

Agenda 2023

Water and Land Committee

Date: Wednesday, 18 October 2023
Time: 10.30AM
Venue: Council Chamber
Environment Canterbury
200 Tuam Street, Christchurch



Water and Land Committee

Membership

Committee Chair: Councillor Iaeen Cranwell

Committee Deputy Chair: Councillor Claire McKay

Committee Members:

- Councillor Greg Byrnes
- Councillor Joe Davies
- Councillor Paul Dietsche
- Councillor David East
- Councillor Grant Edge
- Councillor Tutehounuku Korako
- Councillor Ian Mackenzie
- Councillor Craig Pauling
- Councillor Genevieve Robinson
- Councillor Peter Scott
- Councillor Vicky Southworth
- Councillor John Sunckell
- Councillor Deon Swiggs
- Councillor Nick Ward

WATER AND LAND COMMITTEE

TERMS OF REFERENCE

Version 2.0 Adopted by Council 22 March 2023

REPORTING TO:	Council
MEMBERSHIP:	All members of Council
QUORUM:	Eight (8)
MEETING FREQUENCY:	Six meetings per annum
CHAIR:	One Chair One Deputy Chair

A. PURPOSE

1. Oversee the development, implementation, and review of Christchurch Regional Council's (the Council) Environmental strategies (including the Canterbury Water Management Strategy), policies, plans, programmes, and initiatives to address environmental issues in the region (including issues in the area of land management, regional natural resources, fresh water, and coastal marine environment);
2. Oversee the Council's compliance with its statutory functions, including functions under the Resource Management Act 1991, and all the Council's bylaws; and
3. Work in the spirit of genuine partnership and assist the Council in fulfilling its duties as a partner with Ngāi Tahu and in alignment with the principles contained within the Tuia Agreement. In particular, the Committee will support effective partnerships with Papatipu Rūnanga, recognise the relevance of Te Ao Māori and affirm the importance of an enduring and collaborative relationship between the Council and Ngāi Tahu Papatipu Rūnanga.

B. SPECIFIC RESPONSIBILITIES

4. To consider emerging environmental issues relating to environmental and regulatory monitoring and performance matters and to provide advice on the implications for effective resource management within the region.
5. Receive information on the state of the environment monitoring trends and to direct the use of this information to inform policy and plan review.
6. Receive regular monitoring reports and presentations on the matters set out in the Purpose.

- a) Oversee the development and review of the Council's Environmental strategies, policies, plans, programmes and initiatives, and regional resilience programmes and priorities;
 - b) Prepare any variation to proposed regional plans or plan changes, including making recommendations to the Council on the proposed plans, proposed variations and proposed plan changes that should proceed to public notification;
 - c) Oversee consultation under Schedule 1 to the Resource Management Act 1991;
- 7. Consider regional, national, and international developments; emerging issues and impacts; and changes in legislative frameworks for their implications for the Council's
 - a) Environmental strategies, policies, plans, programmes, and initiatives; and
 - b) Regulatory systems, processes, and tools.
- 8. Ensure that the Committee's decision making:
 - a) Considers climate-change related risks; and
 - b) Is consistent with the Council's plans and initiatives to give effect to the Council's declaration of a climate emergency on 16 May 2019.

C. DELEGATIONS

- 9. Subject to other clauses within these Terms of Reference, the Council delegates to the Committee all the powers, functions, and duties necessary to perform the Committee's responsibilities, except the powers that the Council cannot lawfully delegate, including those under clause 32(1) of Schedule 7 of the Local Government Act 2002.
- 10. The Committee may make decisions on matters with a financial impact only where the related costs are budgeted for within a current, adopted Long-Term Plan or Annual Plan, otherwise the matter must be referred to the Council for decision.
- 11. The Committee may not make a decision that is materially inconsistent with the Council's Long-Term Plan or Annual Plan.
- 13. If all Councillors of the Council are appointed to the Committee, then the Committee can change any part of its own Terms of Reference.
- 14. Only Councillors of the Council may vote on a change to the Committee's Terms of Reference.

Document history and version control

Version	Date approved	Approved by	Brief description
1.0	14 December 2022	Council	New Committee Terms of Reference.
2.0	22 March 2023	Council	Updated to remove reference to operational matters Updated delegation wording and added ability to update own Terms of Reference.

Water and Land Committee

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1. Karakia/Mihi Timatanga - Opening

The meeting will be opened with a karakia, followed by a member of the Water and Land Committee with mihi whakatau.

2. Apologies

At the time the agenda closed there were no apologies received.

3. Conflicts of Interest

Members are reminded to be vigilant and to stand aside from decision making when a conflict arises between their role as a representative and any private or other external interest they might have.

4. Public Forum, Deputations, and Petitions

There were no requests for public forum, deputations, and petitions at the time the agenda was prepared.

5. Extraordinary and Urgent Business

The Chairperson will give notice of items requiring urgent attention not on the agenda as follows.

Matters Requiring Urgent Attention as Determined by Resolution of the Water and Land Committee:

A meeting may deal with an item of business that is not on the agenda where the meeting resolves to deal with that item and the Chairperson provides the following information during the public part of the meeting:

1. The reason why the item is not on the agenda; and
2. The reason why discussion of the item cannot be delayed until a subsequent meeting.

Items not on the agenda may be brought before the meeting through a report from either the chief executive or the Chairperson.

The item may be allowed onto the agenda by resolution of the Water and Land Committee.

Minor Matters relating to the General Business of the Water and Land Committee:

A meeting may discuss an item that is not on the agenda only if it is a minor matter relating to the general business of the meeting and Chairperson explains at the beginning of the public part of the meeting that the item will be discussed. The meeting may not make a resolution, decision or recommendation about the item, except to refer it to a subsequent meeting for further discussion.

6. Notices of Motion

At the time the agenda closed there were no notices of motion received.

7. Minutes

7.1. Unconfirmed Minutes - Water and Land Committee- 30 August 2023

Water and Land Committee

Date of meeting	Wednesday, 18 October 2023
Author	Oliver Neal, Committee Advisor
Endorsed by	Petrea Downey, Team Leader Governance

Purpose

1. The previously circulated minutes from the Water and Land Committee meeting held on 30 August 2023 are to be confirmed.

Recommendations

That the Water and Land Committee:

1. **Confirms the minutes from the Water and Land Committee meeting held on 30 August 2023.**

Attachments

1. 2023 08 30 UNCONFIRMED Water and Land Committee Minutes 30 August 2023
[7.1.1 - 8 pages]

Minutes of the Water and Land Committee, held at Environment Canterbury, Council Chamber, 200 Tuam Street, Christchurch on Wednesday 30 August 2023 at 10.34am.

Present

Committee Chair Iaeen Cranwell, Committee Deputy Chair Claire McKay, Councillors Greg Byrnes, Joe Davies, Paul Dietsche*, David East, Grant Edge, Tutehounuku Korako, Vicky Southworth, Deon Swiggs, and Nick Ward.

*via audio/visual link

1. Karakia/Mihi Timatanga - Opening

Committee Chair Cranwell opened the meeting with a karakia and a mihi whakatau.

Cr Dietsche joined the meeting at 10.36am during the mihi whakatau.

2. Apologies

Apologies for absence were received from Chair Peter Scott, Deputy Chair Craig Pauling, and Councillors Ian Mackenzie and John Sunckell, who were all on Council business. An apology for absence was also received from Cr Genevieve Robinson.

3. Conflicts of Interest

There were no conflicts of interest reported.

4. Public Forum, Deputations, and Petitions

There were no requests for public forum, deputations, and petitions.

5. Extraordinary and Urgent Business

There was no extraordinary or urgent business.

6. Notices of Motion

There were no notices of motion.

7. Minutes

Refer to pages 8 to 15 of the agenda.

7.1 Unconfirmed Minutes - Water and Land Committee - 28 June 2023

Refer to pages 8 to 15 of the agenda.

Staff recommendation adopted without change.

Resolved WLC/2023/24

That the Water and Land Committee:

1. Confirms the minutes from the Water and Land Committee meeting held on 28 June 2023.

Cr Davies/Cr Ward
CARRIED

8. Report Items

Refer to pages 16 to 115 of the agenda.

8.1 Water and Land Committee Resolutions Status Report – August 2023

Refer to pages 16 to 23 of the agenda.

Staff provided visibility on the status of resolutions made by the Water and Land Committee.

Staff recommendation adopted without change.

Resolved WLC/2023/25

That the Water and Land Committee:

1. Notes the status of previous resolutions provided in the Status of Water and Land Committee Resolutions report August 2023.

Cr McKay/Cr East
CARRIED

8.2 CWMS Update - Northern Zone Committees

Refer to pages 24 to 40 of the agenda.

The two Northern Canterbury Water Management Strategy (CWMS) Zone Committees updated the Committee on their Action Plans to support the implementation of the CWMS.

Staff recommendations adopted without change.

Resolved WLC/2023/26

That the Water and Land Committee:

1. Receives this progress update on the two Northern Canterbury Water Management Strategy (CWMS) zone committees, on their current priorities, and progress in advancing their Action Plans and budget.
2. Receives this progress update on the formation of the Hurunui Water and Land Committee.

Cr Byrnes/Cr McKay
CARRIED

Cr Korako left the meeting at 11.29am and returned at 11.30am during the presentation on agenda item 8.3.

Cr East left the meeting at 11.36am and returned at 11.42am during questions of clarification on agenda item 8.3.

8.3 CWMS Fish Screen Working Group - final report

Refer to pages 41 to 55 of the agenda.

Staff provided an update on the Canterbury Water Management Strategy (CWMS) Regional Committee's Fish Screen Working Group's recent work, their completion of a recent project, and sought approval to discharge the group.

Staff recommendations.

That the Water and Land Committee:

1. Receives an update on the Canterbury Water Management Strategy (CWMS) Regional Committee's Fish Screen Working Group's (FSWG) recent work.
2. Discharges the Fish Screen Working Group.
3. Requests Environment Canterbury staff assess the opportunities and needs associated with a programme of work relating to fish screen facilities including the opportunities for the contribution of an external group.

Cr Ward/Cr Byrnes

An amendment to the staff recommendations was moved by Cr Southworth and applied to the substantive motion.

3. Requests Environment Canterbury staff assess the opportunities and needs associated with a programme of work relating to fish screen facilities including the opportunities for the contribution of an external group and will provide an update to the Water and Land Committee at its 29 November 2023 meeting.

Cr Southworth/Cr Swiggs
CARRIED

Resolved WLC/2023/27

Substantive Motion:

That the Water and Land Committee:

1. Receives an update on the Canterbury Water Management Strategy (CWMS) Regional Committee's Fish Screen Working Group's (FSWG) recent work.
2. Discharges the Fish Screen Working Group.
3. Requests Environment Canterbury staff assess the opportunities and needs associated with a programme of work relating to fish screen facilities including the opportunities for the contribution of an external group and will provide an update to the Water and Land Committee at its 29 November 2023 meeting.

Cr Ward/Cr Byrnes
CARRIED

Cr Ward left the meeting at 12.07pm during the presentation on agenda item 8.4 and returned at 12.09 during questions of clarification on agenda item 8.4.

8.4 Discharging the CWMS Regional Committee

Refer to pages 56 to 59 of the agenda.

Staff provided an update on the Canterbury Water Management Strategy (CWMS) Regional Committee.

Secretarial note: Committee Chair Cranwell requested that it be noted in the minutes that the committee acknowledged the Regional Committee and especially the members, Chair Jane Demeter, Angela Cushnie, Dr Andrew Dark, Kevin Gallagher, Cameron Henderson, Rima Herber, and Ross Millichamp for their work, acknowledging the workshops that were held, and their role in meeting and debating on issues relating to water in the region.

