

## **Three Waters Infrastructure and Environment Committee AGENDA**

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### **Notice of Meeting:**

An ordinary meeting of the Three Waters Infrastructure and Environment Committee will be held on:

**Date:** **Wednesday 7 April 2021**  
**Time:** **9.30am**  
**Venue:** **Council Chambers, Civic Offices,  
53 Hereford Street, Christchurch**

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### **Membership**

Chairperson	Councillor Pauline Cotter
Deputy Chairperson	Councillor James Daniels
Members	Mayor Lianne Dalziel
	Deputy Mayor Andrew Turner
	Councillor Jimmy Chen
	Councillor Catherine Chu
	Councillor Melanie Coker
	Councillor Mike Davidson
	Councillor Anne Galloway
	Councillor James Gough
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Sam MacDonald
	Councillor Phil Mauger
	Councillor Jake McLellan
	Councillor Tim Scandrett
	Councillor Sara Templeton

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**31 March 2021**

### **Principal Advisor**

Carolyn Gallagher  
Acting General Manager  
Infrastructure, Planning &  
Regulatory  
Tel: 941 8879

David Corlett  
Committee and Hearings Advisor  
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Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. If you require further information relating to any reports, please contact the person named on the report.

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## Ōtautahi-Christchurch is a city of opportunity for all

Open to new ideas, new people and new ways of doing things – a city where anything is possible

### Principles

Being open, transparent and democratically accountable	Promoting equity, valuing diversity and fostering inclusion	Taking an inter-generational approach to sustainable development, prioritising the social, economic and cultural wellbeing of people and communities and the quality of the environment, now and into the future	Building on the relationship with Te Rūnanga o Ngāi Tahu and the Te Hononga-Council Papatipu Rūnanga partnership, reflecting mutual understanding and respect	Actively collaborating and co-operating with other local, regional and national organisations	Ensuring the diversity and interests of our communities across the city and the district are reflected in decision-making
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### Community Outcomes

<b>Resilient communities</b> Strong sense of community Active participation in civic life Safe and healthy communities Celebration of our identity through arts, culture, heritage, sport and recreation Valuing the voices of all cultures and ages (including children)	<b>Liveable city</b> Vibrant and thriving city centre Sustainable suburban and rural centres A well connected and accessible city promoting active and public transport Sufficient supply of, and access to, a range of housing 21st century garden city we are proud to live in	<b>Healthy environment</b> Healthy water bodies High quality drinking water Unique landscapes and indigenous biodiversity are valued and stewardship exercised Sustainable use of resources and minimising waste	<b>Prosperous economy</b> Great place for people, business and investment An inclusive, equitable economy with broad-based prosperity for all A productive, adaptive and resilient economic base Modern and robust city infrastructure and community facilities
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### Strategic Priorities

Enabling active and connected communities to own their future	Meeting the challenge of climate change through every means available	Ensuring a high quality drinking water supply that is safe and sustainable	Accelerating the momentum the city needs	Ensuring rates are affordable and sustainable
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### Ensuring we get core business done while delivering on our Strategic Priorities and achieving our Community Outcomes

Engagement with the community and partners	Strategies, Plans and Partnerships	Long Term Plan and Annual Plan	Our service delivery approach	Monitoring and reporting on our progress
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**THREE WATERS INFRASTRUCTURE AND ENVIRONMENT COMMITTEE OF THE WHOLE - TERMS OF REFERENCE / NGĀ ĀRAHINA MAHINGA**

<b>Chair</b>	Councillor Cotter
<b>Deputy Chair</b>	Councillor Daniels
<b>Membership</b>	The Mayor and All Councillors
<b>Quorum</b>	Half of the members if the number of members (including vacancies) is even, or a majority of members if the number of members (including vacancies) is odd.
<b>Meeting Cycle</b>	Monthly
<b>Reports To</b>	Council

***Delegations***

The Council delegates to the Three Waters Infrastructure and Environment Committee authority to monitor and make decisions on:

- Water supply, conservation and quality.
- Receive regular updates from the Water Management Zone Committees.
- Stormwater drainage including the Land Drainage Recovery Programme.
- Natural environment, including the waterways, aquifers, ecology and conservation of resources.
- Natural hazards protection, including flood protection and river control.
- Solid waste collection, processing and disposal including landfills.
- Sewage collection, treatment and disposal.
- Applications to the Biodiversity Fund.

***Bylaws***

The Council delegates to the Committee authority to:

- Oversee the development of new bylaws within the Committee's terms of reference, up to and including adopting draft bylaws for consultation.
- Oversee the review of the following bylaws, up to and including adopting draft bylaws for consultation.
  - Trade Waste Bylaw 2015
  - Waste Management Bylaw 2009
  - Water Supply, Wastewater and Stormwater Bylaw 2014

***Submissions***

- The Council delegates to the Committee authority:
- To consider and approve draft submissions on behalf of the Council on topics within its terms of reference. Where the timing of a consultation does not allow for consideration of a draft submission by the Council or relevant Committee, that the draft submission can be considered and approved on behalf of the Council.



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***Limitations***

- This Committee does not have the authority to set project budgets, identify preferred suppliers or award contracts. These powers remain with the Finance and Performance Committee.
- The general delegations to this Committee exclude any specific decision-making powers that are delegated to a Community Board, another Committee of Council or Joint Committee. Delegations to staff are set out in the delegations register.
- The Council retains the authority to adopt policies, strategies and bylaws.

***Chairperson may refer urgent matters to the Council***

As may be necessary from time to time, the Committee Chairperson is authorised to refer urgent matters to the Council for decision, where this Committee would ordinarily have considered the matter. In order to exercise this authority:

- The Committee Advisor must inform the Chairperson in writing the reasons why the referral is necessary.
- The Chairperson must then respond to the Committee Advisor in writing with their decision.
- If the Chairperson agrees to refer the report to the Council, the Council may then assume decision-making authority for that specific report.

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Part A	Matters Requiring a Council Decision
Part B	Reports for Information
Part C	Decisions Under Delegation

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Karakia Whakamutunga

## Karakia Timatanga

### 1. Apologies / Ngā Whakapāha

At the close of the agenda no apologies had been received.

### 2. Declarations of Interest / Ngā Whakapuaki Aronga

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

### 3. Confirmation of Previous Minutes / Te Whakaāe o te hui o mua

That the minutes of the Three Waters Infrastructure and Environment Committee meeting held on [Wednesday, 10 March 2021](#) be confirmed (refer page 8).

### 4. Public Forum / Te Huinga Whānui

A period of up to 30 minutes will be available for people to speak for up to five minutes on any issue that is not the subject of a separate hearings process.

### 5. Deputations by Appointment / Ngā Huinga Whakaritenga

Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.

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

### 6. Presentation of Petitions / Ngā Pākikitanga

There were no petitions received at the time the agenda was prepared.

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## Three Waters Infrastructure and Environment Committee OPEN MINUTES

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**Date:** Wednesday 10 March 2021  
**Time:** 9.31am  
**Venue:** Council Chambers, Civic Offices,  
53 Hereford Street, Christchurch

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**Present**

Chairperson	Councillor Pauline Cotter
Deputy Chairperson	Councillor James Daniels
Members	Mayor Lianne Dalziel
	Deputy Mayor Andrew Turner
	Councillor Jimmy Chen
	Councillor Melanie Coker
	Councillor Mike Davidson
	Councillor Anne Galloway
	Councillor James Gough
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Sam MacDonald
	Councillor Phil Mauger
	Councillor Jake McLellan
	Councillor Sara Templeton

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10 March 2021

**Principal Advisor**

Carolyn Gallagher  
Acting General Manager Infrastructure,  
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**Part A Matters Requiring a Council Decision**

**Part B Reports for Information**

**Part C Decisions Under Delegation**

**Karakia Timatanga:** Given by Councillor Cotter.

The agenda was dealt with in the following order.

## **1. Apologies / Ngā Whakapāha**

**Part C**

**Committee Resolved TWIA/2021/00005**

That the apologies received from Councillor Scandrett for absence and Councillor McKeown, the Mayor and Deputy Mayor for lateness be accepted.

Councillor Cotter/Councillor Templeton

**Carried**

The Mayor, Deputy Mayor and Councillor Keown joined the meeting at 9.32am.

## **2. Declarations of Interest / Ngā Whakapuaki Aronga**

**Part B**

There were no declarations of interest recorded.

## **3. Confirmation of Previous Minutes / Te Whakaāe o te hui o mua**

**Part C**

**Committee Resolved TWIA/2021/00006**

That the minutes of the Three Waters Infrastructure and Environment Committee meeting held on Wednesday, 10 February 2021 be confirmed.

Councillor McLellan/Councillor MacDonald

**Carried**

## **4. Public Forum / Te Huinga Whānui**

**Part B**

There were no public forum presentations.

## **5. Deputations by Appointment / Ngā Huinga Whakaritenga**

**Part B**

There were no deputations by appointment.

## **6. Presentation of Petitions / Ngā Pākikitanga**

**Part B**

There was no presentation of petitions.

## 7. Zone Committees Annual Reports

### Committee Comment

1. The Committee requested a memorandum to the Te Pātaka o Rākaihautū/Banks Peninsula Community Board so that they can advise the community on the progress on the Wainui Wastewater Project.
2. The Committee noted that the Zone Committees are unable to submit on the Council's draft LTP in their own right, and asked staff to look at how the Zone Committees might provide input.

**Committee Resolved TWIA/2021/00007 Officer recommendation adopted without amendment**

### Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receive the Zone Committees' 2020 annual reports.
2. Note the work of each of the three water management Zone Committees.

