their sector."

All farmers should have, as a starting point, a baseline nitrogen baseline leaching rate that reflects Good Management Practice.

"Implementation of good management practices responds to community expectations, and will help achieve better water quality outcomes," Professor Skelton said. "Every farmer is encouraged, and often required by the rules, to do an assessment of the environmental impacts of their farming activities."

"A Farm Environment Plan is a valuable tool for doing this. Environment Canterbury has developed a Farm Portal to provide easy access to nutrient management information. The Plan Change requires farmers to register their farming activities on this website."

The specific rules relating to the Waitaki catchment help deliver the local community's aspirations for water quality. These have been developed through the Upper and Lower Waitaki Zone Committees. They will meet the water-quality requirements in the National Policy Statement for Freshwater Management in this area.

There are new water quality outcomes and a nutrient regime for managing to those outcomes. The Plan Change aims to manage the effects of land use and discharges from activities such as aquaculture on water quality in the Waitaki. Aquaculture and farming activities are both required to meet good practices, implement environment plans and avoid exceeding limits.

The Plan Change also includes a new minimum flow regime for Whitneys Creek (a small stream north of the Waitaki) and rules that restrict the transfer of surface water permits within the Whitneys Creek Zone. These provisions act as a package to protect in-stream values.

Some of the rules for the Upper Waitaki area will have immediate legal effect, while the rest will come into effect when the Plan Change becomes operative.

The "decisions" version of the Plan Change will be notified on 24 June 2017. From that date, the decisions version replaces the publicly notified version of the Plan Change. The period for lodging appeals starts on 24 June 2017 and extends for 20 working days from that date. Appeals on the Council's decision may be lodged in the High Court, but only on a point of law.

For more information, go to <https://www.ecan.govt.nz/get-involved/council-and-committee-meetings/> and search on the 15 June Council agenda.

"Excellent progress has been made with our planning work in the last few years," Peter Skelton concluded. "In partnership with the community, we are well on the way towards completing catchment-focused rules for the whole region."

Background

The Land & Water Regional Plan became operative in September 2015. It sets the framework to implement community aspirations for water through the Canterbury Water Management Strategy, a community led, collaborative approach to improve water outcomes throughout the region. The Land & Water Regional Plan operates at two levels – a region-wide section and 10 sub-region sections. The policies and rules in the sub-region sections can apply instead of, or in addition to, policies and rules in the region-wide section. The sub-region sections implement the region-wide objectives in the plan in the most appropriate way for the catchment. Sub-region sections that are now legally effective cover the Hurunui-Waiau, Selwyn Te Waihora, Wairewa/Lake Forsyth, Hinds Plains and Waitaki - South Coastal Canterbury catchments.

For more information on the Land & Water Regional Plan, go to www.ecan.govt.nz/lwrp

More information

Angus McLeod, Senior Communications Advisor, Environment Canterbury, 0275 497 691



stuff.co.nz

MAY 25, 2017, CHRISTCHURCH MAIL 11

Volunteer effort aids planting project

More than 1,800 native plants were put into the ground at Charlesworth Reserve on Sunday, equating to one every three seconds.

The efforts supported plans to re-establish a coastal bush and native wildlife haven on the edge of the estuary on the 20-hectare site at Ferryhead.

Trees for Canterbury projects co-ordinator Robin Stove hailed the public planting day a "fantastic success", with more than 100 volunteers turning up for the event.

These included huge group of Filipino workers from the Association of Filipino Tradesmen in NZ Inc. and the Brotherhood of Guardians Council NZ.

"Charlesworth Street Reserve is being gradually developed to re-establish estuary-edge ecosystem features such as salt-meadow, salt-marsh and coastal bush that are now either very rare around the estuary or non-existent," Stove said.

Work at the reserve has included planting of coastal bush, building culverts to allow tidal flows to enter the reserve, establishing walking tracks and bridges and installing new signage.