Staff recommendation:

That the Water and Land Committee:

1. Discharges the CWMS Regional Committee as a committee of the Canterbury Regional Council

Resolved WLC/2023/28

An updated staff recommendation was provided to the committee.

That the Water and Land Committee:

1. Recommends to the Canterbury Regional Council that the CWMS Regional Committee is discharged as a committee of the Council.
2. Acknowledges the mahi of the members of the Canterbury Water Management Strategy Regional Committee and thanks them for their dedication.

Cr Swiggs/Cr Southworth
CARRIED

8.5 Ōtūwharekai/Ashburton Lakes Lessons-learnt Report

Refer to pages 60 to 103 of the agenda.

Staff summarized the key lessons from the Ministry for the Environment (MfE) Ōtūwharekai/Ashburton Lakes Lessons-Learnt report and advised of the steps that are being taken to address some of the identified vulnerabilities.

The meeting adjourned at 12.28pm and reconvened at 12.29pm.

11. Extension in Meeting Time Before Break

Pursuant to Standing Orders 4.2 'No meeting can sit for more than two hours continuously without a break of at least ten minutes unless the meeting resolves to extend the time before a break.'

Resolved WLC/2023/29

That the Water and Land Committee:

1. Resolve to extend the time required before a break of at least ten minutes, for at least 30 minutes unless the meeting is almost completed.

Cr Cranwell/Cr Byrnes
CARRIED

The meeting adjourned at 12.30pm and reconvened at 12.35pm.

Cr Davies left during the adjournment and returned to the meeting at 12.36pm during discussion on the amendment to the resolutions on agenda item 8.5.

8.5 Ōtūwharekai/Ashburton Lakes Lessons-learnt Report (continued)

Refer to pages 60 to 103 of the agenda.

Staff recommendations:

That the Water & Land Committee:

1. Receives the Ōtūwharekai/Ashburton Lakes Lessons-learnt report prepared by Ministry for the Environment (MfE) as per attachment 8.5.1.
2. Notes the next steps for improving lake outcomes in Ōtūwharekai.

Cr McKay/Cr Korako

An amendment to the staff recommendations was moved by Cr Edge and applied to the substantive motion. The amendment was voted on in parts.

2. Notes the next steps for improving lake outcomes in Ōtūwharekai.
 - 2.1. Environment Canterbury will continue to work to ensure all landholders in the catchment have appropriate authorisations in place to manage the adverse effects on the lakes from their activities.

Cr Edge/Cr Swiggs
CARRIED

- 2.2. Supporting the Ōtūwharekai Working Group and its ongoing work, with a short-term focus on getting external expertise to guide the group through the development of an integrated management plan for Ōtūwharekai.

Cr Edge/Cr Swiggs
CARRIED

- 2.3. Environment Canterbury continues to work with LINZ and other statutory agencies to align work in the catchment.

Cr Edge/Cr Swiggs
CARRIED

3. Requests the Ōtūwharekai Working Group investigate the consideration of assessing the impact of land-use activity on the outstanding natural landscape values in accordance with the Regional Policy Statement and with reference to the NPS Freshwater Management 2020 Appendix 1B (Natural Form and Character).

Cr Edge/Cr Swiggs
CARRIED

Councillors East, McKay, and Ward requested that their votes against part 3 of the amendment be recorded.

Resolved WLC/2023/30

Substantive motion:

That the Water & Land Committee:

1. Receives the Ōtūwharekai/Ashburton Lakes Lessons-learnt report prepared by Ministry for the Environment (MfE) as per attachment 8.5.1.
2. Notes the next steps for improving lake outcomes in Ōtūwharekai.
 - 2.1. Environment Canterbury will continue to work to ensure all landholders in the catchment have appropriate authorisations in place to manage the adverse effects on the lakes from their activities.
 - 2.2. Supporting the Ōtūwharekai Working Group and its ongoing work, with a short-term focus on getting external expertise to guide the group through the development of an integrated management plan for Ōtūwharekai.
 - 2.3. Environment Canterbury continues to work with LINZ and other statutory agencies to align work in the catchment.
3. Requests the Ōtūwharekai Working Group investigate the consideration of assessing the impact of land-use activity on the outstanding natural landscape values in accordance with the Regional Policy Statement and with reference to the NPS Freshwater Management 2020 Appendix 1B (Natural Form and Character).

Cr McKay/Cr Korako
CARRIED

Cr East requested that his objection to the third part of the substantive motion be noted.

Cr Korako left the meeting at 12.58pm during the presentation on agenda item 8.6.

8.6 Portfolio Work Programme - Water and Land

Refer to pages 104 to 115 of the agenda.

Staff updated the Committee on the progress of key work initiatives for the Water and Land Portfolio.

Staff recommendation adopted without change.

Resolved WLC/2023/31

That the Water and Land Committee:

1. Receives the work programme report for quarter four 2022/23 for the Water and Land portfolio.

Cr McKay/Cr Edge
CARRIED

9. Next Meeting

The next meeting will be held on 18 October 2023.

10. Karakia/Whakamutunga - Closing

Cr Cranwell closed the meeting with a karakia.

The meeting concluded at 1.04pm.

CONFIRMED 18 OCTOBER 2023

Committee Chair Iaeen Cranwell
Councillor, Environment Canterbury

8. Report Items

8.1. Water and Land Committee Resolutions Status Report - October 2023

Water and Land Committee report

Date of meeting	Wednesday, 18 October 2023
Author	Oliver Neal, Committee Advisor
Responsible Director	Dr Tim Davie, Director of Science

Purpose

1. To provide visibility on the status of resolutions made by the Water and Land Committee.

Recommendations

That the Water and Land Committee:

1. **Notes the status of previous resolutions provided in the Water and Land Committee Resolutions Status Report October 2023.**

Status Reporting

2. The status of resolutions is reported at each ordinary Committee meeting. The report includes all resolutions from the previous meeting plus any incomplete actions from prior meetings. Comments and progress updates on incomplete actions are provided where applicable.

Cost, compliance, and communication

Financial implications

3. The report was compiled using existing staff resources, therefore there were no additional financial implications.

Risk assessment and legal compliance

4. This gives visibility to the Committee of matters outstanding to ensure appropriate actions have been taken as resolved.

Engagement, Significance and Māori Participation

5. Not applicable.

Consistency with council policy

6. Under Environment Canterbury Standing Orders 28.3 discussion of minutes is limited to their correctness. This report allows members to be updated on the status of resolutions and to monitor progress.

Climate Change Impacts

7. Not applicable.

Communication

8. Not applicable.

Next steps

9. An updated report will be provided to the 29 November 2023 meeting of the Water and Land Committee.

Attachments

1. Water and Land Committee Resolutions Status Report October Last Meeting [8.1.1 - 3 pages]
2. Water and Land Committee Resolutions Status Report Outstanding and In Progress [8.1.2 - 2 pages]

Water and Land Committee Resolutions Status Report – Last Meeting (30 August 2023) – For October 2023

Meeting Name	Report	Resolution Number	Resolution	Status
Water and Land Committee 2023-08-30	7.1 Unconfirmed Minutes – Water and Land Committee – 28 June 2023	WLC/2023/024	That the Water and Land Committee: 1. Confirms the minutes from the Water and Land Committee meeting held on 28 June 2023.	Complete
Water and Land Committee 2023-08-30	8.1 Water and Land Committee Resolutions Status Report – August 2023	WLC/2023/025	That the Water and Land Committee: 1. Notes the status of previous resolutions provided in the Status of Water and Land Committee Resolutions report August 2023	Complete
Water and Land Committee 2023-08-30	8.2 CWMS Update – Northern Zone Committees	WLC/2023/026	That the Water and Land Committee: 1. Receives this progress update on the two Northern Canterbury Water Management Strategy (CWMS) zone committees, on their current priorities, and progress in advancing their Action Plans and budget. 2. Receives this progress update on the formation of the Hurunui Water and Land Committee.	Complete
Water and Land Committee 2023-08-30	8.3 CWMS Fish Screen Working Group – final report	WLC/2023/027	That the Water and Land Committee: 1. Receives an update on the Canterbury Water Management Strategy (CWMS) Regional Committee's Fish Screen Working Group's (FSWG) recent work. 2. Discharges the Fish Screen Working Group. 3. Requests Environment Canterbury staff assess the opportunities and needs associated with a programme of work relating to fish screen facilities including the opportunities for the contribution of an external group and will provide an update to the Water and Land Committee at its 29 November 2023 meeting.	#1-2 Complete
				#3 In Progress

Meeting Name	Report	Resolution Number	Resolution	Status
Water and Land Committee 2023-08-30	8.4 Discharging to CWMS Regional Committee	WLC/2023/028	That the Water and Land Committee: 1. Recommends to the Canterbury Regional Council that the CWMS Regional Committee is discharged as a committee of the Council. 2. Acknowledges the mahi of the members of the Canterbury Water Management Strategy Regional Committee and thanks them for their dedication.	Complete
Water and Land Committee 2023-08-30	8.5 Ōtūwharekai/Ashburton Lakes Lessons-Learnt Report	WLC/2023/030	That the Water and Land Committee: 1. Receives the Ōtūwharekai/Ashburton Lakes Lessons-learnt report prepared by Ministry for the Environment (MfE) as per attachment 8.5.1. 2. Notes the next steps for improving lake outcomes in Ōtūwharekai. 2.1 Environment Canterbury will continue to work to ensure all landholders in the catchment have appropriate authorisations in place to manage the adverse effects on the lakes from their activities. 2.2 Supporting the Ōtūwharekai Working Group and its ongoing work, with a short-term focus on getting external expertise to guide the group through the development of an integrated management plan for Ōtūwharekai. 2.3 Environment Canterbury continues to work with LINZ and other statutory agencies to align work in the catchment.	Complete #2-3 In Progress

Meeting Name	Report	Resolution Number	Resolution	Status
			3. Requests the Ōtūwharekai Working Group investigate the consideration of assessing the impact of land-use activity on the outstanding natural landscape values in accordance with the Regional Policy Statement and with reference to the NPS Freshwater Management 2020 Appendix 1B (Natural Form and Character).	
Water and Land Committee 2023-08-30	8.6 Portfolio Work Programme – Water and Land	WLC/2023/023	That the Water and Land Committee: 1. Receives the work programme report for quarter four 2022/23 for the Water and Land portfolio	Complete

Water and Land Committee Resolutions Status Report – Outstanding and In Progress August 2023

Meeting Name	Report	Resolution Number	Resolution	Status
Water and Land Committee 2023-02-22	8.2 Drinking Water Nitrate Testing – Response to Notice of Motion 18 August 2022	WLC/2023/003	That the Water and Land Committee: 1. Approves option 2, with staff from Environment Canterbury conducting an information campaign, without water testing events, to promote awareness among private well owners about their responsibilities for their drinking-water supplies, and the potential risks to those supplies from contaminants. 2. Request staff from Environment Canterbury to invite territorial authorities, Te Mana Ora and zone committees to work with Environment Canterbury in an investigation into running private well water testing events following on from an information campaign.	Complete – campaign ended 25 August 2023
				In Progress – currently with the Communications and Engagement team
Water and Land Committee 2023-05-03	8.2 CWMS Zone Committees Update – Central Zones	WLC/2023/009	That the Water and Land Committee: 1. Receives this progress update on the three “Central” Canterbury Water Management Strategy (CWMS) zone committees, on their current priorities, and progress in advancing their Action Plans and budget. 2. Notes the resolutions passed by Christchurch City Council on this matter on 5 April 2023 and as detailed in paragraph 29 of this paper. 3. Note that staff consider an independent audit as recommended by the Christchurch West Melton Zone Committee is premature given existing Christchurch City Council work underway and given that the City’s Comprehensive Stormwater Network Discharge Consent may be reviewed when it is transferred to and managed by a Water Services Entity created under the Water Services Entities Act 2022.	Complete