Councillor Cotter/Deputy Mayor

Carried

Councillor Templeton left the meeting at 10.09am and returned at 10.12am during discussion on item 7.

## 8. Three Waters Infrastructure and Environment Committee Report - January/February 2021

### Committee Comment

1. The Committee discussed reporting processes in relation to the Bromley Organics Processing Plant and requested staff to liaise with ECan to clarify the frequency of certain reports.

### Officer Recommendations / Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters Infrastructure and Environment report for January and February 2021.

**Committee Resolved TWIA/2021/00008**

### Part C

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters Infrastructure and Environment report for January and February 2021.
2. Request that the Bromley area reports on Odour and Dust by ECan be part of this report in future.

Councillor Davidson/Councillor Gough

Carried



**Karakia Whakamutunga:** Given by Councillor Turner.

Meeting concluded at 10.26am.

CONFIRMED THIS 7<sup>TH</sup> DAY OF APRIL 2021

COUNCILLOR PAULINE COTTER  
CHAIRPERSON

Unconfirmed

Item 3 - Minutes of Previous Meeting 10/03/2021



## 7. Waimakariri Zone Committee Minutes

Reference / Te Tohutoro: 21/347400

Report of / Te Pou  
Matua:

Liz Ryley, Committee & Hearings Advisor, [liz.ryley@ccc.govt.nz](mailto:liz.ryley@ccc.govt.nz)

General Manager /  
Pouwhakarae:

Carolyn Gallagher, Acting General Manager Infrastructure, Planning  
and Regulatory, [carolyn.gallagher@ccc.govt.nz](mailto:carolyn.gallagher@ccc.govt.nz)

### 1. Purpose of Report / Te Pūtake Pūrongo

The Waimakariri Zone Committee held meetings on 7 September 2020, 5 October 2020, 2 November 2020, and 1 March 2021, and is circulating the Minutes recorded to the Council for its information.

### 2. Recommendation to Three Waters Infrastructure and Environment Committee

That the Three Waters Infrastructure and Environment Committee receives the Minutes from the Waimakariri Zone Committee meetings held 7 September 2020, 5 October 2020, 2 November 2020, and 1 March 2021.

### Attachments / Ngā Tāpirihanga

No.	Title	Page
A <a href="#">↓</a>	Minutes - CWMS Waimakariri Zone Committee meeting - 7 September 2020	14
B <a href="#">↓</a>	Minutes - CWMS Waimakariri Zone Committee meeting - 5 October 2020	21
C <a href="#">↓</a>	Minutes - CWMS Waimakariri Zone Committee meeting - 2 November 2020	29
D <a href="#">↓</a>	Minutes - CWMS Waimakariri Zone Committee meeting - 1 March 2021	39

### Signatories / Ngā Kaiwaitohu

Author	Liz Ryley - Committee and Hearings Advisor
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**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY  
WAIMAKARIRI ZONE COMMITTEE HELD IN THE FUNCTION ROOM AT THE RANGIORA  
TOWN HALL, 303 HIGH STREET, RANGIORA ON MONDAY 7 SEPTEMBER 2020 AT 3:30PM.**

**PRESENT**

Michael Blackwell (Chairperson), Cameron Henderson (Deputy Chairperson), Dave Ashby, Erin Harvie, Carolyn Latham, Wendy Main, Judith Roper-Lindsay, John Cooke (Te Ngāi Tūāhuriri Rūnanga representative), Arapata Reuben (Te Ngāi Tūāhuriri Rūnanga representative), Councillor Megan Hands (ECan Councillor) and Councillor Sandra Stewart (WDC Councillor).

**IN ATTENDANCE**

J Benn (Department of Conservation), Councillor P Redmond (WDC Councillor) and Councillor V Daly (HDC Councillor).

G Cleary (WDC Manager Utilities and Roading), S Allen (WDC Water Environment Advisor), K Steel (WDC Ecologist-Biodiversity), Dr T Davie (ECan: Acting Director of Science), A Arps (ECan Zone Manager), A Meredith (ECan Principal Water Quality and Ecology Scientist), A McLeod (ECan), S Bragg (ECan CWMS Tangata Whenua Facilitator), M Griffin (ECan CWMS Facilitator) and T Kunkel (WDC Governance Team Leader).

**1 BUSINESS**

**1.1 Karakia**

S Bragg provided the karakia to open the meeting.

**1.2 Apologies**

Moved: M Blackwell

Seconded: C Henderson

An apology for lateness was received and sustained from D Ashby.

**CARRIED**

**1.3 Welcome and Introductions**

The Chairperson welcomed all the members present. He requested the CWMS Waimakariri Zone Committee members, and attendees to introduce themselves to the members of the public that may be listening.

The Chairperson also advised that due to Covid-19 Alert Level 2 requirements the number of staff attending the meeting had been limited. Members of the public had also been advised that they would not be able to attend the meeting due to social distancing requirements, but would be able to listen to the meeting which was being audio streamed.

**1.4 Register of Interests**

No changes or updates were made.

**2 KAIAPOI RIVER MONITORING AND MANAGEMENT – UPDATE – A MEREDITH  
(ECAN, PRINCIPAL SURFACE WATER SCIENTIST) AND S ALLEN (WDC, WATER  
ENVIRONMENT ADVISOR)**

A Meredith reported that a salinity logger had been deployed near the bed of the Kaiapoi River from November 2019 to August 2020. However, the logger failed in mid-May 2020 and did not collect any data from late May to August 2020. The collected salinity data

however showed that there was no salinity intrusion into the Kaiapoi River during late 2019, and the first significant incident was in mid-January 2020. More consistent periods of salinity intrusion occurred between February 2020 and April 2020. It was possible that there were also mid-winter saline intrusion periods during the dry winter months of July and August 2020, with the river recording long periods of naturally sustained low flows over this period.

A Meredith advised that routine water quality sampling of a site within the Kaiapoi River was not currently being conducted due to the highly dynamic nature of the waterway that received daily tidal fluctuations. To successfully measure the water quality of the Kaiapoi River, would require continuous (15 minute) sampling with sonde mounted water quality probes. This proposal was being further scoped for potential installation this year, as it would be most feasible method to give effect to the ZIPA recommendations for managing the water quality of the Kaiapoi River.

J Roper-Lindsay enquired if any biological monitoring was being done on the banks of the Kaiapoi River. A Meredith advised that mud crab activity had been observed on the banks of the Kaiapoi River, which was an indication of saline intrusion into the river. S Allen confirmed that mud crab activity had been detected up to the Cam River floodgate.

Councillor S Stewart enquired as to what equipment would be needed to measure the flow of the Kaiapoi River. A Meredith explained that measuring the flow in a tidal waterway would be difficult. The Ohoka Stream, Silverstream, Cust Main Drain and to an extent up the Cam River had flow loggers and it would be best practise to calculate the flow data and estimate if there were any gains below that. He doubted that it would be possible to measure flow at the current proposed recorder site in the river. ECan would however be installing a level gauge to more accurately measure water levels and tidal influences.

Councillor S Stewart asked if it would be possible to the measure tidal flow (low and high tide) in the Kaiapoi River below the abovementioned contributories, and if ECan had the necessary equipment. A Meredith stated that the value of such recordings needed to be investigated as well as the most effective way to measure tidal flow.

In response to questions, A Meredith advised that it was proposed to install a nitrate logger and a multi-channel logger which would measure the Chlorophyll a , pH-level, dissolved oxygen and "greenness of the river" at the current recording site at the Mandeville Bridge. The recorded data would be correlated with the backflow of the Waimakariri River water, tidal water levels and upstream flows to establish what was generating the worst water quality and ways to improve the water quality.

S Allen stated that as part of its Long Term Plan, the Council acknowledged the role of the Kaiapoi River. There was only one year left of the Kaiapoi River Rehabilitation Working Programme. The Council's current management of the Kaiapoi River included inter-tidal planting, dredging, terrestrial planting, and scoping of pigeon control and an in-line wetland and sediment trap. This was being funded through ZIPA and the Kaiapoi River Rehabilitation budgets. She reported that the Council had employed Jacobs Ltd, to complete hydrodynamic modelling of the Waimakariri District Coastline.

J Roper-Lindsay requested that a presentation be done at a subsequent meeting of the CWMS Waimakariri Zone Committee on the finding of the Jacobs Ltd report. S Allen noted that public meeting would be held in September/October 2020 on Natural Hazards Modelling. M Griffin was requested to facilitate a CWMS Waimakariri Zone Committee briefing on the Natural Hazards Modelling.

M Blackwell stated that on 3 September 2020 the National Policy Statement on Freshwater Management (NPS-FM) came into effect. The NPS-FM required real time monitoring of water environments. It was therefore important that ECan install the equipment that would cater for real time monitoring in the Kaiapoi River. Especially in light of the fact that there was a bathing site at the Kaiapoi Bridge, which would have to be tested daily for Escherichia coli (E. coli).

Moved: Councillor S Stewart

Seconded: C Latham

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update regarding the Kaiapoi River Monitoring and Management.
- (b) **That** Ecan be requested to urgently install a nitrate logger and a multi-channel logger in the Kaiapoi River at the current recording site at the Mandeville Bridge.
- (c) **That** Ecan take advice and investigate the possibility of installing a tidal flow (low and high tide) in the Kaiapoi River below the contributories.
- (d) **That** Ecan report to the CWMS Waimakariri Zone Committee on the monitoring of the Kaiapoi River.