It also includes continued plantings and a predator trapping programme.

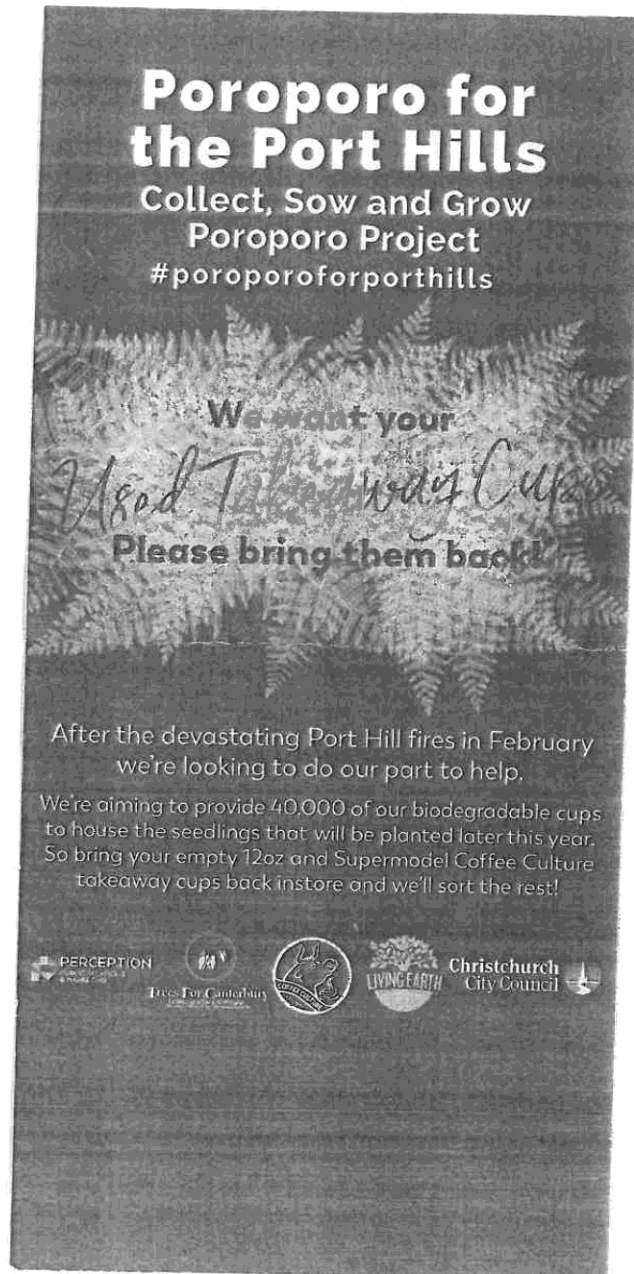
Trees for Canterbury has donated more than 24,000 native plants to this reserve since 2002.

Support for the project so far has come from Trees for Canterbury, Christchurch City Council, and the Avon-Heathcote Estuary Trust.



Anna Coberger, Toby (the dog), Tomas Coberger, Jeff Turner, Ana Turner plant *Plagianthus divaricatus* (marsh ribbonwood) at the Charlesworth Reserve.





Lesley Woudberg

From: Kirsty Brennan <kirsty@eosecology.co.nz>
Sent: Wednesday, 31 May 2017 4:13 p.m.
To: Helen Greenep
Cc: Shelley McMurtrie; Lesley Woudberg
Subject: Whaka Inaka reporting to Ecan Zone Committee
Attachments: Whaka_Inaka_2016_resultstable.xlsx; ATT00001.htm;
WhakaInaka2016results_GISshapefile.zip; ATT00002.htm; 2016
_Whaka_Inaka_Engagement_report_card_LowRes.pdf; ATT00003.htm; 2016
_whaka_inaka_report_card_LowRes.pdf; ATT00004.htm; 2016
_WhakaInaka_PestMonitoring_ReportCard_LowRes.pdf; ATT00005.htm

Hi Helen,

We sincerely thank the Christchurch West Melton Zone Committee for their support and funding for Whaka Inaka. We have well exceeded the expectations for community engagement as specified in the funding contract, and the GIS files together with the report describe the areas suitable for long-term restoration.