Meeting Name	Report	Resolution Number	Resolution	Status
			<p>4. Recommends that staff bring a report to the next Water and Land Committee meeting explaining the roles and responsibilities of Environment Canterbury in relation to reducing sediment runoff within the Christchurch City Council boundary.</p> <p>5. Recommends that Canterbury Regional Council and Christchurch City Council staff work together to:</p> <p>5.1 Improve construction industry compliance with erosion and sediment control matters.</p> <p>5.2 Continue exploring other best practicable approaches and business practices to gain better environmental outcomes.</p>	
Water and Land Committee 2023-05-03	8.6 CWMS Action Plan Budget 2022/23 – Hurunui Waiau Uwha Water Zone	WLC/2023/010	<p>That the Water and Land Committee:</p> <p>1. Approves, subject to receiving endorsement from Hurunui District Council, Te Rūnanga ō Kaikōura and Te Ngāi Tūāhuriri Rūnanga, the utilisation the CWMS Action Plan Budget available for the Hurunui Waiau Uwha Water Zone to be allocated to the Hurunui Waiau Braided River Birds Flagship programme in this financial year.</p>	Complete

8.2. Soil Quality Monitoring

Water and Land Committee report

Date of meeting	Wednesday, 18 October 2023
Author	Zach Hill, Science Team Leader - Land Resources
Responsible Director	Dr Tim Davie, Director of Science

Purpose

1. To provide the Water and Land Committee with an overview of the soil quality monitoring programme carried out within Canterbury/Waitaha.
2. To provide assurance to the Water and Land Committee that soil quality in Canterbury is being monitored as part of the State of the Environment monitoring programme.

Recommendations

That the Water and Land Committee:

1. **Notes the report on the Canterbury soil quality monitoring programme carried out as part of the Environment Canterbury State of the Environment monitoring.**
2. **Notes that the review of the soil quality monitoring programme carried out in 2019 fulfils a target in level of service 2.3 in the 2021-31 Long Term Plan.**
3. **Recommends that staff continue to work on the soil quality monitoring programme, noting that progress updates will be provided to Council, or an appropriate committee of Council, on an ongoing basis.**

Key points

3. Soil quality is monitored in Canterbury as part of our State of the Environment monitoring programme.
4. Our soil quality monitoring programme covers 315 sampling sites throughout the region, covering a wide mix of land uses, climate zones, landscapes and soil types.
5. We collect soil samples on a rolling basis, revisiting each site every 8-10 years.
6. Analysis of the data shows that structural degradation remains a concern for lowland soils, for both pastoral and arable land uses. This results in increased susceptibility to wind and water erosion, soil compaction and runoff.
7. Level of service 2.3 in the Water & Land Portfolio contains the target to “assess each monitoring network at least once every 10 years”. A review of the soil quality monitoring programme was carried out in 2019.

Background on soil quality monitoring

Why do we have the programme?

8. The Resource Management Act (1991) provides the over-arching driver for the monitoring of soil quality. The purpose of the Act is to maintain the life-supporting capacity of land, water and ecosystems. Soils are living ecosystems, support a range of life forms and are – for human timeframes at least – a finite non-renewable resource. Section 35 of the Act details the responsibility of councils to gather information in order to monitor the state of the environment for each region.
9. In Te Ao Māori, soil is highly valued as a taonga and soil health is intertwined with broader holistic concepts of whakapapa and wellbeing. In terms of beliefs, values and creation stories: we originated from the soil, we live on soil, and we return to the soil. *Te toto o te tangata he kai, te oranga o te tangata, he whenua, he oneone* - while food provides the blood in our veins, our health is drawn from the land and soils.
10. In the late 1990's/early 2000s there were coordinated efforts to implement nationally consistent soil monitoring initiatives, which laid the platform for many of the long-term programmes that are in use around New Zealand/Aotearoa today. Around this time, the National Land Monitoring Forum identified seven key soil management issues for which these programmes were intended to address: structural decline, nutrient depletion, carbon depletion, biological activity change, nutrient saturation, soil acidity change, and contaminants.
11. In Canterbury/Waitaha, our soil monitoring programme monitors soil quality and quantity. The programme is linked to nationally-aligned initiatives, but also focus on the land use pressures unique to Canterbury. The soil quality monitoring programme has the aims of:
 - Providing an early-warning system to identify the effects of land uses (and sometimes land management) on soil quality;
 - Utilising the results for state of environment reporting, and developing policy;
 - Integrating our knowledge with other monitoring programmes (e.g., surface water, groundwater).

The Environment Canterbury soil quality monitoring

How is soil monitoring done?

12. Our soil quality monitoring programme covers 315 sampling sites throughout the region, covering a wide mix of land uses, climate zones, landscapes and soil types (see figure 1). The majority of sampling sites are on private property, with a weighting towards the more intensive farming uses on flat to rolling land.

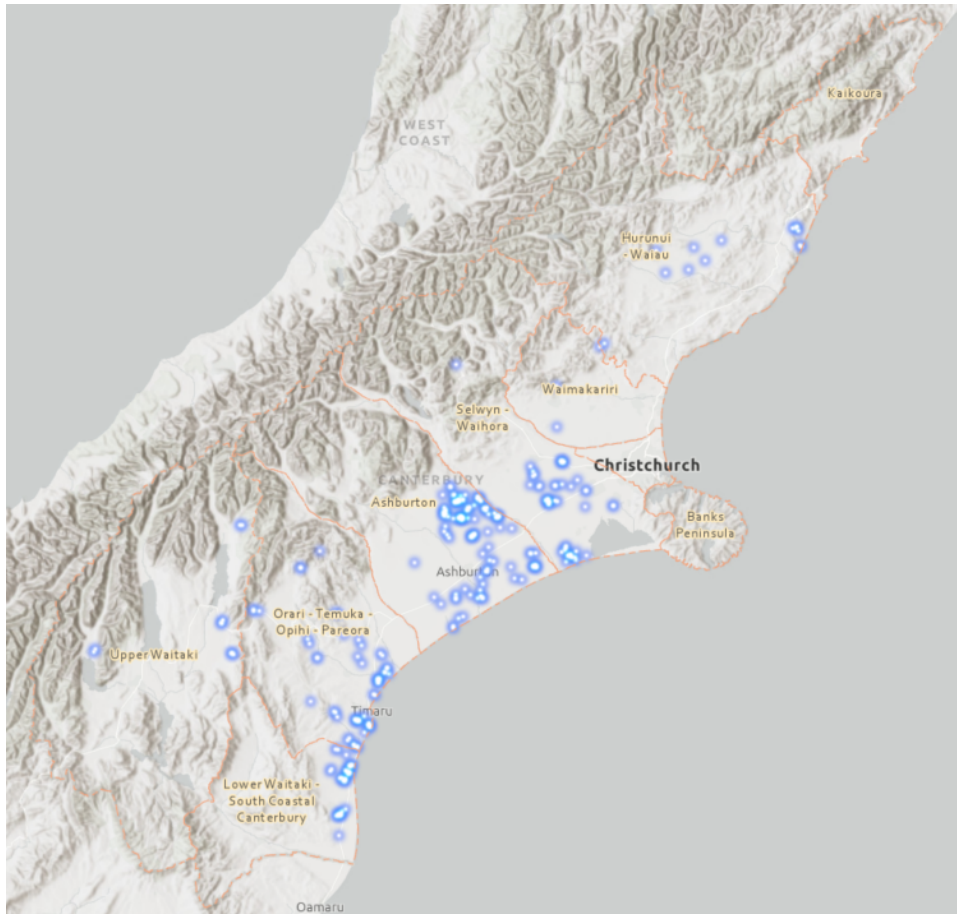


Figure 1: Location of soil quality monitoring sites

13. There are several different measurements of physical, chemical and biological properties taken at each location. These various samples require sophisticated laboratory analysis. We collect soil samples on a rolling basis, revisiting each site every 8-10 years.
14. In some locations, contaminants of the soil (such as arsenic, fluorine, lead and cadmium) are also measured. Environment Canterbury land and soil scientists work closely with our contractors at Plant and Food Research to plan fieldwork and analyse the results. Soil results are then entered into our soils database as a permanent record, with bagged samples archived.
15. National Environmental Monitoring Standards (NEMS) for soil monitoring have been developed in recent years. Like all NEMS, the goal is to ensure consistency in sampling methodology, thereby greatly enhancing the value of the data for reporting national statistics, such as those required under the Environmental Reporting Act (2015).
16. The Canterbury soil quality monitoring programme complies with NEMS standards.

How is it reported, and what are we finding?

17. The majority of sampling sites are on private land, and we have an obligation to preserve landowner confidentiality. This is in contrast to typical air and water sampling and reporting protocols. Consequently, point-based, state of environment information on soil quality is not as publicly visible as other environmental monitoring attributes.

We can anonymise results somewhat by masking locations or limiting map scale, and analyse aggregated data by land use or soil groupings.

18. Annual reports with laboratory results are prepared for all sites sampled in that year, but for cost and resource efficiency reasons a comprehensive review of the whole dataset is undertaken once an entire sampling cycle is finished, usually every nine years.
19. Our analysis¹ reveals that structural degradation remains a concern for lowland soils, for both pastoral and arable land uses. This results in increased susceptibility to wind and water erosion, soil compaction and runoff. Our soil data has also fed into national reporting, most notably the *Our Land 2021* report. This report – produced by the Ministry for the Environment and Statistics NZ – echoes requests by the Parliamentary Commissioner for the Environment for even better land and soil information across Aotearoa. *Our Land 2021* identified a number of national issues:
 - Macroporosity (the number of pores in the soil) across Aotearoa was below the target range for selected land uses between 2014-2018. This is consistent with pastoral findings from our region. This can lead to lower plant growth/yield, and greater surface runoff of water and nutrients.
 - Increasing Olsen phosphorus levels nationally on cropping and drystock sites between 1996-2018, indicative of excessive fertiliser use.
 - A New Zealand study² has shown that irrigated pastures can have significantly less soil carbon and nitrogen than non-irrigated pastures. This may lead to increases in CO₂ losses to the atmosphere and increases in nitrogen leaching. Canterbury has 64% of Aotearoa's irrigated area. Our own findings don't differentiate between irrigated and non-irrigated land uses, but show that carbon levels are deficient in a moderate proportion of cropping sites in our region, from a soil quality perspective.
20. The report also points out the difference between soil quality and soil health. Soil quality focuses on intended use, whereas soil health is a broader concept that includes the soil's ongoing capacity to function as a living ecosystem that sustains plant, animal and human health. There is a growing interest worldwide in revisiting these traditional definitions and consider adding more holistic measures of resource wellbeing, such as biological indicators.
21. Data from the soil quality programme are also used in regional planning and consents work. For example, soil properties like porosity and bulk density are controlling parameters in the movement of water through a soil profile and used in modelling nutrient/contaminant losses.

¹ Lawrence-Smith EJ, et al. (2014) *Arable and Pastoral Soil Quality Monitoring Programme – Analysis of 1999-2013 Dataset*. Environment Canterbury report R14/132, <https://api.ecan.govt.nz/TrimPublicAPI/documents/download/2430806>

² Mudge, P. L., Kelliher, F. M., Knight, T. L., O'Connell, D., Fraser, S., & Schipper, L. A. (2017). Irrigating grazed pasture decreases soil carbon and nitrogen stocks. *Global Change Biology*, **23**(2), 945–954.