**CARRIED**

Councillor S Stewart stated that there was no verified data on the water flow and quality in the main stream of the Kaiapoi River. The Kaiapoi River was a receiving environment for most of the contributory streams in the southern part of the district and its water quality therefore needed monitoring. The Kaiapoi River also seemed to qualify for various elements of degradation under the NPS-FM, and it was therefore important that the monitoring of the river be prioritised.

Councillor M Hands sought clarity as to the roles of the Councils and the CWMS Waimakariri Zone Committee with regard to the broader monitoring required of the NPS-FM. A Meredith explained that the monitoring of the Kaiapoi River had been driven by the ZIPA recommendations that identified the degraded water quality of the Kaiapoi River as a concern. Due to the tidal nature of the Kaiapoi River it needed special monitoring techniques similar to a lake rather than a river. Although the NPS-FM did not explicitly indicate where monitoring had to take place, it did focus on integrated rivers such as the Kaiapoi River. T Davie noted that the NPS-FM had set new parameters on what needed to be monitored rather than where. ECan was already adhering to some of the new monitoring requirements.

### **3 COMMITTEE UPDATE – M GRIFFIN (ECAN)**

#### **5.1 Proposed Plan Change 7 (Waimakariri)**

M Griffin advised that the independent Hearing Panel had set down a new timetable for the Plan Change 7 hearing. The hearing would commence on 28 September 2020 and would run on five 5 non-consecutive weeks through to 4 December 2020. The Panel Chairperson, David Sheppard, resided in Melbourne, Australia and was currently under COVID-19 lockdown restrictions. The Chairperson would therefore be attending the hearing via video conferencing. The hearing would be held in Christchurch and Timaru.

#### **5.2 CWMS Regional Committee**

C Latham reported that the last CWMS Regional Committee meeting was held on Tuesday 11 August 2020. The next meeting would be held on 13 October 2020.

#### **5.3 Land and Water Committee**

In response to a question from J Roper-Lindsay, S Allen clarified that the flows of the springs in the Fernside area where the Pinevale Farm planting would be done followed Fernside Road.



#### 5.4 Zone Committee Working Groups

- Landcare Working Group

C Henderson provided the following update:

- The Working Group took a walk on 4 September 2020 on properties around the spring heads at Silverstream.
- The Working Group had shifted away from general public engagement to a Landcare Group which sought to engage more with farmers and other rural stakeholders.

- Biodiversity Working Group

J Roper-Lindsay highlighted the following:

- Drone photography – J Cooke was going to use a drone to take video and photos of the Cam/Ruataniwha River between the floodgates and Revel's Road.
- ZIPA implementation updates – The Council had obtained "shovel-ready" project funding for part of Kaiapoi flood management which included habitat restoration on McIntosh's and Feldwick Drains.
- "Environment" Award - The possibility of establishing an award to recognise biodiversity work by individuals or groups in the District was discussed.
- Te Ara Kākāriki Trust - The trust may be able to do work in Waimakariri District.
- Taranaki Reserve planting - CWMS Waimakariri Zone Committee members were encouraged to join in a second planting day.
- Saltwater Creek Catchment Group meeting - Members of the Biodiversity Working Group would continue to attend meetings.
- The next meeting would be held on 1 October 2020.

- Coastal Catchments Working Group

C Latham advised as follows:

- A meeting was held on 25 August 2020 for the Saltwater Creek catchment, which was attended by approximately 31 people from 24 properties.
- It was agreed that the property owners wanted to form a Saltwater Creek Catchment Group.
- Next meeting would be held on 6 October 2020.

*D Ashby joined the meeting at 4:22pm.*

#### 5.5 Communications and Engagement

M Griffin reported that the communications and engagement had focused mainly on addressing the public's concerns surrounding the clearing of trees in an area of Ashley/Rakahuri Regional Park.

J Roper-Lindsay asked what was planned for the area where the trees had been removed. A Arps confirmed that after consultation with residents it was anticipated that the area would be planted. He suggested that the CWMS Waimakariri Zone Committee could be briefed on this matter at their next meeting.

#### 5.6 Action for Healthy Waterways

T Davie explained there was different aspects to the Government's Action for Healthy Waterways package, which were the NPS-FM, National Environmental Standards for Freshwater Regulations, Stock Exclusion and Water Measurement and Reporting. NPS-

FM sets out a higher framework to which Land and Water Regional Plans had to adhere to in future.

T Davie advised that under the new National Environmental Standards for Freshwater Regulations, intensive winter grazing could require a consent. The new regulations for intensive winter grazing would come into force on 1 May 2021, where after property owners would still have six months under their existing use rights.

With regard to proposed Plan Change 7, the Hearing Panel needed to take the NPS-FM into consideration when hearing submissions, but it only had to attempt to line up the NPS-FM and not strictly adhere to its provisions. This was because the NPS-FM came into effect after notification of Plan Change 7.

C Henderson questioned the extent of the CWMS Waimakariri Zone Committee's involvement to ensure compliance with the provisions of the NPS-FM, especially in light of the NPS-FM emphasis on consultation and collaboration. Councillor M Hands stated that ECan had always placed strong emphasis on community involvement, but they were currently still exploring the administrative implications of the new NPS-FM requirements. It was therefore too early to confirm the role of the CWMS Waimakariri Zone Committee in this process.

D Ashby stated that Minister for the Environment, David Parker, had indicated that he would be establishing a Working Group with local councils to oversee the implementation of new NPS-FM requirements. He enquired who would be representing ECan on the proposed Working Group. T Davie confirmed that ECan would be represented by its Chief Executive, Stefanie Rixecker, and its Chief Operating Officer, Nadeine Dommissie.

#### 5.7 CWMS Zone Committee Review

No discussion emanated from this point.

#### 5.8 Action points from the previous Zone Committee Meeting – 3 August 2020

- Waimakariri River water quality monitoring data on the LAWA website

T Davie and A Meredith followed-up with the LAWA website administrator and the problems with the capturing of the data on the website had been resolved. It was anticipated that the LAWA website would be regularly updated with monitoring data from the two NIWA sites as from September 2020.

Moved: Councillor S Stewart

Seconded: C Latham

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information, and with reference to the Committee's 2020 Work Programme and Community Engagement priorities.

**CARRIED**

### 6 CONFIRMATION OF MINUTES

#### 6.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 3 August 2020

Moved: C Henderson

Seconded: J Cooke

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Confirms** the amended Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 3 August 2020, as a true and accurate record.

**CARRIED**

## 6.2 Matters Arising

- Investigation into the automation of the Cam River Floodgate (ECan)

S Allen explained that the Mahaanui Kurataiao Ngāi Tahu Kaitiaki did not support the proposed automation of the Cam River floodgates and the Council would therefore not proceed with this initiative. She confirmed that the Mahaanui Kurataiao Ngāi Tahu Kaitiaki sought independent advice on the proposed automation of the floodgates.

- Rangiora Racecourse Quarry proposal

C Latham requested that the Minutes of the meeting held on 3 August 2020 be amended as follows:

Page 6 of 6, paragraph 7.2 should be amended to read as follows:

*"She enquired if the CWMS Waimakariri Zone Committee would be given an opportunity to make input on the impact that the loss of shingle in the river would have on the nesting of river birds."*

## 7 GENERAL BUSINESS

### 7.1 Implications of the new NPS-FM regulations on saltwater waterways

C Henderson enquired what the implications of the new NPS-FM monitoring requirements would be on waterways that revolved from freshwater to saltwater. T Davie advised that the NPS-FM was predominately focused on freshwater, but it did not preclude work being done in waterways in the coastal environments. A Meredith explained that the NPS-FM did refer to integrated rivers and rivers connections to the sea, but on a very high level.

### 7.2 Hapua Monitoring

A Meredith reported that the ECan had installed data loggers in the Waipara and Hurunui River mouths in a bid to understand these dynamic environments more clearly. Fish surveys would also be conducted in braided river mouths during the summer over the next three years. It was anticipated that the rivers in the Waimakariri District would be surveyed during the second year. The fish population was last comprehensively surveyed approximately 30 to 40 years ago.

### 7.3 Councillor M Hands

Councillor M Hands advised that she was the National Parties new Rangitata candidate.

## KARAKIA


S Bragg provided the karakia to close the meeting.

## NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee was scheduled for the 5 October 2020 at 3:30pm.

There being no further business, the meeting closed at 5.15pm.

CONFIRMED



Chairperson

5 October 2020

Item 7  
Attachment A

**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY  
WAIMAKARIRI ZONE COMMITTEE HELD IN THE FUNCTION ROOM AT THE RANGIORA  
TOWN HALL, 303 HIGH STREET, RANGIORA ON MONDAY 5 OCTOBER 2020 AT 3:30PM.**

**PRESENT**

Michael Blackwell (Chairperson), Cameron Henderson (Deputy Chairperson), Dave Ashby, Erin Harvie, Carolyne Latham, Wendy Main, Judith Roper-Lindsay, Arapata Reuben (Te Ngāi Tūāhuriri Rūnanga representative), and Councillor Sandra Stewart (WDC Councillor).

**IN ATTENDANCE**

R Johnston (Farmer), M Bate (Kaiapoi Resident), J Ensor (Mandeville Residents Association), L Pocock (Oxford Farmers Market), J Benn (Department of Conservation).

G Cleary (WDC Manager Utilities and Roading), S Allen (WDC Water Environment Advisor), K Steel (WDC Ecologist-Biodiversity), G Hutchinson (WDC Wastewater Asset Manager), A Arps (ECan Zone Manager), A McLeod (ECan Senior Communications Advisor), M Cataloni, (ECan Northern Zone Delivery Lead), Z Ploeg (ECan Biodiversity Officer), I Heslop (ECan Senior River Engineer), M Griffin (ECan CWMS Facilitator) and T Kunkel (WDC Governance Team Leader).