In order to meet our obligations for the funding received by the Christchurch West Melton Zone Committee for Whaka Inaka I attach three reports, a spreadsheet and GIS files:

> Whaka Inaka Report

Card [http://www.eosecology.co.nz/files/Whaka_Inaka_2016_Results_Summary_\(pub_May_2017\).pdf](http://www.eosecology.co.nz/files/Whaka_Inaka_2016_Results_Summary_(pub_May_2017).pdf)

> Pests and Poop Report

Card http://www.eosecology.co.nz/files/2016_WhakaInaka_PestMonitoring_ReportCard.pdf

> Community Engagement

Report http://www.eosecology.co.nz/files/Whaka_Inaka_2016_Engagement_Summary.pdf

> Whaka Inaka 2016 results table

> Whaka Inaka 2016 results GIS files

I request inclusion of reference to these reports and their links in the next Zone Committee minutes.

Thanks,
Kirsty



All numbers contained in this report are correct as at 31 March 2017.

Media coverage

40 media release mentions

- 4 radio interviews
- 26 news articles
- 3 broadcast TV news items
- 7 magazine/newsletter/planning document articles
- Up to **5,987** people reached by post on active Project Facebook page









Public event participation

- Estuary Fest
- **500** participants World Fish Migration Day
- Matariki in the Zone
- Red Zone Tour
- Whaka Inaka Celebration Evening

5 events involved in



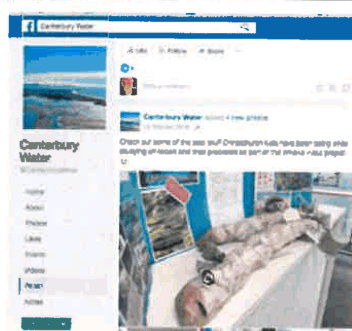






Presentations about Project

- National Marine and Freshwater Education Wānanga Conference
- National Collective of Maori Design Professionals, Nga Aho
- The Avon-Heathcote Estuary/Ihutai Trust AGM
- Christchurch West Melton Zone Committee
- Local Community Board
- **3** separate presentations linked to Whaka Inaka – New Zealand Freshwater Sciences Society Conference
- Whaka Inaka Celebration Evening
- **3** student presentations to CCC & Zone Committee



Additional school participation



650 students from **16** schools participated in the specially developed fieldwork-based programme – 'Whaka Inaka Pest Monitoring Module'