Monitoring programme review

22. Environment Canterbury's soil quality monitoring programme was reviewed³ in 2019 by Professor Keith Cameron and Associate Professor Peter Almond from Lincoln University.
23. The report authors concluded that – overall – Environment Canterbury's soil monitoring programmes were fit for purpose and meet or exceed best practice guidelines. Some smaller technical improvements have been made as a result of other suggestions raised.
24. One issue raised for consideration was the monitoring of soil acidification in the hill and high country. We are currently designing a new monitoring programme to address this.
25. Level of service 2.3 in the Water & Land Portfolio contains the target to "assess each monitoring network at least once every 10 years". The review carried out in 2019 fulfils this Level of Service with respect to soil quality monitoring.

Cost, compliance and communication

Financial implications

26. Soil quality monitoring is part of Environment Canterbury's State of Environment Monitoring programmes, which are funded by existing budgets in the 2021-31 Long Term Plan.

Risk assessment and legal compliance

27. As described in the paper there is a risk around confidentiality of data collected on private land, where the release of those data has a potential impact on land value and farm viability. As a signatory to Government Open Data this is a difficult space.
28. This risk is mitigated by:
 - a. Published information being at a generic level so that individual properties can't be distinguished.
 - b. Where any data are supplied through data requests the property holder is notified.

Engagement, Significance and Māori Participation

29. Environment Canterbury has worked with Koukourarata Rūnanga on a soil mapping project for Horomaka/Banks Peninsula and continue to develop relationships with Papatipu Rūnanga with interest in these data.

Consistency with council policy

30. The information reported here is within Environment Canterbury policy.

³ (Review of) Environment Canterbury Soil Quality Monitoring Programme – C23C/89100

Climate Change Impacts

31. There are potentially wide-ranging impacts on soils arising from climate change. These impacts are difficult to anticipate, as they often relate to human uses of land in the future – which are not always predictable.
32. It is likely that soil erosion events will increase in severity and frequency with more climatic extremes.
33. Knowledge of soil properties is important to track climate change impacts.

Communication

34. There is no particular communication plan with this ongoing work.

Next steps

35. Environment Canterbury staff will continue to monitor soil quality as part of the state of the environment monitoring and report on the results through Science Reports and feeding into national reporting.

Attachments

Nil

Legal review	
Peer reviewers	Cameron Smith, Senior Strategy Manager Judith Earl-Goulet, General Manager - Regulatory Services

8.3. Update on Contact Recreational Monitoring Programme

Water and Land Committee report

Date of meeting	Wednesday, 18 October 2023
Author	Dr Elaine Moriarty, Surface Water Science Manager Shirley Hayward, Team Leader Water Quality
Responsible Director	Dr Tim Davie, Director of Science

Purpose

1. To inform the Water and Land Committee of contact recreation gradings to apply in the upcoming summer and to provide assurance that soil quality in Canterbury is being monitored as part of the State of the Environment monitoring programme.

Recommendations

That the Water and Land Committee:

1. **Receives this update on the Contact Recreation Monitoring Programme, including grades for sites, based on the past five years of data.**
2. **Recommends that staff continue to monitor contact recreation sites across Canterbury and other work outlined in the “Next steps” section of this paper.**

Key points

2. At the conclusion of the 2022/23 summer, 78% of coastal sites (estuaries, harbours, and beaches) are generally suitable for swimming.
3. Nearly half of sites within Lyttelton Harbour/Whakaraupō and Akaroa Harbour/Whakaroa have changed from being ‘suitable for swimming’ to ‘unsuitable for swimming’ over the previous two seasons. In the last season, two coastal sites (Tikao Bay in Akaroa Harbour, and West End Caroline Bay) changed from being ‘suitable for swimming’ to ‘unsuitable for swimming’.
4. At the conclusion of the 2022/23 summer, 71% of the freshwater sites were graded as generally suitable for contact recreation. Out of these freshwater sites, 88% of the lakes were graded as suitable for contact recreation and 65% of rivers.
5. Potentially warmer and drier than normal conditions are forecast for the spring/early summer, and we can therefore expect to see a high occurrence of benthic cyanobacterial blooms in our hill-fed and lowland rivers, prompting health warnings for these river types.

Background

6. Environment Canterbury’s recreational water quality programme monitors key swimming sites in the region. The monitoring programme follows the national

microbiological water quality guidelines for marine and freshwater recreational areas (MfE & MoH, 2003).

7. Environment Canterbury staff routinely monitor 103 popular freshwater (stream, river, and lake) and coastal (beach, harbour, and estuary) sites, sampling for *Escherichia coli* (*E. coli*) and/or enterococci (also called Faecal Indicator Bacteria (FIB)). At the beginning of the season monitored sites are given a long-term grade reflective of their water quality over the last 5 years. Sites are graded: "Very Poor", "Poor", "Fair", "Good" or "Very Good", with fair being the threshold considered suitable for recreation.
8. Monitoring is conducted weekly between mid-November and March each summer. Microbial monitoring results are updated as soon as the data are available on the Land Air Water Aotearoa (LAWA) website (www.lawa.org.nz).
9. Staff also monitor for blooms of potentially toxic cyanobacteria at swimming sites in our rivers and lakes. Cyanobacteria reporting has become increasingly important in our contact recreational monitoring programme.
10. Te Mana Ora – a branch of Te Whatu Ora National Public Health Service for Waitaha/Canterbury Region (previously known as Community and Public Health (CPH)), are notified of high-risk results and may issue human health warnings. These are displayed on LAWA and Environment Canterbury websites (ecan.govt.nz/health.warnings).
11. The role of Environment Canterbury is to collect, analyse and report on the results of the monitoring. Te Mana Ora issue any required health warnings, and the TAs place the signs at locations where there is an increased health risk from swimming at that location.
12. The annual summary report has been completed for the 2022/2023 season:
 - a. Water quality for contact recreation: Annual summary report 2022-23 season. Environment Canterbury Science Summary report R23/40. (<https://api.ecan.govt.nz/TrimPublicAPI/documents/download/4988324>).

Freshwater Grades

13. At the conclusion of the 2022/23 summer, 71% of monitored freshwater sites (lakes and rivers) were graded as being generally suitable for swimming (i.e., a Suitability for Recreation grade (SFRG) of 'fair' or better) (Figure 1 & Attachment 8.3.1).
14. Fifteen sites (27%) were graded as being unsuitable for swimming (i.e., a grade of 'poor' or 'very poor') and are mostly located in the lower reaches of rivers. Two river sites, one that had a location change and was treated as a new site this year, and one lake site, remain ungraded due to having insufficient data (i.e., less than three season's data).
15. Most monitored lake sites (88%) were graded as 'fair' to 'very good' compared to 65% of graded river sites (Figure 1). Two river sites have declined from suitable to unsuitable for contact recreation, resulting in thirteen river sites being unsuitable for contact recreation. Five freshwater sites had an improved grade, while four freshwater sites had a deteriorated grade as follows:
 - Lake Tekapo/Takapō Beach had an improved grade from "good" to "very good".

- Waiau Uwha at Waiau (SH70), Rakaia River Gorge, Ashley River/ Rakahuri above Rangiora-Loburn Bridge and Opihi River/Ōpihi at SH1 have improved grades from “fair” to “good”. However, they are still considered unsuitable for swimming 48 hours after rainfall.
- Lake Aviemore at Waitangi and Orari River at Gorge declined from “good” to “fair” and remain generally ‘suitable for swimming’.
- Ōtūkaikino River at Swimming Hole and Paeroa River/Pureora at Evans Crossing are now graded ‘unsuitable for swimming’ after being downgraded from “fair” to “poor”.

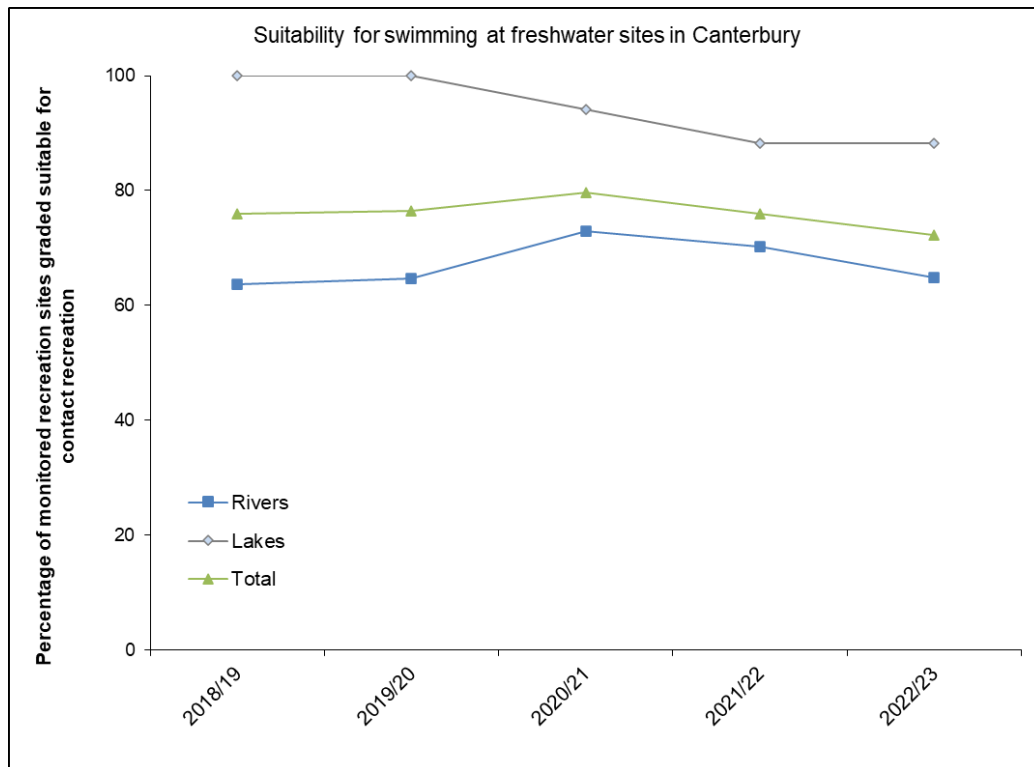


Figure 1: Freshwater bathing sites in Canterbury graded as generally ‘suitable for swimming’ for the last 5 seasons

Coastal Grades

16. This year’s grading of coastal water quality indicates that 78% of coastal sites (estuaries, harbours and beaches) are generally suitable for swimming (i.e., a SFRG of “fair” or better) (Figure 2 and Attachment 8.3.2). This is a decrease in the sites suitable for swimming when compared to the previous five years (where the percentage of sites ranged from 83% to 91%).
17. There were no sites that had improved grades and five sites where the grades have declined. Two of those sites have degraded from being suitable to unsuitable for swimming. Overall, there are ten coastal sites that are unsuitable for swimming.
18. Most of the beach sites (95%) are graded “fair” or better and are therefore considered suitable for swimming (Figure 2), except West Caroline Bay which has “poor” water quality. Two other monitored sites on Caroline Bay are graded a suitable for swimming (Attachment 8.3.2).

19. The number of Banks Peninsula harbour sites graded “fair” or better declined in the 2022/23 season with only 53% (from 60% in 2021/22 and 93% in the 3 years prior) of sites considered suitable for swimming (Figure 2). Three harbour sites have declined a grade:
- Duvauchelle Bay and Charteris Bay at Paradise Beach have declined from “good” to “fair” but remain ‘suitable for swimming’.
 - Tikao Bay is graded ‘unsuitable for swimming’ after being downgraded from “fair” to “poor”.
20. Most estuary sites are considered ‘suitable for swimming’ with 78% graded “fair” or better (Figure 2). Avon-Heathcote Estuary/Ihutai at South Spit has declined from a SFRG of “good” to “fair”. The remaining sites have the same grade as the 2021/22 season.