**1 BUSINESS**

**1.1 Karakia**

A Reuben provided the karakia to open the meeting.

**1.2 Apologies**

Moved: J Roper-Lindsay

Seconded: C Henderson

Apologies were received and sustained from John Cooke and Councillor Megan Hands for absence. An apology for lateness was received and sustained from D Ashby, who arrived at 3:45pm.

**CARRIED**

**1.3 Welcome and Introductions**

The Chairperson welcomed all the members present. He requested the CWMS Waimakariri Zone Committee members, and attendees to introduce themselves to the members of the public in attendance.

**1.4 Register of Interests**

A Reuben advised that he was no longer the Chairperson of the Ngāi Tūāhuriri Rūnanga and requested that the Register of Interest be amended accordingly.

**2 OPPORTUNITY FOR THE PUBLIC TO SPEAK**

**2.1 R Johnston - Farmer**

R Johnston advised that the environmental damage caused by the Ashley River to his property was finally being addressed. He however expressed a concern that it took 27 years to resolve the matter, during which his family lost approximately 10 hectares of river frontage land.

R Johnston reported that he was requested to do the river protection work at his property by the end of June 2020, so that ECan could proceed with the vegetation clearance. However, it was unclear to when ECan would commence the project.

A Arps confirmed that the vegetation clearance from the Ashley Gorge to Waikuku would be done as part the Ashley/Rakahuri River protection and fairway management project. He undertook to report back on when the work would commence.

R Johnston understood that the funding for the proposed vegetation clearance was secured from the Central Government as part of the 'shovel ready funding' for flood protection measures. He urged ECan to make future budgetary provision for the maintenance of the vegetation clearance, as this would not be a one-off project.

J Roper-Lindsay reported that during the CWMS Waimakariri Zone Committee Long Term Plan discussion the management of flows in the Ashley Rakahuri was identified as a priority.

*D Ashby joined the meeting at 3:45pm.*

In response to comments, M Blackwell advised that ECan contractors were obligated to mitigate the impact that they would have on waterways and the environment when doing work.

C Latham enquired what work still needed to be done on the frontage of R Johnston's property. R Johnston highlighted the protection work done and future projects, hopefully the work would hold under flood conditions. He concluded by noting he was pleased with the work done by ECan despite the length of time, and additional cost, to complete this protection work.

## 2.2 M Bate – Kaiapoi Resident

M Bate showed photos taken at various locations on the Cam River. He stated that although the planting on the riverbanks seemed healthy, he was still concerned about the lack of aquatic life in the river, especially the lack of weeds and indigenous species. Photos taken of the Cam River at the Bramleys Road Bridge, showed an area where aquatic weeds were growing in the river. M Bate also showed photos of water crescents growing in the Cam River. He stated that Council needed to determine why there was no aquatic life in other parts the Cam River and Taranaki Stream, as there seemed to be enough nutrients in the water.

M Bate stressed that it was not just the sediments that prevented aquatic weeds from growing, he still believed that the lack of aquatic life was due to chemical spraying. L Pocock explained the synergism effect in toxicology, which referred to the effect caused by exposure to two or more chemicals simultaneously resulting in effects that were greater than the sum of the effects of the individual chemicals. She enquired if toxins in the rivers could be caused by owners spraying on their properties downstream. Maybe a public information campaign was needed to advise property owners of the synergism effect in toxicology. M Bate recommended that the sediment in the rivers should be tested to establish what toxins it contained.

J Roper-Lindsay recommended that ECan be requested to provide the CWMS Waimakariri Zone Committee with a briefing on the habitat requirements needed for the growth of healthy aquatic weeds.

S Allen suggested that it may be helpful if the areas where no aquatic life was found were mapped to ascertain if there was a pattern. A Reuben stated that the Council and ECan knew what the problems in the Cam River were and all the problem areas had already been mapped as part of the Cam River Enhancement Project. It was just a matter of implementing the proposed plans. Councillor S Stewart agreed, but advised that no work could be done in the Cam River, as the Council was still waiting for the approval of the ECan consent.



In response to the above, A Arps reported that the granting of the ECan consent was imminent, once final information from WDC supporting this consent was received. He also confirmed that the vegetation clearance work in the upper Ashley River would commence by February 2021.

**3 IMMEDIATE STEPS BIODIVERSITY – UPDATE – Z PLOEG (BIODIVERSITY OFFICER, ECAN) AND K STEEL (ECOLOGIST, BIODIVERSITY, WDC)**

Z Ploeg advised that the Motu Kānuka Scientific Reserve was an important remnant of Kānuka forest in the Eyrewell area. The reserve was 13 hectares in size, with approximately 11 hectare of Kānuka forest. While lines had previously been bulldozed through the forest, resulting in a discontinuous canopy, the forested part of the reserve was in good condition and displayed high species diversity. Z Ploeg stated that the project would involve the control of gorse, broom and other problematic weeds to protect the Kānuka forest.

C Henderson enquired if the Kānuka forest would be irrigated. Z Ploeg confirmed that the Kānuka forest would not be irrigated. However, the possibility of getting water moving along the ground was being investigated.

R Johnston asked how tall the Kānuka forest was expected to grow. Z Ploeg explained that it was envisaged that the Kānuka forest would create a four meter high closed canopy, with other shrubs underneath it. Herbs and orchids were also expected to grow under the lower shrubs.

C Henderson also sought clarity on the proposed ongoing maintenance of the site. Z Ploeg advised that the Department of Conservation would be responsible for the ongoing maintenance of the site. However, it was hoped that once a closed Kānuka forest canopy had formed the property would become self-maintaining.

Moved: J Roper-Lindsay

Seconded: Councillor S Stewart

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Supports** an allocation of \$10,006 of Immediate Steps funding for the Motu Kānuka Weed Control Project.

**CARRIED**  
Against C Latham

C Latham agreed that the Kānuka forest needed to be protected. However, the CWMS Waimakariri Zone Committee was allocating ten percent of its annual Immediate Steps Funding budget to a project on land owned by the Department of Conservation. She believed that it should be Department of Conservation's responsibility to protect biodiversity on its land.

W Main requested that the CWMS Waimakariri Zone Committee be provided with a list of proposed future Immediate Steps Funding projects to assist the Committee in determining what percentage of its Immediate Steps Funding budget to allocate to proposed projects.

**4 MCINTOSH'S BEND ROCK PROTECTION – UPDATE – I HESLOP (SENIOR RIVER ENGINEER, ECAN)**

I Heslop advised that ECan had been concerned for quite some years about the risk of the Waimakariri River breaking out at the McIntosh's Bend area. The McIntosh's Bend was just downstream of the Kaiapoi confluence on the Waimakariri River and slightly upstream from the oxidation ponds. The Waimakariri River catchment stretched back to the Southern Alps and the main concern for flooding at McIntosh's Bend and Kaiapoi was, therefore, not

so much the Kaiapoi River but the Waimakariri River. Since the 1930s the Waimakariri River had been narrowed down and constrained in a bid to manage the river's flow.

I Heslop explained that some work had been done in the 1960s to re-enforce the river bank by installing rock armour along the outside of the bend. This was done to manage the risk of the river undercutting the stopbank and letting flood waters out. Over the intervening years ECan had been maintaining the rock armour. The proposed \$3.2 million project would reduce the risk of flooding by strengthening the existing riverbank rock work and constructing new stopbank rock protection. Works were planned from December 2020 to May 2021 and needed to be managed carefully to allow recreational activities to continue as much as possible, without endangering public safety.

E Harvie enquired which routes the construction vehicles would take and if it was anticipated that the smaller roads would need to be repaired after construction. I Heslop advised that the construction vehicles would be using Lineside, Johns and Beach Roads to move the 20,000 of graded rock from Oxford to Kaiapoi. He noted it was not anticipated that the construction vehicles would have a negative impact on the roads. G Cleary confirmed that the Council was satisfied that the roads to be used would not need any additional maintenance after construction.

E Harvie expressed a concern that the construction vehicles would be following a route passing close to Kaiapoi North School. She suggested, therefore, that the times the heavy construction vehicles used the route should be managed so not to correspond with the dropping-off and collecting of children at the school. I Heslop undertook to discuss this matter with the preferred contractor.

D Ashby enquired as to why McIntosh's Bend was not eliminated by straightening the flow of the river. I Heslop stated that the straightening of the bend would entail a lot more funding than what was currently available but may be considered in future. However, the current proposed work would not negatively impact any future efforts to straighten the river.

J Roper-Lindsay asked what impact the proposed construction would have on the adjoining wetlands. I Heslop confirmed that the rock armour would not be placed in the wetlands and that the size of the wetlands would not be reduced. J Roper-Lindsay stressed that the preferred contractor needed to be made aware of the environmental sensitivity of the wetland area.

Moved: E Harvie

Seconded: D Ashby

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update on the McIntosh's Bend Rock protection project.
- (b) **Advises** on local community consultation needs.
- (c) **Request** ECan to ensure that the community was advised of the proposed route the construction vehicles would be taken.

**CARRIED**

**5 WDC OCEAN OUTFALL COMPLIANCE – UPDATE – G HUTCHINSON (WASTEWATER ASSET MANAGER, WDC)**

G Hutchinson updated the CWMS Waimakariri Zone Committee on the consent compliance performance of the Eastern District Sewer Scheme for the 2019-20 reporting year. Compliance was achieved for all consent conditions during the period monitored. The Wastewater Treatment Plants were operating and annual maintenance was done to ensure that this continued. Upgrades were planned over the next eight years at the Kaiapoi and Rangiora Wastewater Treatment Plants to ensure that the consent conditions were met in future.