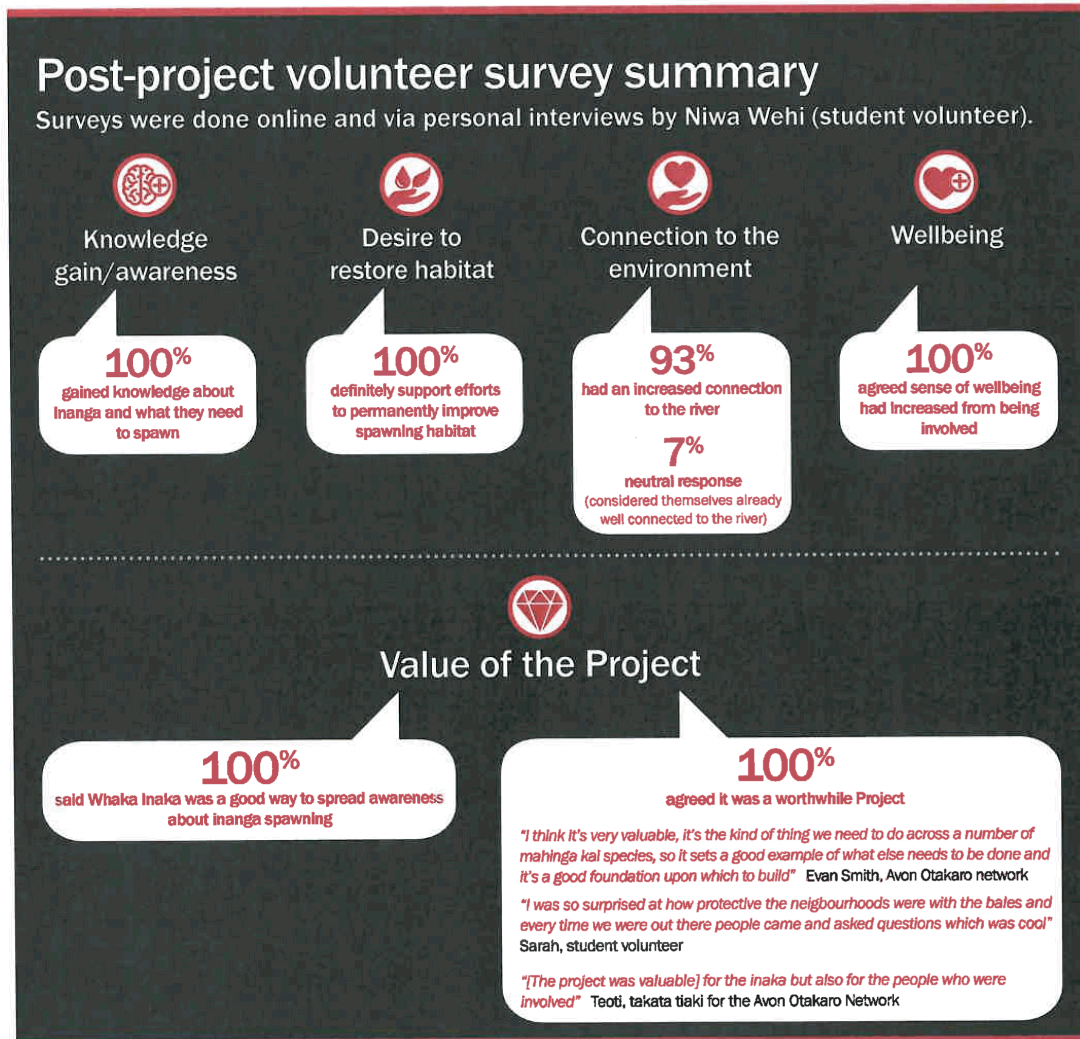
347 data entries from monitoring visits

115 individual field visits by students

"Thank you for everything. I have LOVED working with you and your amazing team. The kids have loved every minute of it and they are so curious about things that my Enviro Group has soared and so many questions and musings from the kids. Thank you again!" – Hillview Christian School



"The kids are very excited about this project and are loving the process of being real-life scientists...Thank you again for including us in this project; it's been great to see the children of Room 6 engaged in such a relevant project to their community, and they can't wait for the next trip out." – Barnford School



Project Collaborators



Project Lead



Te Rūnanga o Ngāi Tahu



Department of Conservation
Te Papa Ahureiwhai
COMMUNITY FUND



Report Card created & designed by EOS Ecology.

All photos & diagrams are © of EOS Ecology unless otherwise specified & cannot be used by any other party without written consent.

AGENDA ITEM NO:	SUBJECT MATTER: DRINKING WATER UPDATE
REPORT: Regional Water Management Committee	DATE OF MEETING: 13 June 2017
REPORT BY: Anita Fulton, Dann Olykan – Environment Canterbury	

PURPOSE

To provide the Regional Committee with an update on drinking water.