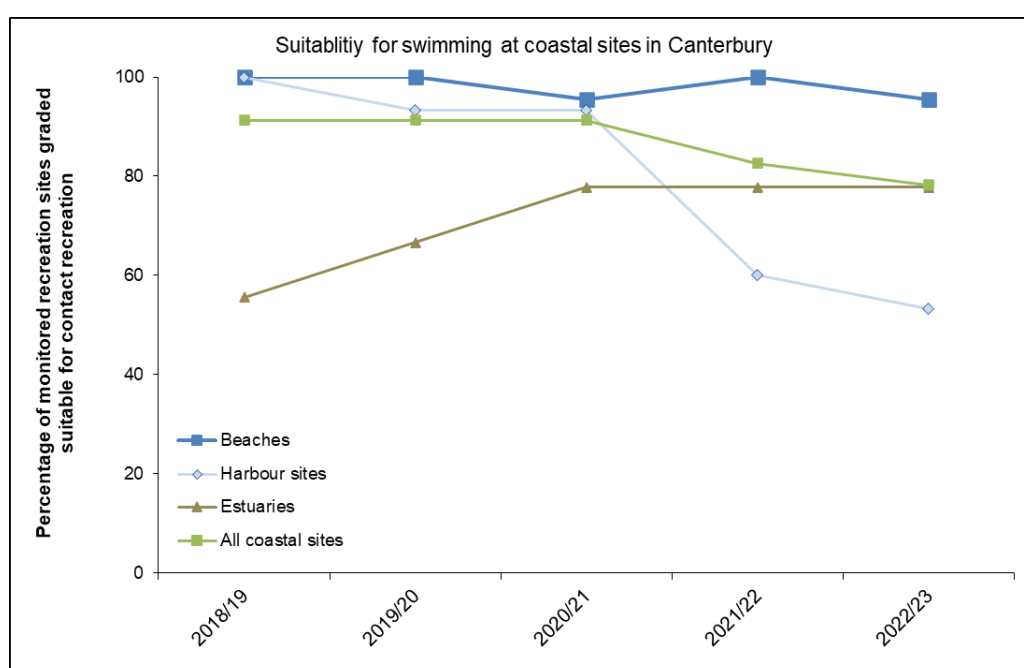


Figure 2: Coastal bathing sites in Canterbury graded as generally ‘suitable for swimming’ for the last 5 seasons

21. A number of investigations were carried over summer 2022/2023 to determine the source of elevated faecal indicator bacteria in Lyttleton/Whakaropu and Akaroa. The results of the Faecal Source Tracking determined that human pollution was the dominant source at many sites (Table 6 in the Annual Summary report).
22. The most likely sources of this contamination could include cross-connections, broken sewer pipes or faulty septic tanks. Environment Canterbury is assisting Christchurch City Council in their work to find and remediate the sources of pollution. This is a long-term and complex project as every public or private connection is a potential source.

Cyanobacterial monitoring of 2022/23 season

23. During the 2022/23 monitoring season, 10 river sites exceeded the ‘Action’ level threshold for benthic cyanobacteria cover in rivers and had health warnings issued for them. This is similar to last year, where 11 river sites had warnings issued during the

2021/22 season, although some blooms persisted for in 2022/23 season compared to the previous year.

24. Several lakes also had health warnings in place because of potentially toxic planktonic cyanobacterial blooms: These were:
 - Lake Rotorua (Kaikōura) – permanent warning in place
 - St Annes Lagoon/Mata Kopae – permanent warning in place
 - Pegasus Lake
 - Te Waihora/Lake Ellesmere - warning remains in place
 - Te Roto o Wairewa/Lake Forsyth
 - Lake Hood
 - Lake Opuha
 - Saltwater Creek (planktonic bloom).
25. If the summer develops into a warm and dry season, we can expect to have higher occurrence of cyanobacterial blooms, and associated health warnings in place.

Cost, compliance and communication

Financial implications

26. This work is funded through the Monitoring and Understanding our Environment Programme within the Water and Land Portfolio and the Managing the coastal environment within the Climate Change & Community Resilience Portfolio of the Council's Long-Term Plan.

Risk assessment and legal compliance

27. There is significant reputational risk for Environment Canterbury in communicating health risks to the public. This is mitigated by working closely with Te Mana Ora who have health expertise and following guidelines provided by the Ministry of Health. However, Environment Canterbury is the lead agency and the public look to us for explanations.
28. Under the National Policy Statement for Freshwater Management (2021) Regional Councils are required to monitor freshwater contact recreation sites that are named in the Land & Water Plan. Environment Canterbury is legally compliant with this requirement.

Engagement, Significance and Māori Participation

29. Significant engagement on this issue has occurred with Papatipu Runanga, Zone Committees, Whaka ora/Healthy Harbours, community groups and residents of Whakaraupō /Lyttelton Harbour.
30. All results are shared with Papatipu Runanga in person.
31. Environment Canterbury science and communication staff members, in collaboration with Te Whatu Ora and CCC staff, have attended, and will continue to attend, relevant community events in affected areas to share this information with them.
32. Environment Canterbury will continue to share results on "Can I Swim Here?" page of the LAWA (Land, Air, Water Aotearoa) website:

Consistency with council policy

33. Nothing in this report is a deviation from existing Council policies.

Climate Change Impacts

34. Climate change can impact on a number of aspects of our contact recreational monitoring programme. This includes predictions of more intense rainfall events affecting water quality.

Communication

35. Environment Canterbury will undertake its annual Can I Swim Here? communications campaign from December to January this year. The community will be encouraged to “look before they leap” and check the LAWA Can I Swim Here? website to find out where are the best spots for recreation before they go out. Social media advertising, posters, fliers, and staff at events will be promoting this message before and during the swimming season. This work includes a separate campaign focused on educating the public about how to identify cyanobacteria, its risk and what to do to keep people and animals safe in our waterways. As above, reactive and proactive social media and digital advertising, brochures and collaboration with local vet clinics will be a priority with this campaign.
36. A separate engagement campaign has been underway for Whakaraupō /Lyttelton Harbour due to the many popular sites graded poor for swimming this season. Residents have received a letterbox drop sharing health information and key messages about what they can do to help our efforts to improve water quality in the region. Staff are also attending community events and meetings around the Harbour to share this information.
37. Region-wide warning signage has been created in collaboration with Te Mana Ora for Territorial Authorities to use alert communities to the health risks present at recreational sites in their area. This aims to create consistency throughout the region and assist the public to recognise and read the relevant health information they need to know.

Next steps

38. The Contact Recreation monitoring programme will continue throughout the 2023/24 summer period; commencing in mid November. Results of the monitoring will be shared on the LAWA website.
39. Work is continuing over the summer to identify the sources of faecal pollution within the region and to inform the community of the increased risk at identified swimming sites.
40. Environment Canterbury staff, with external assistance, are working to develop a model which can inform the predicted risk of poor water quality at sites in Lyttelton/Whakaraupō and Akaroa harbours. This will not be ready for the upcoming season but we aim to trial validation of the model based on this season's monitoring data. Additional sampling is being undertaken to provide sufficient data to build and calibrate the model.

41. Environment Canterbury staff continue to work with the Christchurch City Council, landowners, Iwi and Te Whata Ora to identify sources of human faecal pollution in the harbours and rivers.

Attachments

1. Suitability for Recreation Grades Freshwater Sites in Canterbury [8.3.1 - 1 page]
2. Suitability for Recreation Grades Coastal Sites in Canterbury [8.3.2 - 1 page]

Legal review	
Peer reviewers	

Site	Suitability for Recreation Grade (*excludes rainfall data)					Change in grade
	2018/19	2019/20	2020/21	2021/22	2022/23	
Kaikoura District						
Kahutara River at SH1	Good*	Good*	Good*	Fair	Fair	
Lyell Creek/Waikōau Lagoon	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	
Hurunui District						
Hanmer River at Hanmer Road	-	-	-	Insufficient data	Insufficient data	↑
Hurunui River at SH1	Fair*	Poor	Fair*	Fair*	Fair*	
Hurunui River at SH7	Poor	Poor	Poor	Very Poor	Very Poor	
Waiau Uwha River upstream SH70	Good	Good	Good	Fair	Good*	
Waipara River at Swimming Hole	Fair	Fair	Fair	Poor	Poor	
Waimakariri District						
Ashley River/Rakahuri above Rangiora-Loburn bridge	Good*	Good*	Good*	Fair	Good*	↑
Ashley River/Rakahuri at SH1	Insufficient data	Insufficient data	Good*	Good*	Good*	
Ashley River/Rakahuri u/s Gorge Bridge	Good*	Good*	Good*	Good*	Good*	
Kaipoi River at Boat Ramp	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	
Pegasus Lake at Moto Quay	Very Good	Very Good	Very Good	Very Good	Very Good	
Christchurch City						
Avon River/Ōtākaro at Kerrs Reach	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	↓
Ōtūkaikino Creek at swimming hole	Poor	Poor	Poor	Fair*	Poor	
Roto Kōhatu Reserve at Lake Tahī	Good	Good	Good	Good	Good	
Waimakariri River at Rock Spur	Poor	Fair*	Fair*	Fair*	Fair*	
Waimakariri River u/s old Highway Bridge	-	-	-	-	Insufficient data	
Selwyn District						
Te Waihora/Lake Ellesmere at Lakeside Domain	Fair	Fair	Fair	Poor	Poor	↑
Rakaia River at Gorge	Insufficient data	Insufficient data	Good*	Fair	Good	
Selwyn River/Waikirikiriri at Chamberlains Ford	Good	Good	Good*	Good*	Good*	
Selwyn River/Waikirikiriri at Coes Ford	Poor	Poor	Poor	Poor	Poor	
Selwyn River/Waikirikiriri at Glentunnel	Fair*	Fair*	Fair*	Fair*	Fair*	
Selwyn River/Waikirikiriri at Upper Huts	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	
Waimakariri River at Thompsons Road (The Willows)	Poor	Poor	Poor	Poor	Poor	
Ashburton District						
Ashburton River/Hakaterere at SH1	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	
Lake Camp at beach	Very Good	Very Good	Very Good	Very Good	Very Good	
Lake Clearwater west of huts	Very Good	Very Good	Very Good	Very Good	Very Good	
Lake Hood at Bayliss Beach	Very Good	Very Good	Very Good	Very Good	Very Good	
Timaru District						
Hae Hae Te Moana River at Gorge	Good*	Good*	Good	Fair	Fair	↑
Ōpihi River at Saleyards Bridge	Good*	Good*	Good*	Good*	Good*	
Ōpihi River at SH1	Good	Good	Good	Fair	Good*	↓
Ōpihi River at Waipopo Huts	Good*	Good*	Good*	Good*	Good*	
Ōrāri River at Gorge	Good*	Good*	Good	Good	Fair	
Temuka River/Te Umu Kaha at SH1	Fair*	Fair*	Fair*	Fair*	Fair*	
Waihi River at Gorge	Fair	Good*	Good*	Good*	Good*	
Waihi River at Wilson St footbridge	Insufficient data	Poor	Fair*	Fair*	Fair*	
Mackenzie District						
Lake Alexandrina at bottom huts	Fair	Good	Good	Good	Good	↑
Lake Opuha at Ewarts Corner Boat ramp	Fair	Fair	Poor	Poor	Poor	
Lake Opuha at Recreation Reserve	Very Good	Very Good	Very Good	Very Good	Very Good	
Lake Ruataniwha at camping ground	Very Good	Fair	Very Good	Very Good	Very Good	
Lake Tekapo/Takapō Beach	Very Good	Very Good	Good	Good	Very Good	
Loch Cameron at South Bank	-	-	-	Insufficient data	Insufficient data	
Ōpihi River at SH79/Fairlie	Insufficient data	Insufficient data	Good*	Good*	Good*	
Twizel River/Whakatipu at picnic area	Good*	Fair*	Fair*	Fair*	Good*	
Waimate District						
Pareora River/Pureora at Evans Crossing	Fair*	Fair*	Fair*	Fair*	Poor	↓
Pareora River/Pureora at Pareora Huts	Poor	Fair*	Fair*	Poor	Poor	
Hakataramea River at SH82	Good*	Good*	Good*	Fair	Fair	↓
Lake Aviemore at Te Akatarawa Camp	Good	Good	Good	Fair	Fair	
Lake Aviemore at Waitangi	Good	Good	Good	Good	Fair	
Otaio River/Ōtaia at Gorge	Good*	Good*	Good*	Fair	Fair	
Waihao River at Black Hole	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	
Waihao River at Bradshaws Bridge	Good*	Good*	Good*	Good*	Good*	
Waihao River at Gum Tree Flat Rd (Don's Hole)	Fair*	Fair*	Fair*	Fair*	Fair*	
Waitaki District						
Lake Aviemore at Loch Laird	Fair	Fair	Fair	Fair	Fair	
Lake Benmore at Pumpkin Bay	Good	Good	Good	Good	Good	
Lake Benmore at Sailors Cutting	Good	Good	Good	Good	Good	
Lake Middleton at north end of lake	Fair	Fair	Fair	Fair	Fair	

Suitability for Recreation Grades (SFRGs) over the past 5 years at freshwater sites in Canterbury. Arrows represent an improvement (↑) or degradation (↓) in SFRG after the 2022/23 season.