C Latham enquired if ECan had investigated the diatom sea foam at Pines Beach and if there was a connection between the diatom sea foam and the ocean outfall. S Allen reported that the investigation was launched by the Institute of Environmental Science and Research (ESR), but they were unable to collect sea foam. They did however collect samples from the sand and water. The ESR did not find any levels of concern with regard to faecal bacteria. The Council also did weekly water quality testing as part of the ocean outfall compliance monitoring and no concerns had been raised. S Allen stated that it was difficult to collect enough sea foam for accurate testing. She however believed that the diatom sea foam was a natural phenomenon that occurred during the summer.

G Hutchinson stated that over the last five years the bacterial numbers at the ocean outfall had always been far below the acceptable maximum limit. To date no problems had been reported. He did not believe, therefore, that there was a correlation between the ocean outfall and the diatom sea foam.

M Blackwell enquired if the ocean outfall and the Wastewater Treatment Plants would be sufficient to deal with the expected population growth. G Hutchinson confirmed that adequate provision had been made.

M Blackwell also stated that both Kaiapoi and Woodend relied on wetlands for filtration. He asked if the wetlands would need to be expanded to deal with the expected population growth in these areas. G Hutchinson advised that the treated wastewater passes through an ultraviolet (UV) disinfection system and aeration before being pumped to the ocean outfall, an extension of the wetlands would, therefore, not be needed.

C Henderson question the spike of Escherichia coli (E. coli) in February 2020 and March 2020. G Hutchinson explained that due to the increase in the water temperature in the pipes, the biofilm inside the pipes came loose thereby causing the Enterococci count to spike. The pipes had a substantial biofilm layer, which was a collection of organic and inorganic material. Consequently, they will be cleaned more regularly, which should curb the spike.

Moved: C Latham

Seconded: W Main

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update on the consent compliance performance of the Eastern District Sewer Scheme for the 2019-20 reporting year.

**CARRIED**

## **6 UPDATE – M GRIFFIN (ECAN)**

### **6.1 Proposed Plan Change 7 (Waimakariri)**

M Griffin advised that the hearings on proposed Plan Change 7 had commenced on 28 September 2020 and would run for five non-consecutive weeks through to 4 December 2020. The hearings were being live streamed on You Tube.

### **6.2 CWMS Regional Committee**

C Latham reported that the next CWMS Regional Committee meeting would be held on 13 October 2020.

### **6.3 Land and Water Committee**

M Griffin reported that the next Land and Water Committee meeting would be held on 8 October 2020. An update would, therefore, be provided to the CWMS Waimakariri Zone Committee in November 2020.

#### 6.4 Zone Committee Working Groups

- Landcare Working Group

In response to questions, C Henderson advised that the Silverstream Wetlands project was a key water quality project that the Landcare Working Group was looking at. Given the unique nature of Silverstream which did not have defined spring heads but seemed to be one continuous spring head, a meeting was held on 24 September 2020 to discuss the possibility of targeted solutions around 'spring heads' in Silverstream. It became clear that additional information and research would be needed to fix the water quality. The research would be done by the Landcare Working Group with ECan support, but no timeframes had been set.

With regard to the future establishment of a Landcare Group, C Henderson explained it was envisaged that a Landcare Group would be driven by landowners and have a broader focus than local catchment groups. A Landcare Group would potentially incorporate various catchment groups on shared issues. However, it was unclear if the term "Landcare Group" would be used in future.

- Biodiversity Working Group

J Roper-Lindsay reported that the Biodiversity Working Group met with Peter Joyce and Letitia Lum on Thursday 1 October 2020 to discuss the work that the Te Ara Kakariki Trust had been doing in Selwyn and if it would be possible for the Trust to assist in the Waimakariri District. Also being discussed was the possibility of the establishment of a Biodiversity Community Trust for the Waimakariri District.

- Coastal Catchments Working Group

C Latham advised that the next Saltwater Creek Catchment Group meeting would be held on 6 October 2020, where possible priorities, goals and future projects would be discussed.

#### 6.5 Communications and Engagement

No additional discussion emanated from this point.

#### 6.6 Action for Healthy Waterways

J Roper-Lindsay requested that the CWMS Waimakariri Zone Committee be briefed as soon as possible on the Government's Action for Healthy Waterways Essential Freshwater Package that came into force on 3 September 2020. C Henderson concurred and stated that land owners and communities had numerous questions regarding the implementation of the Action for Healthy Waterways Essential Package.

M Griffin advised that various briefings would be scheduled for Zone Committees to discuss the several aspects of the Government's Action for Healthy Waterways Essential Package.

E Harvie enquired if thought had been given to the community engagement on the National Policy Statement for Freshwater Management 2020. The policy statement clearly stated that the Regional Council must engage with communities and tangata whenua to determine how Te Mana o te Wai applies to water bodies and freshwater ecosystems in the region. The wishes of the communities and tangata whenua,

therefore, needed to be balanced. A McLeod advised that community consultation would be undertaken.

J Roper-Lindsay stated that the CWMS Waimakariri Zone Committee was the liaison between the community and the Rūnanga on environmental issues and it was, therefore, important that the CWMS Waimakariri Zone Committee be briefed as soon as possible.

#### 6.7 CWMS Zone Committee Review

M Griffin provided feedback on the CWMS Zone Committee Review. The Council was in the process of drafting the Letter of Shared Priorities. It was envisaged that a letter would be developed and submitted to the CWMS Waimakariri Water Zone committee jointly by ECan and the Council every three years.

#### 6.8 Action points from the previous Zone Committee Meeting – August 2020 and September 2020

- Information captured on LAWA website

Councillor S Stewart expressed a concern regarding the gaps in the data included on the LAWA website. She requested, therefore, that the CWMS Waimakariri Zone Committee be briefed on the capturing of data on the website, especially the information being recorded about the Kaiapoi River. It was also requested if the LAWA website could reflect the recommendation of the Waimakariri ZIP Addendum whereby the 'Kaiapoi River' is used to refer to the lower section of the catchment from the three streams confluence to the Waimakariri confluence, and 'Silverstream' used for the upper section of this catchment from the springheads to the three streams confluence.

C Henderson noted that the LAWA website included an annual analysis of the water quality on a national level. He suggested that the same analysis should be done on a zone level, to determine if the water quality in the various zones were improving.

- Briefing on Natural hazards Hydrodynamic Modelling

The CWMS Waimakariri Zone Committee would be briefed on the natural hazards and hydrodynamic modelling of the Waimakariri District Coastline at the meeting to be held on 2 November 2020.

Subsequent to discussion, it was agreed that further discussion of these items would be deferred to a subsequent meeting to enable ECan Principal Water Quality and Ecology Scientist, A Meredith, to be present to brief the CWMS Waimakariri Zone Committee

Moved: J Roper-Lindsay

Seconded: D Ashby

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information, and with reference to the Committee's 2020 Work Programme and Community Engagement priorities.

**CARRIED**

## 6 CONFIRMATION OF MINUTES

### 6.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 7 September 2020

Moved: D Ashby

Seconded: J Roper-Lindsay



**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Confirms** the amended Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 7 September 2020, as a true and accurate record.

**CARRIED**

## 6.2 Matters Arising

- Hearings on proposed Plan Change 7

M Blackwell advised that he attended the first day of the hearing, where ECan's legal opinion on the applicability of the National Policy Statement for Freshwater Management 2020 on the proposed plan change was tabled. The legal opinion stated that the proposed Plan Change 7 must give effect to the National Policy Statement for Freshwater Management 2020. He urged members to read the said legal opinion presented at the hearings, as it would have far reaching effects for communities.

- Kaiapoi River Monitoring and Management:

Councillor S Stewart requested that a report regarding the Kaiapoi River Monitoring and Management and the installation of a nitrate logger and a multi-channel logger in the Kaiapoi River be submitted at the next meeting.

## 7 GENERAL BUSINESS

No discussion emanated from this point.

### KARAKIA

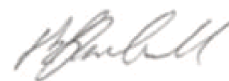
A Reuben provided the karakia to close the meeting.

### NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee was scheduled for the 2 November 2020 at 3:30pm.

There being no further business, the meeting closed at 5.55pm.

CONFIRMED



Chairperson

2 November 2020



**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY  
WAIMAKARIRI ZONE COMMITTEE HELD IN MEETING ROOM 1 (UPSTAIRS), RUATANIWHA  
KAIAPOI CIVIC CENTRE, 176 WILLIAMS STREET, KAIAPOI ON MONDAY 2 NOVEMBER  
2020 AT 3:30PM.**

**PRESENT**

Michael Blackwell (Chairperson), Dave Ashby, Erin Harvie, Carlyne Latham, Wendy Main, Judith Roper-Lindsay, Arapata Reuben (Te Ngāi Tūāhuriri Rūnanga representative), John Cooke (Te Ngāi Tūāhuriri Rūnanga representative), Councillor Sandra Stewart (WDC Councillor) and Councillor Megan Hands (ECan Councillor).

**IN ATTENDANCE**

M Bate (Kaiapoi Resident), J Ensor (Mandeville Residents Association), J Benn (Department of Conservation).