BACKGROUND

Havelock North Drinking Water Inquiry: Stage 1

Stage 1 of the Inquiry is completed and addressed matters relating directly to the Havelock North water contamination incident. Key findings included:

- ☐ Approximately 5500 residents in Havelock North became ill with campylobacteriosis from contaminated drinking water supplied by two bores on the outskirts of town.
- ☐ The drinking water was sourced from the Te Mata aquifer under the Heretaunga Plains. It was thought this aquifer was a confined aquifer so no treatment was deemed necessary.
- ☐ Brookvale Road bores 1 and 2 were used to access the water from the aquifer and pumped into the reticulation system.
- ☐ Heavy rain inundated paddocks neighbouring Brookvale Road causing contaminated water (likely from sheep faeces) to flow into a pond about 90 metres from Brookvale Road bore. The pond water entered the aquifer and flowed across to Brookvale Road bore 1 and into the reticulation system.
- ☐ The Inquiry found that the Te Mata aquifer was not confined and was vulnerable to contamination. The aquifer had also been penetrated by a significant number of disused or uncapped bores, leaving it vulnerable to entry from contamination.
- ☐ The Inquiry found that the failings, most notably by the Regional Council and District Council, did not directly cause the outbreak, although a different outcome may have resulted.
- ☐ Hawke's Bay Regional Council's knowledge and awareness of aquifer and catchment contamination risks near Brookvale Road fell below required standards. It failed to take specific and effective steps to assess the risk of contamination, including through its resource consent processes; its management of uncapped and disused bores in the vicinity; its State of the Environment and resource consent monitoring work; and its liaison with the District Council. It also imposed a generic condition on the water take permits granted to the District Council that did not meet the necessary standards and then failed adequately to monitor compliance with the conditions of the permits.
- ☐ Hastings District Council did not learn from past outbreaks and E.coli transgressions. It did not implement the high standard of care required of a public drinking water supplier. Mid-level managers did not provide adequate supervision in this area which also resulted in

- delays to preparing a Water Safety Plan. Maintenance of plant equipment and record keeping was inadequate and contingency planning was lacking.
- ☐ The Drinking Water Assessors were too hands-off in applying standards and did not push the District Council to meet its responsibilities.
 - ☐ The poor relationship between the Regional Council and District Council was key to creating a lack of trust, collaboration and ability to work together.
 - ☐ The two authorities have now partnered with the District Health Board to form a Joint Working Group to improve relationships and focus on the recommendations from the Inquiry.
 - ☐ Until the security of the water source and bores can be assured, treatment of water in Havelock North and Hastings continues.

Havelock North Drinking Water Inquiry: Stage 2

Stage 2 of the inquiry is now underway and covers 24 topics that address systemic issues and will provide recommendations about managing water supply across New Zealand. It will examine the existing statutory and regulatory regimes involved in delivering drinking water to look for improvements. Stage 2 is due to be completed by 8 December 2017 and covers the following topics:

- 1 Current safety Havelock North Drinking Water
- 2 Drinking water partnerships and collaboration
- 3 Drinking water safety and compliance levels in New Zealand
- 4 Should the “secure” category in DWSNZ 4.5 and definitions remain
- 5 Should all drinking water be treated
- 6 Treatments of drinking water
- 7 Should there be a dedicated drinking water supply entity or entities
- 8 NES Regulations
- 9 Consenting by Regional Council
- 10 Regional Councils’ approach to first barrier protection for drinking water – other than under NES Regulations
- 11 DW Suppliers
- 12 DWAs
- 13 Roles of agencies in relation to drinking water
- 14 Water Safety Plans
- 15 Monitoring and testing
- 16 Laboratories
- 17 Protozoa risk

- 18 Boreworks and casings
- 19 Health Act
- 20 DWSNZ
- 21 DW Guidelines
- 22 Emergency Response Plan
- 23 Communications
- 24 Other outbreak management issues.