Site	Suitability for Recreation Grade (*excludes rainfall data - adjustment ceased 2020)					Change in grade
	2018/19	2019/20	2020/21	2021/22	2022/23	
Kaikoura District						
Armors Beach	Good	Good	Good	Good	Good	
Gooches Beach	Good	Good	Good	Good	Good	
Mangāmāunu	Very Good	Very Good	Very Good	Very Good	Very Good	
Peketa Beach	Good	Good	Good	Good	Good	
South Bay/Te Hiku-o-te-waeroa Beach	Good	Good	Good	Good	Good	
Hurunui District						
Gore Bay/Pariroa	Very Good	Very Good	Very Good	Very Good	Very Good	
Motunau Beach	Very Good	Very Good	Very Good	Good	Good	
Waimakariri District						
Ashley River/Rakahuri Estuary	Poor	Poor	Poor	Poor	Poor	
Pegasus township	Very Good	Very Good	Very Good	Very Good	Very Good	
Pines Beach	Good	Good	Good	Fair	Fair	
Waikuku Beach	Very Good	Very Good	Very Good	Very Good	Very Good	
Woodend Beach	Very Good	Very Good	Very Good	Very Good	Very Good	
Christchurch City						
Avon-Heathcote Estuary/Ihutai at Beachville Rd jetty	Good	Good	Good	Good	Good	↓
Avon-Heathcote Estuary/Ihutai at Humphreys Drive	Poor	Poor	Poor	Poor	Poor	
Avon-Heathcote Estuary/Ihutai at Moncks Bay	Good	Good	Good	Good	Good	
Avon-Heathcote Estuary/Ihutai at Mt Pleasant Yacht Club	Fair	Fair	Fair	Fair	Fair	
Avon-Heathcote Estuary/Ihutai at Penguin Street	Poor	Poor	Fair	Fair	Fair	
Avon-Heathcote Estuary/Ihutai at South New Brighton Park	Poor	Fair*	Fair	Fair	Fair	
Avon-Heathcote Estuary/Ihutai at South Spit	Good	Good	Good	Good	Fair	
New Brighton Beach at surf club	Good	Good	Good	Good	Good	
Scarborough Beach	Good*	Good*	Fair	Fair	Fair	
South Brighton Beach at Caspian St	Good	Good	Good	Good	Good	
South Brighton Beach at surf club	Good	Good	Good	Good	Good	
Spencerville Beach	Very Good	Very Good	Very Good	Very Good	Very Good	
Sumner Beach	Good	Good	Good	Good	Good	
Taylor's Mistake/Te Onepoto	Good	Good	Very Good	Good	Good	
Waimairi Beach	Good	Good	Good	Fair	Fair	
Lyttelton Harbour/Whakaraupō						
Cass Bay/Motu-kauati-rahi	Good	Good	Good	Fair	Fair	↓
Church Bay/Kaioruru	Fair	Fair	Fair	Fair	Fair	
Corsair Bay/Motu-kauati-iti	Good*	Good*	Fair	Poor	Poor	
Diamond Harbour/Te Waipapa Beach	Fair	Good*	Fair	Poor	Poor	
Charteris Bay/Te Wharau at Paradise Beach	Good	Good	Good	Good	Fair	
Purau Bay	Good	Good	Good	Poor	Poor	
Rāpaki Bay	Good	Good*	Fair	Poor	Poor	
Sandy Bay	Fair	Poor	Poor	Poor	Poor	
Banks Peninsula/Te Pātaka-o-Rākaihautū						
Akaroa main beach	Good	Good	Good	Poor	Poor	↓
Duvauchelle Bay	Good	Good	Good	Good	Fair	
French Farm Bay Boatsheds	Very Good	Very Good	Good	Good	Good	
Glen Bay	Good	Good	Good	Fair	Fair	↓
Okains Bay Estuary	Good*	Good*	Good	Fair	Fair	
Takamatua Beach	Fair	Fair	Fair	Fair	Fair	
Tikao Bay/Ōkoropeke	Fair	Fair	Fair	Fair	Poor	
Wainui Beach	Good	Good*	Fair	Fair	Fair	
Timaru District						
Caroline Bay mid beach	Good*	Good*	Good	Fair	Fair	↓
Timaru Coast Yacht Club	Very Good*	Very Good*	Very Good	Very Good	Very Good	
West Caroline Bay	Fair*	Fair*	Poor	Fair	Poor	

Suitability for Recreation Grades (SFRGs) over the past 5 years at coastal sites in Canterbury. Arrows represent an improvement (↑) or degradation (↓) in SFRG after the 2022/23 season.

8.4. Update on implementation of Essential Freshwater Regulations

Water and Land Committee report

Date of meeting	18 October 2023
Author	Fiona Myles, Principal Strategy Advisor
Responsible Director	Tim Davies, Director Science

Purpose

1. This paper provides an update to the Water and Land Committee on the implementation of national regulations regarding synthetic nitrogen fertiliser use (N-Cap), Intensive Winter Grazing (IWG), and freshwater farm planning (FW-FP).

Recommendations

That the Water & Land Committee:

1. **Receives this update on the implementation of the Essential Freshwater Regulations including:**
 - 1.1 **Use of synthetic nitrogen fertiliser (N-Cap)**
 - 1.2 **Intensive Winter Grazing (IWG)**
 - 1.3 **Freshwater Farm Plans (FW-FP)**
2. **Notes that, pending formal inclusion in the Order in Council, the Freshwater Farm Plan regulations will take effect in Canterbury from 1 July 2025.**
3. **Notes that work to implement the Essential Freshwater Regulations was agreed to in the Long-Term Plan Te Pae Tawhiti 2021-31 and that any subsequent changes may require community consultation under the Canterbury Regional Council's Engagement, Significance and Māori Participation Policy.**
4. **Recommends that staff continue to work on implementation of the Essential Freshwater Regulations, noting that progress updates will be provided to Council or an appropriate Committee of Council on an ongoing basis.**

Key points

2. The Essential Freshwater package 2020 introduced a number of new regulations, intended to contribute to improving freshwater which affect farming.
3. Work programmes have been in place to support farmers to understand the new requirements for the use of synthetic nitrogen fertiliser (N-Cap) and Intensive Winter Grazing (IWG) since 2021/22. This paper provides an update on the work undertaken in these programmes in the last calendar year.

4. Freshwater Farm Plan (FW-FP) Regulations were gazetted in June 2023. This paper provides an overview of the implementation programme that is being developed to support the implementation of FW-FP Regulations in Canterbury. It also identifies some key activities to take place over the remainder of 2023/24.

Background

5. The Essential Freshwater package was released by central government in 2020 with the aim of halting degradation of water quality, making improvements to water over five years and reversing past damage to restore ecosystems within a generation.
6. National Environment Standards for Freshwater (NES-F) introduced as part of this package included regulations that restrict the use of synthetic nitrogen fertiliser (referred to as N-Cap) on farm, and new rules that apply to Intensive Winter Grazing (IWG). Work programmes have been in place since 2021/22 to support implementation of these new requirements.
7. New regulations on Freshwater Farm Plan (FW-FP) were also signalled as part of the Essential Freshwater package. However, these regulations were not gazetted until June 2023. An implementation programme is being established to support the roll-out of FW-FP in Canterbury.

Update on implementation of N-Cap

8. The NES-F regulations apply a limit of 190kg/ha/year of synthetic nitrogen on all farms with grazed pasture. Regulations also include a requirement for dairy farms to report their annual synthetic nitrogen use, by 31 July each year. A work programme was initiated in 2021/22 to ensure the farming community is aware and are complying with the new requirements. The 2022-23 work programme is outlined in Table 1.

Year	Quarter	Update
2022/23	Quarters 1-2	46% of dairy farms had reported by December 2022 after a delay in the development of the national reporting tool. 1.9% of these reported exceeding 190kg/ha/yr.
	Quarters 3-4	Region-wide communications campaign undertaken. Emails and letters sent to dairy farmers to remind them of their responsibilities. Supported with messages in print, radio and digital channels and via industry groups.
2023/24	Quarter 1	As of 25 September, out of 1,334 consented dairy farms (based on dairy effluent consents) in Canterbury, reports have been received from 58% of farms. 1.7% of these reported exceeding 190kg/ha/yr. The reports show that the majority (83%) of those that reported exceeding 190kg/ha/yr in 2022/23 have made reductions in 2023/24 and are now compliant. All farms that submitted reports have received communications thanking them for this. For those within 5kg of the limit, this included additional messaging about monitoring their use carefully to avoid exceeding it in the future. All farms that reported exceeding the limit have been emailed requesting confirmation of how they plan to reduce their synthetic nitrogen fertiliser use.

Table 1: Update on N-Cap implementation during 2022/23 and 2023/24

9. For the remainder of 2023/24 year, there will be a focus on process improvements for analysing and storing the data. This includes seeking to increase the rate of reporting through targeted communications. A new version of the national N-Cap reporting tool has also been developed. This improves farmer usability and includes map coordinates to be included with the reporting, enabling councils to better align the reporting to their own databases.

Implementation update on Intensive Winter Grazing

10. New national rules around IWG in the NES-F came into force from 1 November 2022. Under the NES-F, any farmer unable to meet the requirements of the Permitted Activity rules must apply for a resource consent for their IWG.
11. Over the past year the focus of the implementation programme has continued to be on educating farmers and industry about the requirements for IWG in the NES-F and undertaking monitoring flights.