G Cleary (WDC Manager Utilities and Roading), S Allen (WDC Water Environment Advisor), D Young (Senior Engineering Advisor), K Steel (WDC Ecologist-Biodiversity), A Arps (ECan Zone Manager), A Meredith (ECan Principal Water Quality and Ecology Scientist), A McLeod (ECan Senior Communications Advisor), M Cataloni, (ECan Northern Zone Delivery Lead), S Bragg (ECan CWMS Tangata Whenua Facilitator), M Griffin (ECan CWMS Facilitator) and T Kunkel (WDC Governance Team Leader).

**1 BUSINESS**

**1.1 Karakia**

A Reuben provided the karakia to open the meeting.

**1.2 Apologies**

Moved: J Cooke

Seconded: E Harvie

An apology was received and sustained from Cameron Henderson for absence.

**CARRIED**

**1.3 Welcome and Introductions**

The Chairperson welcomed all the members present. He requested the CWMS Waimakariri Zone Committee members, and attendees, introduce themselves to the members of the public in attendance and those who may be listening

On behalf of the members of the CWMS Waimakariri Zone Committee, the Chairperson congratulated C Henderson on his wedding.

**1.4 Register of Interests**

A Reuben advised that he was no longer a Trustee of the Tuahiwi Marae and M Hands reported that she was no longer the National Party candidate for the Rangitata Electorate. M Blackwell requested to be removed as the Treasurer of the North Canterbury Clay Target Association. They requested M Griffin to ensure that the Register of Interest was amended accordingly.

**2 OPPORTUNITY FOR THE PUBLIC TO SPEAK**

**2.1 M Bate – Kaiapoi Resident**

M Bate showed photos taken of the Beachgrove Creek at the Beachgrove Subdivision in Kaiapoi. He stated that there seemed to be an improvement in the health of the creek as it was filled with water and aquatic weeds. He also observed other aquatic life and various birds near the creek. M Blackwell requested S Allen to report back to the CWMS Waimakariri Zone Committee on the reasons for the vast improvement.

M Bate also showed photos taken of the Lower Cam River, from Marshall Road to the southern junction of the South Brook. He again expressed his concern about the lack of aquatic life in the river, especially the lack of weeds and indigenous species. There seemed to be some aquatic weeds growing in the South Brook, but not much, and the rocks in the quieter parts of the stream were covered with brown algae. He questioned if ECan had investigated the concerns that he raised previously.

M Bate showed photos of the sea foam on a Waimakariri Beach, he still maintained that there was a connection between the diatom sea foam and the ocean outfall. C Latham recommended that the report on the Council's Ocean Outfall Compliance Update presented to the CWMS Waimakariri Zone Committee at the meeting held on 5 October 2020 be made available to M Bate.

J Cooke stated that he spent many hours surfing in this area prior to the ocean outfall being developed and there had always been a problem with dirty sea foam. C Latham suggested that it may be a good idea that discuss the problem of diatom sea foam with the people that accessed the beaches on a daily basis, such as lifesavers and surfers.

M Bate provided various photos and a video of dead and dying birds found at the Kaiapoi Wastewater Treatment Plant. He stated that it was unacceptable that waterfowl were being poisoned in large numbers by botulism toxins at the wastewater ponds.

Councillor S Stewart enquired if any outbreaks of Avian Botulism had been reported in the district. S Allen reported that no outbreaks had been reported, but Clostridium Botulinum naturally occurred in soils present in ponds and wetlands and was triggered by certain environmental conditions, such as hot and humid weather. Because a warmer summer was expected, there would be a higher risk of botulism occurring during the next few months.

M Blackwell questioned the Council's ability to maintain a higher water level in the sewer ponds in a bid to minimise the risk of a botulism outbreak over the next few months. S Allen explained that the main concern was not the water level, but the time that the water took to flush through the system. She confirmed that modifications would be done at the wastewater ponds to minimise the risk of a botulism outbreak occurring.

J Roper-Lindsay enquired how Christchurch City Council was ensuring that there was no botulism outbreak at their wastewater treatment plants. M Bate stated that they kept their wastewater ponds as clean as possible. S Allen advised that it was a complexed situation and the Council had developed an Avian Botulism Management Plan in 2018 to minimise bird deaths and the spread of an avian botulism outbreaks, and to manage the health risk to the community from botulism. S Allen undertook to report back to the CWMS Waimakariri Zone Committee on this matter.

Councillor M Hands asked if the Council had investigated the possibility of keeping the birds away from the wastewater ponds. S Allen reported that deterrents were tried in other districts without any long term success.

In conclusion, M Blackwell stated that he was pleased about the improvement of the health of the Beachgrove Creek and the increase of aquatic life and birds.

3 **ZIPA IMPLEMENTATION – FIRST QUARTERLY UPDATE 2020/21 – S ALLEN (WDC, WATER ENVIRONMENT ADVISOR) AND M GRIFFIN (ECAN, CWMS FACILITATOR – WAIMAKARIRI)**

S Allen and M Griffin provided updates on the Zone Implementation Programme Addendum (ZIPA) for the first quarter of the 2020/21 financial year. S Allen highlighted the following:

- The Council's Stormwater Network Discharge Consent monitoring programmes for Rangiora, Woodend, Kaiapoi and Oxford had all been lodged with ECan as part of Stormwater Network Discharge Consents.
- The Council's Drainage Maintenance Management Plan had been incorporated as part of conditions for the Council's Global 'Maintenance and Minor Works in Waterways' Consent application.
- A budget of \$10,000 was allocated in 2020-21 for local stormwater education resources, there was still funds available for educational resources. A Section 17A review (under the Local Government Act) was being carried out on all environmental education by the Council, which would likely decide how this budget would be allocated.
- The Council had conducted surveys of seven stockwater race sites throughout the Waimakariri Stockwater Race System for fish and macro-invertebrates populations. The survey work would inform operational management of the stockwater race system and the review of the current Stockwater Race Bylaw.
- The Inanga spawning area improvements for McIntosh Stream would no longer be funded through the ZIPA budget, as the works would be incorporated into the 'Shovel-Ready' Flood Protection Project at McIntosh Stream.
- The Council was carrying out a second year of study, with repeat testing for nitrate and other chemical parameters planned for late October 2020. All 19 private well owners in Cust and Eyreton from the 2019 study had reconfirmed commitment to retesting in 2020, and sample kits had been sent out. The Council had drafted a pamphlet with guidance on well depth and well-head security. It was anticipated that the pamphlet would be ready for distribution at the end of 2020.

M Griffin elaborated on the following:

- The Plan Change 7 hearing process would involve a large commitment of ECan's groundwater and surface water scientists over the next three to four months. It was anticipated that the last day of the Hearing would be 4 December 2020, with a report of reply likely due by the end of February 2021.
- With regards to ground water, ECan provided support to the District Council with the second pilot study for nitrate monitoring in private wells. The request for proposals to drill and install the deep well was being prepared and it was anticipated to be published within the month.
- In regard to surface water, the salinity logger data for the Kaiapoi River had been reported to the committee in September 2020. ECan was also helping the Council to understand the cyanobacterial blooms occurring in artificial lakes. Offering both a recommended solution, and loan of monitoring resource.
- A Meredith had been attending meetings with the new owners of Pegasus Lake and affected parties, to discuss possible solutions to water quality problems. The owners of Pegasus Lake would make submissions to the Plan Change 7 hearing and had committed to finding a solution to water quality problems.
- The Braided River Revival Programme on the Ashley/ Rakahuri River was expected to commence early in the new year.
- Work had commenced on the Hammonds, Springvale and Auld Wetland projects funded through Immediate Steps Funding.
- A new floodgate at Taranaki Stream had been installed reducing the risk of flooding and increasing fish passage.
- ECan's Regional Implementation team had identified a further 70 farms in the Zone that might require a Farming Land Use Consent under current operative Canterbury Land and Water Regional Plan. ECan was still hosting drop-in sessions for farmers requiring land use consents and general advice.

- The Wintergrazing Campaign for the 2020/21 season had commenced by engaging with key stakeholders working in the area at an information session hosted in late July 2020.
- Catchment support was continuing with a focus on sedimentation and riparian protection.

Councillor Stewart requested copies of the data being collected monthly for baseline nitrate concentration monitoring of springs in the Silverstream. She also sought clarity on the proposed drilling and installation of a deep well in early 2021. M Griffin undertook to report back to the CWMS Waimakariri Zone Committee on these matters.

Councillor Stewart stated that the new floodgate installed in the Taranaki Stream seemed to have caused the Inanga spawning area to dry up. She enquired what work would be done to the fish passage to ensure the health of the waterway. A Meredith explained that this was a complex situation. It had been a very dry year and ECan, therefore, needed to establish if the low water levels above the floodgate was due to the effective sealing of the floodgate or the dry weather. Once ECan opened the fish-window in the floodgate, the real influence of the floodgate on the Inanga spawning would be determined, but it was not expected that the area would be so dry.

Councillor Stewart sought confirmation on when the fish-window in the floodgate would be opened. A Meredith advised that he would be able to provide the CWMS Waimakariri Zone Committee with a strategy for the management of the fish-window at the next meeting.

M Blackwell noted that the recent field trip for rural advisors held in the Ohoka area that focused on Mahinga Kai's relevance to farming was well supported. ECan's Cultural Land Management Advisor/Pōu Matai Kō, Makarini Rupene, had reported that there seemed to be an increase in understanding and buy-in for the inclusion of Mahinga Kai values in farming.

In response to questions, M Cataloni reported that the farmers in the Rakahuri (Lower Ashley) catchment area were being assisted with accessing the Fonterra Catchment Funding that would focus on water quality.