Canterbury Drinking Water Reference Group

The Reference Group reported to the CEs Forum and Mayoral Forum in May 2017 and highlighted the collaborative work taking place across local councils and CDHB. To date the Group has:

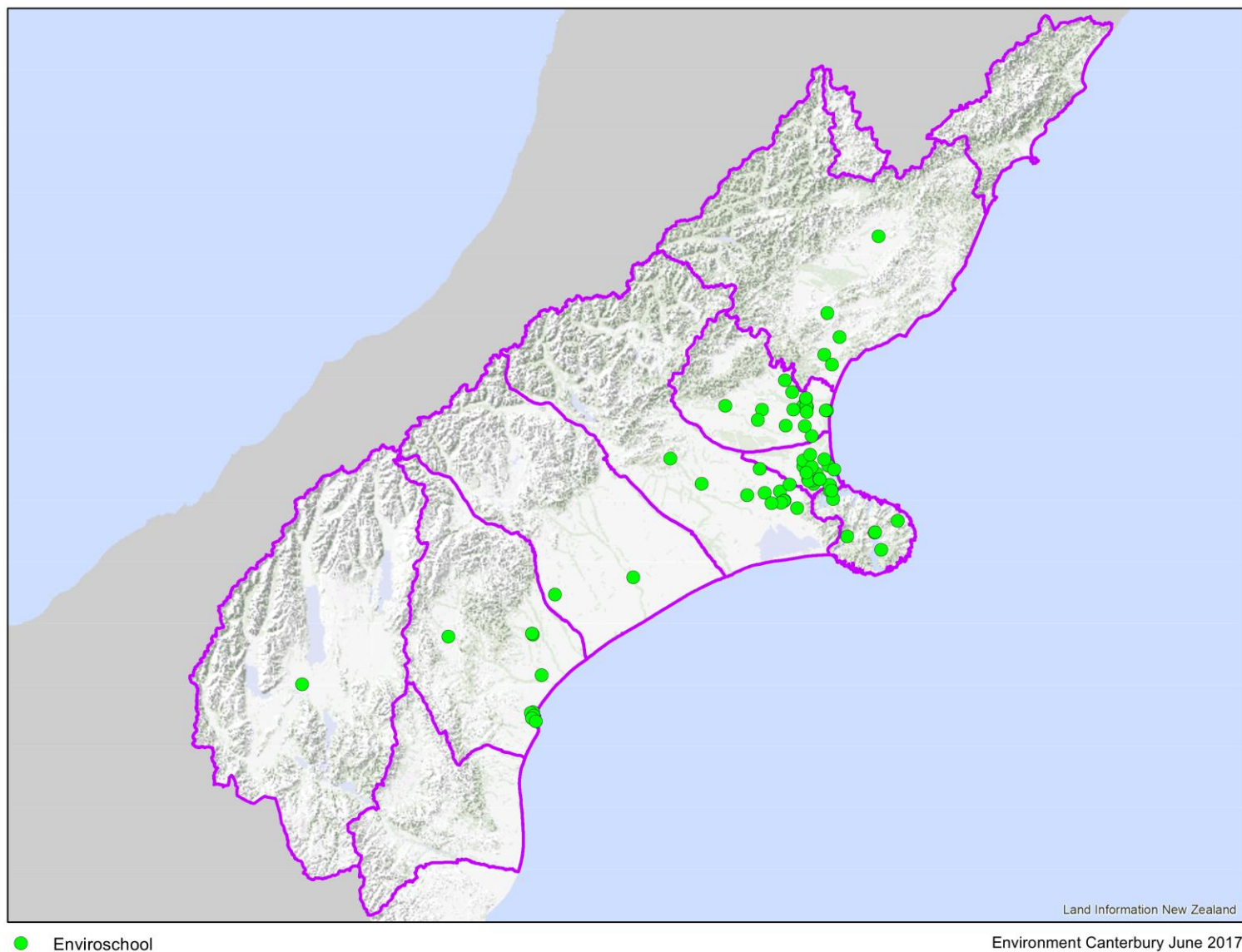
- ☐ reviewed compliance with current regulation;
- ☐ reviewed contingency planning and preparedness for a contamination response, including developing a set of principles;
- ☐ shared contingency plans across the region to develop a best practice approach;
- ☐ developed clear and open lines of communication between agencies.