Year	Quarter	Update
2022/23	Quarters 3-4	<p>Farmer drop-in sessions were carried out alongside industry and catchment groups across the region in the months before winter. These were well attended and highlighted that many farmers were adjusting their planned IWG practices to meet the permitted activity regulations.</p> <p>Advertising campaign in print and digital media carried out and staff attended a number of field days and industry events.</p> <p>First fly-over flights occurred in May in Waimakariri and Ashburton Zones to observe how winter grazing paddocks were being prepared ahead of stock beginning grazing. A stakeholder group was set up in each zone to support the planning of the flight and the communications around it.</p>
2023/24	Quarter 1	<p>A second fly-over was undertaken in July in both Ashburton and Waimakariri to observe how grazing practices were occurring in mid-winter and to check whether negative effects on the environment were occurring.</p> <p>Staff followed up with 4 farms where improvements could be made. Staff also contacted approximately 15 farmers across the two zones where very good practices were being implemented.</p>

Table 2: Summary of the implementation programme

12. Between 1 May and 30 August 2023, 19 complaints were received in relation to IWG. Of these:
 - five had actual or potential environmental effects requiring further compliance action,
 - four were technical breach of the IWG regulations without direct environmental effect and further education was provided,
 - two were unrelated to IWG,
 - four were determined to be permitted under all regulations, and
 - four are still under investigation.
13. In terms of resource consent applications for IWG, a total of 40 applications have been received by Environment Canterbury. Four of these are for global consents covering multiple farms (e.g. irrigation schemes or large enterprises). A total of 13 resource consents for IWG have been granted.

14. In 2021/22 IWG monitoring flight occurred over the Waimakariri District and in 2022/23 in the Waimakariri and Ashburton Districts.
15. For the remainder of 2023/24, Environment Canterbury will continue its communications campaign on the IWG through print and digital media channels. Direct contact will be made with farmers who likely need a resource consent for their winter grazing, with ongoing engagement to ensure they become compliant. Further monitoring flights are also planned for 2024 winter, covering a different water management zone to this past winter. The location of the 2024 winter flyovers will be determined based on environmental risk, and the capacity within local stakeholder groups to support community engagement needed about the flights.

Implementation of FW-FP Regulations

Background

16. The FW-FP Regulations were gazetted in June 2023 after being signalled as part of the Essential Freshwater package in 2020. These require all farms over 20ha in size (5ha for horticulture) to prepare a FW-FP that identifies actions that are to be taken to manage risks to freshwater. They are intended to contribute to halting further degradation of New Zealand's freshwater resources and improving water quality.
17. In Canterbury, there is already an existing and well-established programme of Farm Environment Plans (FEP) in place. FEP apply to higher-risk farms as determined by thresholds (e.g. 50ha of irrigated land area) set in the Land and Water Regional Plan (LWRP). Approximately 3,000 Canterbury farms currently have an FEP (1,200 of these as part of irrigation schemes). FW-FP will apply to a greater number of farms across Canterbury than FEP. It is estimated from provisional 2022 farm census data that 4,300 farms will require a FW-FP.
18. Environment Canterbury has previously been very clear that there was no desire to see the situation arise where farms with a current FEP as part of their Farming Land Use consent are required to have two farm plan frameworks in operation. Successful transition to ensure that the FWFP still demonstrates requirement with consent conditions is required.
19. There are some key differences between FEP and the nationally regulated FW-FP which will replace FEP over time. The key differences are summarised in Table 3:

Key component	FEP	FW-FP
Identification of risks to be managed	Industry agreed Good Management Practice (GMP) in Schedule 7 Land & Water Regional Plan provides objectives and targets for managing the adverse effects of key activities	Catchment context, challenges, and values (CCCV) prepared by Council highlighting priorities for catchment. On-farm risk assessment and identification of steps to be taken to manage risks based on CCCV
Certifier	N/A – not part of existing system	Certifier assesses and approves the action plan to ensure the actions in the plan adequately manage the risks and give effect to CCCV
Action plan	Evidence for audit on GMP being met	Actions to be implemented for 5-year period, submitted to regional council

Key component	FEP	FW-FP
Audit	Independent auditor assesses compliance against GMP to assign a grade	Independent auditor checks that the Action Plan has been implemented
Accreditation	Environment Canterbury trains, appoints and supports auditors	National accreditation system with regional appointment for auditors and certifiers. Regional training on unique aspects of region.

Table 3: Key differences between FEP and the nationally regulated FW-FP

20. In addition, the role of Environment Canterbury in implementing the national FW-FP regulations is very different from FEP. As a regionally driven requirement, Environment Canterbury is responsible for providing all the supporting infrastructure for FEP. Whereas, with FW-FP, much of the infrastructure is to be provided nationally. For example, a system for accreditation of certifiers and auditors and an Integrated National Farm Data Platform (INFDP) are to be developed nationally. The role of Environment Canterbury in FW-FP is reduced to key points of influence in the system:
- Developing Catchment Context, Challenges and Values (CCCV) that provides the information a farmer needs to undertake a risk assessment and prepare a FW-FP.
 - Developing an appointment process for certifiers and auditors and any specific training required for the regional context.
 - Aligning the data and systems infrastructure (internal and national) to support the implementation.
 - Engaging with mana whenua to the extent they wish to be.
21. The Ministry for the Environment is undertaking a phased roll-out of the FW-FP regulations nationally over the 2023-2025 period. This approach is to help ease pressure on the supporting infrastructure and resourcing that will be required to implement FW-FP, much of which is still being developed.
22. As Environment Canterbury already has many FEP in place across the region, pending formal confirmation via an Order in Council (OIC) process, Canterbury has been placed in the final tranche for the regulations to take effect from 1 July 2025. This date also aligns well with the review of the Regional Policy Statement (RPS) and the development of Freshwater Management Units, allowing Catchment Context, Challenges and Values to reflect the direction established in the RPS.
23. There is a significant volume of regulatory change occurring that impacts on how freshwater is managed in Canterbury, and Environment Canterbury's implementation of FW-FP will need to be cognisant of this. The attached diagram in Appendix 1 places the FW-FP go-live date in the context of other key regulatory or process dates in the 2023-2026 period.

Implementation programme FW-FP

24. In recognition of the scale and significance of the work required to implement the FW-FP Regulations in Canterbury, an Environment Canterbury programme of work has been established with project management support, a responsible director, and a Programme Steering Group. There are four primary workstreams included in the programme:

- CCCV development
 - Certifier and auditor appointment and training
 - Approach for the transition from FEP to FW-FP
 - Data and systems required to support regional implementation of FW-FP Regulations
25. These four workstreams are supported by staff focused on mana whenua engagement and communications & engagement, recognising that these functions will cut across the workstreams and need to align with wider organisational priorities (e.g. the integrated regional plan development).

Key activities for 2023/24

26. The implementation of FW-FP will span multiple years. Key activities for the remainder of 2023/24 include:
- Informing the Order in Council process for turning the Regulations on in Canterbury on 1 July 2025.
 - Initiating engagement with papatipu rūnanga, initially via Te Paiherenga (a technical working group with representatives from ngā Papatipu Rūnanga and Council staff) in November 2023, on how they wish to be involved.
 - Confirming the transition approach from FEP to FW-FP that avoids a farm needing two farm plans while ensuring all legal requirements of consent conditions associated with FEP are met.
 - Understanding requirements of and identifying options for developing CCCV, certifier and auditor appointment and training, and data and systems needs.
 - Communicating the implementation approach and key milestones for implementation with the rural sector, irrigation schemes and industry.
 - Ongoing engagement with Te Uru Kahika/Regional and Unitary Councils Aotearoa on national tools and systems and opportunities to learn from those councils implementing early.

Cost, compliance and communication

Financial implications

27. Work programmes supporting the implementation of N-Cap and IWG regulations are covered in existing budgets.
28. There will be financial implications associated with the implementation of the FW-FP Regulations in Canterbury. Staff are currently working to understand and quantify the extent of these implications to inform the Long-Term Plan 2024-2034.

Risk assessment and legal compliance

29. Risks and legal compliance are being managed through the individual implementation programmes.
30. It is up to each farmer to determine if they comply with permitted activity provisions of IWG or need a resource consent. There is a risk that as properties who need consent do not apply and they may find it increasingly difficult to gain consent in the future.

Engagement, Significance and Māori Participation

31. Communications and engagement are a key element of the implementation work programmes for N-Cap and IWG as noted in the updates above.
32. A communications and engagement plan is being developed to support the FW-FP workstreams in the lead up to 1 July 2025, when the Regulations will turn on in Canterbury and during the roll-out. Initially the focus will be on communicating the approach that will be used to implement the FW-FP Regulations in Canterbury, key dates for the implementation and the approach that will be used for the switch from FEP to FW-FP.
33. It is recognised that in Canterbury there are a significant number of farmers that are well informed and already have FEP arrangement associated with their Farming Land Use consent. The remaining farmers have not traditionally engaged with Environment Canterbury on activities relating to farming operation as they often do not have existing consents.
34. Engagement with papatipu rūnanga to the extent they wish to be, will be crucial to the success of the implementation approach of the FW-FP Regulations in Canterbury. Initial engagement will be via Te Paiherenga in November 2023. Staff are working to plan further engagement with rūnanga on FW-FP Regulations taking into consideration other priority work such as development of the integrated regional plan.

Consistency with Council policy

35. The Zone Delivery Priority Projects and budget expenditure align with the Canterbury Water Management Strategy, Council Policies, and the Canterbury Biodiversity Strategy.
36. The Zone Delivery Priority Projects contribute to the Freshwater Resilience work programme. Level of Service 11.3 is to achieve improvements in freshwater outcomes through implementation and delivery of work programmes with partners and key agencies, where priorities are aligned. The target is to report on 10 priority projects.

Climate Change Impacts

37. The CWMS and its effective implementation are one of the adaptation strategies Canterbury has in place to respond to climate change and support community resilience.

Next steps

38. All implementation programmes will continue for the remainder of 2023/24 as scheduled.
39. Further updates on progress will be provided to the Water and Land Committee in line with quarterly reporting.

Attachments

1. Timeline [8.4.1 - 1 page]

Legal review	
Peer reviewers	Cameron Smith, Senior Strategy Manager Judith Earl-Goulet, General Manager - Regulatory Services

8.5. Zone Priority Project Update 2022/23

Water and Land Committee report

Date of meeting	Wednesday, 18 October 2023
Author	Johannes Welsch, Zone Manager - Central
Responsible Director	Tim Davie, Director of Science

Purpose

1. To provide the Water and Land committee with an update on the work delivered through Zone Delivery Priority Projects workstream.

Recommendations

That the Water and Land Committee:

1. **Receives this progress update on Zone Delivery Priority Projects for 2022/23 and the outlook for this current financial year 2023/24.**
2. **Recommends that staff continue to work on the Zone Delivery programme, noting that progress updates will be provided to Council, or an appropriate committee of Council, on an ongoing basis.**

Key points

2. Zone Delivery Priority Project funding (ZPP) was established through Environment Canterbury's Long-Term Plan 2021-31. The intention of the funding is to implement catchment based work programmes and projects working with and behalf of the community to maintain constructive relationships with partners and stakeholders
3. All Zone Delivery teams have completed their projects and working on delivery towards their projects for 2023/24
4. All Zone Delivery priority projects are delivering towards:
 - Aligned catchment approach (socio/hydro/strategic)
 - Support key local and regional community and catchment groups.
 - Project areas and values align and are partially led by rūnanga.
 - Majority of project support multi-year projects to ensure success of project and build commitment and trust with the local community.
 - Most projects are supported both financially and in-kind by partners, landowners or other funding providers. Environment Canterbury's \$300,000 contribution pairs with other funds and inkind action to contribute to over \$2 million of on the ground delivery.

Background

5. The funding stream called Zone Delivery Priority Project funding (ZPP) was established through Environment Canterbury's Long-Term Plan Te Pae Tawhiti 2021-31. The intention of this work stream was to implement catchment based work

programmes and projects working with and behalf of the community to maintain constructive relationships with partners and stakeholders. Support for the 10 zone committees is part of this work and often the funding allocated is matched with contributions from other parties.