Moved: J Roper-Lindsay                      Seconded: A Reuben

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update on the implementation of the Zone Implementation Programme Addendum recommendations for the first quarter of the 2020/21 financial year.

**CARRIED**

Councillor Stewart and J Roper-Lindsay congratulated the Council and ECan on the implementation for the ZIPA recommendations and the improved reporting.

**4      WAIMAKARIRI NATURAL HAZARDS MAPPING – UPDATE – S ALLEN (WDC, WATER ENVIRONMENT ADVISOR) AND D YOUNG (WDC, SENIOR ENGINEERING ADVISOR)**

D Young provided a brief background on the reasons for mapping natural hazards. He advised that managing natural hazard risk helped the Council to protect people, property and infrastructure from a range of natural hazards, as well as allowing people to make informed decisions, and building stronger and more resilient communities. D Young explained how the CWMS Waimakariri Zone Committee could access the Natural Hazards Mapping data via the Council's website. The current map was the 200 year Flood Hazard map which incorporated the combined output of the three modelling methods used, namely Localised flooding, Ashley Breakout flooding, and Coastal flooding. He proceeded to expound on the modelling maps:



- Localised flooding was flooding that occurred due to the direct result of rainfall falling on the ground.
- Ashley Breakout Flooding would occur due to a stopbank breach on the Ashley Rakahuri River. These flood events included flow directly from a stopbank breach plus localised rainfall that would occur at the same time.
- Coastal Flooding could occur in the coastal regions of the district and is due to the interaction between storm surge, river flows from the Ashley and Waimakariri Rivers plus groundwater effects.

D Young further advised that mapping fault ruptures was expensive, so the Council concentrated on mapping in detail the faults that were the most active and nearest to populated areas. The map showed the known earthquake faults at the ground surface in the district. Most of the mapped faults seemed to be in the sparsely populated hilly areas to the north of Rangiora, however, there were some mapped faults on the upper Canterbury Plains.

In conclusion, D Young advised that the Coastal Erosion Hazard Zone (CEHZ) mapping indicated that the majority of the district's coastline would probably not be subject to coastal erosion over the next 100 years due to the continued supply of sand from the Waimakariri River. Erosion was only projected in the north east of the district, around the existing dunes at Waikuku and Kairaki, over the next 130 years

J Roper-Lindsay stated that during the District Planning Review process, there still might not be clarity on the work that ECan would be doing to stop the projected flooding. She, therefore, questioned if the Council would be placing restrictions on prospective developers to mitigate against any potential flooding in the District Plan. D Young confirmed that, as part of the District Plan Review, prospective developers would be expected to show the Council how they proposed to mitigate any potential low, medium, and high-risk flooding. J Roper-Lindsay suggested that, from an ecological point of view, it would be a better for development to be focused in areas not prone to flooding. It is usually best to design and develop "around" nature rather than trying to control nature.

In response to questions, D Young stated that the protection of properties from flooding, due to development on neighbouring properties, formed part of the resource consent application process.

Moved: C Latham

Seconded: E Harvie

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update on the Waimakariri Natural Hazards Mapping.

**CARRIED**

**5 KAIAPOI RIVER MONITORING AND MANAGEMENT – UPDATE – A MEREDITH (ECAN, PRINCIPAL SURFACE WATER SCIENTIST)**

A Meredith briefed the CWMS Waimakariri Zone Committee on ECan monitoring being done in the Kaiapoi River. He explained that monitoring the Kaiapoi River, in an effective manner, was more difficult than first anticipated due to the complex flow dynamics of the river. He proceeded to address the following:

- Why the Kaiapoi River quality was not previously routinely monitored.
- A new driver for routinely monitoring the Kaiapoi River.
- Key learning to date – regarding salinity, different approaches, and suitable equipment

A Meredith advised that the most effective site for installing the equipment was off a pile in the deepest channel off the Mandeville Bridge, as this site represents a position within the centre of both the urban and tidal reaches of the Kaiapoi River. He explained the rationale and timeline for the proposed installation of a nitrate logger and a multi-probe sonde in the

river, as well as other associated monitoring. It was anticipated that the multi-probe sonde would measure parameters such as water level, temperature, turbidity, dissolved oxygen, pH, chlorophyll a, and phycocyanin. A separate instrument would be installed to measure nitrate and salinity.

In conclusion, A Meredith reported that continuous water quality monitoring in the Kaiapoi River was necessary to understand and manage issues through Kaiapoi. This was achievable and should be installed and up and running later this summer.

Councillor S Stewart asked how long data needed to be collected in the Kaiapoi River before ECan would be able to draft a management plan for the river. A Meredith confirmed that ECan would need to monitor the river for a few years before they would be able to draft a well-informed plan.

Councillor S Stewart requested that the PowerPoint presentation from A Meredith on the Kaiapoi River continuous water quality monitoring be made available to the CWMS Waimakariri Zone Committee.

Moved: Councillor S Stewart

Seconded: C Latham

**THAT** the CWMS Waimakariri Zone Committee:

(a) **Receives** the update on the Kaiapoi River monitoring and management.

**CARRIED**

Councillor S Stewart thanked ECan on the work that they were doing on the monitoring of the Kaiapoi River and hoped that enough information would be available by the end of 2021 to address the degradation of the river.

**6 ESSENTIAL FRESHWATER PACKAGE – UPDATE – M GRIFFIN (ECAN, CWMS FACILITATOR – WAIMAKARIRI)**

M Griffin provide a brief background on the initial assessment being undertaken by ECan on the Central Government's Essential Freshwater Package. ECan was currently analysing the new requirements to determine how the new National Environmental Standards for Freshwater 2020 rules align with its existing rules and freshwater plans.

J Roper-Lindsay stated that the National Environmental Standards 2020 referred to stock exclusion from "wide" rivers and lakes. She enquired how would "wide" be quantified. M Griffin advised that his understanding was a wide river referred to a river with a bed that was wider than one metre anywhere in a land parcel, but this would need to be confirmed with the ECan Planning Team. Councillor M Hands stated that there seemed to be many issues and questions on the Essential Freshwater Package that still needed to be clarified.

C Latham advised an early estimate was posed at the previous CWMS Regional Committee meeting that ECan would need to spend something in the vicinity of \$30 million to undertake the planning and implementation work required to comply with the Essential Freshwater Package.

D Ashby noted the seeming lack of democratic process during the approval of the Central Government's Essential Freshwater Package. He expressed concern regarding the clashing implementation timeframes of the Central Government's Essential Freshwater Package, which became mandatory on 3 September 2020, and the Canterbury Land and Water Regional Plan which set baselines for freshwater management from 2009 to 2030. He hoped there would be further discussion on the practical implications of the implementation of the Essential Freshwater Package and possible modifications.

In response to questions from Councillor S Stewart, A Meredith explained that ECan routinely monitored for ammonia at 150 grab sampling sites, and it was found that ammonia levels in Canterbury were usually low. He added ECan had not planned to monitor the

ammonia levels in the Kaiapoi River, as there were no effective probes currently available for this.

M Griffin emphasised that Freshwater must be managed in a way that prioritised as follows:

- Health and wellbeing of water; then
- Health needs of people; then
- Ability of people and communities to provide for their social, economic and cultural wellbeing.

Councillor M Hands stressed that the key point was that the health and wellbeing of water superseded any other consideration, including any proposed future development. She asked if the Council had done any economic modelling of the effect of the implementation of the Essential Freshwater Package. S Allen stated that it was difficult to model possible scenarios, due to the many questions on the Essential Freshwater Package that still needed to be clarified.

A McLeod stated that some of the aspects of the Essential Freshwater Package would have an immediate effect of the current work being done by ECan, such as consent applications. However, it was envisaged that implementation of most regulations would be "rolled-out" over time with compliance expected by 2024. ECan was working closely with other Councils on this matter.

Moved: J Roper-Lindsay

Seconded: J Cooke

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** the update on the Essential Freshwater Package, with consideration to its priorities and community engagement.

**CARRIED**

*D Ashby left the meeting at 5:50pm.*

## **7 COMMITTEE UPDATES – M GRIFFIN (ECAN)**

### **7.1 Proposed Plan Change 7 (Waimakariri)**

M Griffin advised that the hearings on proposed Plan Change 7 had commenced on 28 September 2020 and were being recorded and were available to view on ECan's YouTube channel, with a link provided in the committee's meeting papers. M Griffin noted that the key reports provided by ECan's science team in response to the submissions made at the Hearings would be made available to the CWMS Waimakariri Zone Committee early next year.

### **7.2 CWMS Regional Committee**

C Latham reported that the CWMS Regional Committee meeting was held on 13 October 2020. She advised that with regards to the National Policy Statement for Freshwater Management 2020, it was agreed that engagement with tangata whenua would be done prior to community engagement. She questioned, therefore, if any plans for engaging with the tangata whenua had been made. The Te Ngāi Tūāhuriri Rūnanga representatives, A Reuben and J Cooke, advised that they had no knowledge of any planned engagement.

In response to questions, C Latham advised that the feedback on the proposed CWMS Regional Committee review was currently being considered by the ECan Council. Councillor M Hands advised that the ECan Council had received feedback from staff, but no decision had been made at this point.

7.3. **Land and Water Committee**

M Blackwell sought clarity on the upstream and downstream boundaries within the Kaiapoi River that the Tonkin Taylor report on the Kaiapoi River Rehabilitation referred to. S Allen stated that the Tonkin Taylor report was requested to focus on the area which extended from the Mandeville Bridge upstream to the Ruataniwha/Cam River floodgates and the old meander bend of the realigned Kaiapoi River between the Motorway Bridge and Cam River mouth.