The Mayoral Forum agreed to retain the Reference Group to enable a collective approach to be taken to the learnings and key findings from Stage 1. The Group will also review and if appropriate draft submissions on Stage 2 of the Inquiry.

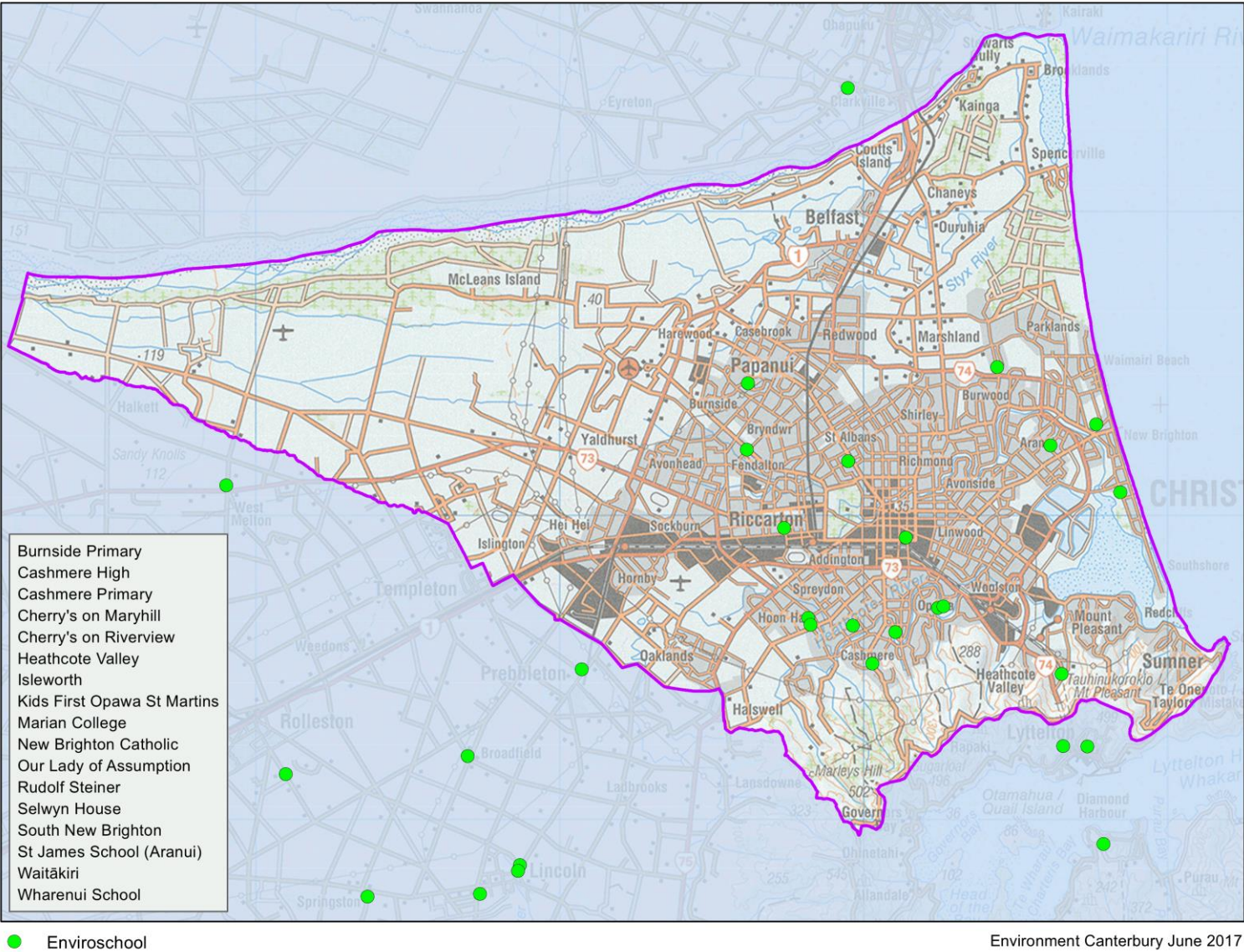
Recommendation

That the Regional Committee receive this drinking water update.