6. The total budget is approximately \$300k annually that is across the whole region. This has varied in response to emerging issues that needed financial support (Examples: the fan worm issue in Whakaraupō, post flood events on Banks Peninsula).
7. Past and current funding rounds have also covered \$220,000 for Soil Conservation and Revegetation Programme (SCAR) in North Canterbury.
8. Zone Delivery Priority Projects work stream is the sole Goods and Service funding in Zone Delivery. This funding plays a key role in ensuring commitment and building trust with the community, stakeholders, rūnanga and other partners towards action to improve the environment.
9. The projects are separated into Northern, Central and Southern projects. This reflects the very distinct differences between community, rūnanga and stakeholder needs and approaches throughout Canterbury.
 - Northern: Kaikōura and Waimakariri zone committees, and the Hurunui area
 - Central: Christchurch West Melton, Banks Peninsula, and Selwyn Waihora zone committees.
 - Southern: Ashburton, Ōrāri Temuka Ōpihi Pareora, Lower Waitaki, and Upper Waitaki zone committees
10. Each of the above areas receive \$100K annually for allocation.

Zone Priority Projects 2022/23

11. The listed projects below identify funding support where the value provided by Environment Canterbury is over \$5000.

Northern – Kaikōura, Waimakariri and the Hurunui area

12. Northern projects cover everything from supporting the set-up of catchment groups, funding grassroot efforts for trap building, through to full scale habitat protection for nesting birds, wetlands and mahinga kai. One of the best examples for longstanding commitment and great environmental and community outcomes is the Love the Lyell project.
13. Waiau Toa – signage developed and erected advising of nesting native braided river birds and riverbed brush weed control around black billed gull nesting sites to improve quality of the braided river environment.
14. Charwell/Conway – weed control in targeted areas to improve nesting and breeding success of black billed gulls.
15. Hapuku – funding provided for the production of traps, assembled by members of the Men Shed, and vine control at the Hapuku mouth as part of the Hapuku Catchment Collective.
16. Kaikōura Plains – Love the Lyell (Warrens Creek) includes restoration planting, fencing for stream protection, wetland enhancements approx. 2-3 ha, erosion control, mahinga

kai and protection of existing terrestrial biodiversity as well as additional landowner engagement and education. Nagari Wetland, an ecologically rich freshwater environment in West End Kaikoura / Restoration of the Lyell's best example of a fen wetland.

17. Amuri Basin Future Farming - Supporting the establishment of 13 Catchment Groups across 137 Farms in the Amuri Basin. This was possible through the commitment of multi-year funding by Environment Canterbury and Ministry for Primary Industry and in-kind from the wider farming community.
18. Saltwater Creek catchment - large wetland woody weed control, springs, wetland as well as natural spring regeneration already occurring in partnership with "Wetlands as Farm Assets" project (Environment Canterbury / Ministry of Primary Industry) multi-year also partnered with Fonterra.

Central - Christchurch West Melton, Banks Peninsula, and Selwyn Waihora

19. A key focus in the Central zone has been the multi-year support of key community groups delivering on Avoca valley restoration, Te Ahu Pātiki and Te Ara kakariki. All three groups deliver significant landscape-scale terrestrial biodiversity catchment outcomes and community engagement results beyond the ability of our funding.
20. Te Ara Kakariki – funding over 3 years to support the Greendot Programme with the vision to connect the Southern Alps with Te Waihora and Te Pataka o Rakaihautū (Banks-Peninsula).
21. Whakaraupō Te Ahu Pātiki – funding over 3 years to support the setup of the new conservation park concept. This partnership funding is leveraging funding from multiple agencies – Christchurch City Council (CCC), Rod Donald Trust, QEII, private investors and Ngati Wheke beyond \$1 million dollars.
22. Whakaraupō Steadfast Stream - Supporting community planting of the catchment in conjunction with Cass Bay Residents Association, Conservation Volunteers, Ngati Wheke, Whaka ora Healthy Harbour, CCC. This contribution to a much bigger Whaka-ora programme with a significant amount of community ground-swell building and joint delivery of all partners including Lyttelton Port Company (LPC), local government and Ngati Wheke as well as conservation volunteers, Kaimahi for nature teams and landowners around the harbour.
23. Wairewa Catchment – Maintenance of riparian planting programmes along multiple waterways which is building on work from Zone Committee and rūnanga.
24. Eastern Bay Flood Response – This was part of a multi-year commitment to support communities on the easter side of the peninsula post weather event with funding to reinstate fencing of protected terrestrial and biodiversity areas taken out by slips. This work included Queen Elizabeth II (QEII) and Banks Peninsula Conservation Trust (BPCT) covenants.
25. Avoca Valley – Supporting restoration of vegetation of the whole catchment. This project delivers in partnership with Department of Conservation Jobs for Nature programme, Christchurch City Council, Harry Ell Summit Road Memorial Trust, Million Metre Streams, Trees that Count, Environment Canterbury, Meridian and donations from individuals, families, and local businesses.

26. Styx River Humms Drain - Planting and maintenance of a degraded riparian area and rubbish removal. This work is in conjunction with CCC as part of a significant project.

Southern - Ashburton, Ōrāri Temuka Ōpihi Pareora, Lower Waitaki, and Upper Waitaki

27. One of the key features of the Southern projects was weed control to ensure braided river habitat, wetland enhancement, riparian restoration and bird breeding habitats. This work includes a variety of weeds. A great example for this is the bird habitat in the Upper Ohau Catchment for example.
28. Several projects are multi-agency as well as community group supported or led. Working with local catchment groups in Pareora/Kakahu/Tengawai or the Ahuriri catchment have been fundamental to working with, and delivering together, on key local aspirations and challenges. The approach relies heavily on the groups and their pathway to solutions and opportunities.
29. Alford forest and foothills – Holly control multi-year programme with support from local landowners
30. Mt Harding – aligned work programme for weed control with land owners and work by Environment Canterbury Rivers team
31. Rakaia gorge – Terrestrial biodiversity protection and enhancement project in collaboration with Department of Conservation, local rūnanga, Land Information New Zealand (LINZ), Selwyn District Council (SDC), Ashburton District Council (ADC) and local landowners.
32. Upper and lower Ashburton / Hakatere river –Braided river habitat, wetland enhancement and weed control
33. Ahuriri catchment – In collaboration with Zone Committee and local community focused on water quality monitoring and weeds
34. Upper Ohau – Inter agency weed control work and braided river habitats
35. Taikao stream – Taonga mudfish habitat protection and enhancement

Outlook for Zone Priority Projects 2023/24

36. The Zone Delivery teams within Environment Canterbury have been working to align the various internal and external funding and leveraging opportunities into a more focused catchment-approach. This is to improve delivery in conjunction with various parts of Environment Canterbury including rivers, programmes & Implementation, science, biosecurity, communications and Tuia teams.

Northern

37. Kaikōura Plains - ongoing maintenance/enhancement work of existing projects above including additional planting along sections of the Lyall and wetlands, weed/predator control. Good Management Practice project on private land includes enhanced water quality, biodiversity and landowner engagement/education.
38. Waipara Hapua – Willow control with a 2ha area of coastal wetland which will result in increased native biodiversity and landowner education/engagement.

39. Hurunui Lakes – Weed/predator control in a unique environment. Community engagement with the local farmers providing education on native biodiversity protection
40. Amuri Basin Future Farming – Ongoing support to ensure the establishment of 13 Catchment Groups across 137 Farms in the Amuri Basin. This is funded for multiple years with Ministry for Primary Industries (MPI).
41. Saltwater Creek catchment - woody weed control in large wetland and spring heads with adjoining landowners.
42. Ashley Rakahuri Rat Group received a grant to contract a rat control dog to protect threatened braided river birds.

Central

43. Te Ara Kakariki – funding over 3 years to support the Greendot Programme (last year of funding)
44. Whakaraupō Te Ahu Pātiki – funding over 3 years to support the setup of the new conservation park concept. Leveraging funding from multiple agencies – CCC, Rod Donald Trust, QEII, private investors and Ngāti Wheke (last year of funding)
45. Whakaraupō Steadfast Stream - Supporting community planting and maintenance of the catchment in conjunction with Cass Bay Residents Association, Conservation Volunteers, Ngati wheke, Whaka ora Healthy Harbor, CCC
46. Avoca Valley – Supporting restoration of vegetation of the catchment. Leveraging with CCC, QEII (last year of funding)

Southern

47. Mt Potts – implementation of weed control plan for Mt Potts controlling woody weeds escaping from homestead
48. Ashburton river - Oldfields wetland enhancement
49. Surface water quality sampling program in Carters creek to inform management of contaminants – closely working with and supporting community groups
50. North Ashburton Catchment - Progressive containment of Alders and controlling road erosion control planting
51. Sustainable Farming Fund - Futures Project Farm management practices to reduce soil compaction under irrigation and grazing. Collaboration with various Industry partners
52. Kakahu - Working with upper catchment farmers to establish where the issues are in the catchment and fund the installation of sediment traps to reduce sediment running into the Kakahu river working closely with landowners and catchment group/farming community
53. Coastal interface- Philaris control - rūnanga led project.
54. Hakataramea – rūnanga priority - maintenance weed control in the upper reaches for willow, lupin, broom and barberry control

55. Ohau – Post fire support in collaboration with Mackenzie District Council, rūnanga, and the community
56. Ahuriri - Sediment trap installation, critical source mapping, nutrient risk assessment in relation to Good Management Practice and future Freshwater Farm Plans in co-design with rūnanga and other parts of Environment Canterbury

Cost, compliance and communication

Financial implications

57. The funding of Zone Priority Projects (ZPP) represents approximately \$300,000 annually. Past and current funding rounds have also covered \$220,000 for Soil Conservation and Revegetation Programme (SCAR) in North Canterbury.
58. The ZPP funding has been consistent and has enabled teams to make multiyear commitments across the region which have led to significant increases in leveraging with and from other partners and landowners. On average Environment Canterbury's \$300,000 investment is leveraged through working with others to contribute to over \$2 million worth of on ground delivery.
59. ZPP funding also regularly covers the costs of external facilitators, venue hire, minor catering, additional communication material and other miscellaneous needs to support successful engagement and support across the catchments.

Engagement, Significance and Māori Participation

60. The Zone Delivery Priority Project budget has been guided by the priorities of Environment Canterbury, local territorial authorities, rūnanga, zone committees and other partners and landowners which has been highlighted by the projects listed above.
61. Rūnanga representatives at Zone committees and through on the ground relationships have been a strong voice in setting priorities of both focus, type of projects and successful implementation.

Consistency with council policy

62. The Zone Delivery Priority Projects and budget expenditure align with the Canterbury Water Management Strategy, Council Policies, and the Canterbury Biodiversity Strategy.
63. The Zone Delivery Priority Projects contribute to the Freshwater Resilience work programme. Level of Service 11.3 is to achieve improvements in freshwater outcomes through implementation and delivery of work programmes with partners and key agencies, where priorities are aligned. The target is to report on 10 priority projects.

Climate Change Impacts

64. The CWMS and its effective implementation are one of the adaptation strategies Canterbury has in place to respond to climate change and support community resilience.

Communication

65. Environment Canterbury Communications team attempts to feature project across the region on our internal news page, social media channels and has selected success in stories being pick up by external media providers.

Next steps

66. Zone Delivery teams will continue to implement their projects and engage further as well as consolidate outstanding priority projects for budget and strategic alignment purposes.

Attachments

Nil

Legal review	
Peer reviewers	Judith Earl-Goulet, General Manager - Regulatory Services

9. Next Meeting

The next meeting of the Water and Land Committee is scheduled to be held on 29 November 2023. Any changes to this time will be publicly advertised and updated on the Environment Canterbury website.

10. Karakia Whakamutunga - Closing

The meeting will conclude with a karakia by a member of the Water and Land Committee.