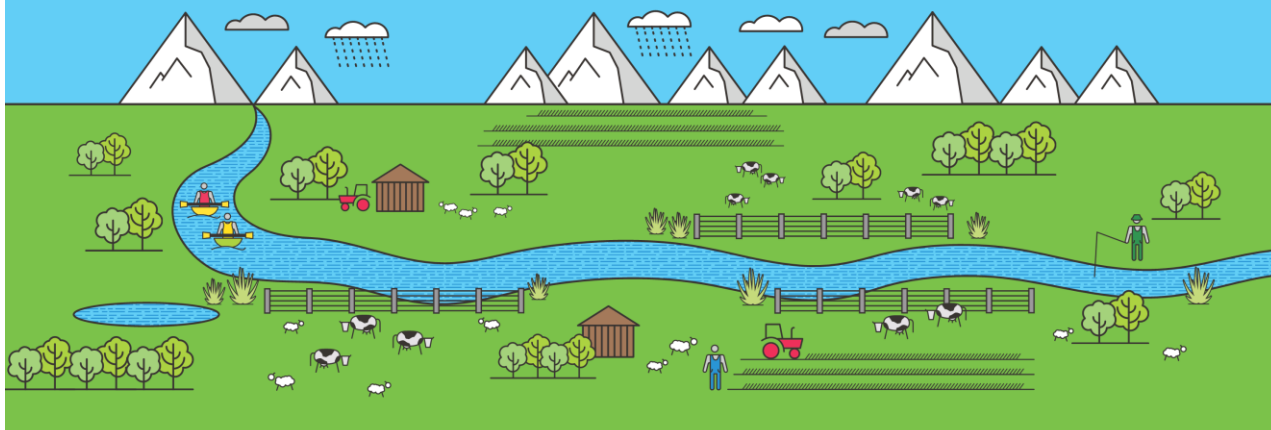
Locations of Enviroschools in Canterbury



Enviroschools in Christchurch West Melton Zone



Want to learn about Selwyn's fresh water?



Come along to one of our seminars at Lincoln University.

Hosted by the Selwyn Waihora Zone Committee.

DATE	TOPIC	PRESENTER
Thursday 22 June 12pm and 7.30pm	Land and water issues – what and how we got here	Ken Taylor (Our Land and Water Science Challenge) and David Perenara-O'Connell (Taumutu Rūnanga)
Thursday 06 July 12pm and 7.30pm	Water quantity	Tim Davie (Environment Canterbury)
Thursday 20 July 12pm and 7.30pm	Water quality	Melissa Robson (Landcare Research)
Thursday 03 August 12pm and 7.30pm	Te Waihora/Lake Ellesmere	Tim Davie (Environment Canterbury) and David Perenara-O'Connell (Taumutu Rūnanga)
Thursday 17 August 12pm and 7.30pm	CPW (Central Plains Water)	Susan Goodfellow (CPW)
Thursday 31 August 12pm and 7.30pm	Farming to limits in Selwyn	Ron Pellow (South Island Dairy Development Centre) and David Birkett (Foundation for Arable Research)
Thursday 14 September 12pm and 7.30pm	A first step... what more needs to be done	Panel discussion

Lunchtime seminars: Held in the D6 lecture room (Landscape Building) from 12pm to 12.50pm.

Evening seminars: Held in the S2 lecture room (Stewart Building) from 7.30pm to 9pm.

For more information find us at

facebook.com/canterburywater