7.4 **Zone Committee Working Groups**

- Landcare Working Group

No additional discussion emanated from this point.

- Biodiversity Working Group

J Roper-Lindsay reported that the Biodiversity Working Group would be investigating the possibility of the establishment of a Biodiversity Community Trust for the Waimakariri District.

- Coastal Catchments Working Group

C Latham advised that the next Saltwater Creek Catchment Group meeting would be held on 24 November 2020. The working group would be going on a field trip to Broad Road settlement area.

7.5 **Communications and Engagement**

A McLeod advised that ECan was in the process of developing a pamphlet on wetlands in the Waimakariri district and the work being done on the management of the wetlands.

7.6 **Land Air Water Aotearoa (LAWA) Website – Waimakariri and Kaiapoi/Silverstream data**

A Meredith advised that the LAWA Website was upgraded every 12 months, so it was currently displaying data as at 30 June 2020. He confirmed that the information being recorded about the Kaiapoi River had been included on the LAWA Website. The data was previously not included as it belonged to the National Institute of Water and Atmospheric Research (NIWA). However, ECan would be taking ownership of the NIWA data, and the information would therefore be displayed on the LAWA Website.

A Meredith acknowledged that the naming convention of the lower section (Kaiapoi River) and the upper section (Silverstream) of the catchment area displayed on the LAWA Website needed to be changed to reflect the recommendation of the Waimakariri ZIP Addendum.

A Meredith noted that the data on the LAWA website was more national and catchment orientated and it might therefore be unrealistic to expect further analysis at a regional and district levels. However, ECan was in the process of developing a freshwater reporting methodology that included the CWMS Water Zone specific information.

7.7 **Action points from the previous Zone Committee Meeting – October 2020**

Z Ploeg would be updating the CWMS Waimakariri Zone Committee on proposed future Immediate Steps Funding projects at the next CWMS Waimakariri Zone Committee



Moved: E Harvie                      Seconded: C Latham

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information, and with reference to the Committee's 2020 Work Programme and Community Engagement priorities.  
**CARRIED**

## 8 CONFIRMATION OF MINUTES

### 8.1 Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 7 September 2020

Moved: J Roper-Lindsay                      Seconded: A Reuben

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Confirms** the amended Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 5 October 2020, as a true and accurate record.

**CARRIED**

### 8.2 Matters Arising

None

## 9 GENERAL BUSINESS

### 9.1 CWMS Waimakariri Water Zone Committee Review.

M Griffin noted that the CWMS Zone Committee Review feedback had included a request to consider the option of including a representative of Christchurch City Council as a member of the Waimakariri Water Zone Committee. Councillor M Hands advised that the ECan Council would be considering the matter shortly and she, therefore, requested CWMS Waimakariri Water Zone Committee members to let her know their thoughts on this matter.

Councillor S Stewart stated that if the ECan Council wanted the Council's input on this matter, an official request should be sent to the Waimakariri District Council. M Griffin would follow up further on this option and report back to the committee.

### 7.2 Ngāi Tahu filed papers at the High Court in Christchurch

A Reuben reported that the Ngāi Tahu filed papers at the High Court in Christchurch seeking to assert its rangatiratanga over freshwater in the Ngāi Tahu takiwā, which covers all of the South Island. He advised that the iwi had tried to engage with successive governments on the issue but had been ignored. The iwi would be using the Ngāi Tahu Settlement Act in 1998 as the basis for its case.

## KARAKIA

A Reuben provided the karakia to close the meeting.

## NEXT MEETING

The next meeting of the CWMS Waimakariri Water Zone Committee was scheduled for the 7 December 2020 at 3:30pm.

There being no further business, the meeting closed at 6:30pm.



Chairperson

7 December 2020

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**MINUTES OF THE MEETING OF THE CANTERBURY WATER MANAGEMENT STRATEGY  
WAIMAKARIRI ZONE COMMITTEE HELD IN THE FUNCTION ROOM, RANGIORA TOWN  
HALL, 303 HIGH STREET RANGIORA ON MONDAY 1 MARCH 2021 AT 3:30PM.**

**PRESENT**

Cameron Henderson (Acting Chairperson), Dave Ashby, Carolyn Latham, Wendy Main, Arapata Reuben (Te Ngāi Tūāhuriri Rūnanga representative), Councillor Sandra Stewart (WDC Councillor) and Councillor Megan Hands (ECan Councillor).

**IN ATTENDANCE**

M Bate (Kaiapoi Resident), J Ensor (Mandeville Residents Association), R Johnston (Farmer), M Mckeown (WGA Environmental Consultants), G McKenzie (Real Communications), C Butler (Water Strategies NZ), J Benn (Department of Conservation) and H Zervos (Student).

S Allen (WDC Water Environment Advisor), T Davie (ECan Director: Science), A Arps (ECan Zone Manager), M Cataloni (ECan Northern Zone Delivery Lead), Z Ploeg (ECan Biodiversity Officer), M Griffin (ECan CWMS Facilitator) and T Kunkel (WDC Governance Team Leader).

**KARAKIA**

Arapata Reuben provided the karakia to open the meeting.

**1 BUSINESS**

**1.1 Apologies**

Moved: D Ashby

Seconded: W Main

Apologies were received and sustained from Michael Blackwell, Erin Harvie, Judith Roper-Lindsay and John Cooke for absence.

**CARRIED**

**1.2 Welcome and Introductions**

The Acting Chairperson welcomed all the members present. He requested the CWMS Waimakariri Zone Committee members and attendees to introduce themselves to the members of the public in attendance.

**1.3 Register of Interests**

No discussion emanated from this point.

**2. OPPORTUNITY FOR THE PUBLIC TO SPEAK**

**2.1 C Butler - Water Strategies NZ**

C Butler highlighted the Ministry of Primary Industries' (MPI) Sustainable Food and Fibre Futures Project which would be led by the farming community. It was envisaged that farmer-led groups would share and explore knowledge, ideas and solutions supported by facilitators, with experts brought in as required. Water Strategies NZ would be supporting the Waimakariri farming community to proactively explore solutions to sustainability challenges.

Funding received from the MPI would be used for the following:

- Facilitate and co-ordination of farmer groups.
- Technical expertise to exploration of future farm systems and to pilot whole of Farm Business Plan approach.

- Implement an Evaluation and Monitoring Programme to ensure the project progress was measured, reported on and adapted. Farmer case studies would also be undertaken over the next three years.
- Updates on progress and findings to farmers and wider community.

C Butler elaborated on the approach taken to establish farmer-led groups. Water Strategies NZ was currently drafting up ideas and proposals that were raised during the high level workshops with the farmer-led groups. It was agreed to first determine what existing practices and information were available, before commencing work. C Butler noted that the project would be undertaken in collaboration with other groups and organisations such as ECan, the Waimakariri Landcare Trust, Beef and Lamb New Zealand, and Waimakariri Irrigation.

C Henderson advised that although the project fell under the auspice of the Waimakariri Landcare Trust, a steering group had been established to manage the project. W Main would be representing the CWMS Waimakariri Zone Committee on the said steering group, to ensure constant feedback to the Committee. He advised that a website was currently being developed for the project to keep interested parties updated.

Councillor S Stewart sought clarity on the kind of ideas for study that were being raised at the farmer-led workshops. C Butler noted that issues such as fertigation, on pasture activities, effective engagement with iwi and the wider community, and environmental measures on farms seemed to be the main concerns.

In response to questions, C Butler confirmed that just under \$500,000 funding was received for the three year project.

## 2.2 R Johnston – Farmer

R Johnston raised a concerns that, as a farmer, he believed that he was not being represented in government. He advised that the flow of communication from the CWMS Waimakariri Zone Committee to the general public was not effective enough to keep the community informed on the work being done by the Committee.

R Johnston expressed further apprehension regarding the lack of public consultation by Central Government on issues relating to fresh water prior to realising the National Policy Statement on Fresh Water 2020. This lack of consultation has led to ECan's proposed rates increase of 24.5 per cent, to cover the fallout of the Government's new freshwater regulations. He noted that many of the residents in the Waimakariri district would not be able to afford the proposed rates increase.

R Johnston noted that to date the funding allocated for the Ashley River Clearance Project had not been spent. M Cataloni confirmed that ECan was in the process of procuring contractors for clearing the vegetation. It was envisaged that the project would commence in April 2021.

## 2.3 M Bate – Kaiapoi Resident

M Bate showed recent photos and videos of the Kaiapoi River, emphasizing the lack of aquatic weeds and the algal bloom in the river. However, he noted the improvement in the aquatic weed growth in the Kaiapoi River behind the Kaiapoi Borough School. There also seemed to be an increase in the growth of aquatic weeds on the mud flats near the State Highway Bridge. However, there still seemed to be no aquatic life in the waterway.

M Bate also showed a video highlighting the effluent that Christchurch Ready Mix Concrete was releasing into the Waimakariri River. A Reuben expressed a concern that ECan was not advised immediately of the effluent running into the Waimakariri River and requested M Cataloni to investigate the matter.

In conclusion, C Henderson expressed the CWMS Waimakariri Zone Committee's appreciation for the continued campaigning done by M Bate. He was encouraged by the increase growth of aquatic weeds in the Kaiapoi River.

### 3. REPORTS

#### 3.1 Immediate Steps Biodiversity – Update – Z Ploeg (Ecan Biodiversity Officer)

Z Ploeg advised that the Council, ECan and the QEII Trust were collaborating with the landowner to support the retirement, fencing and permanent protection of approximately 150-hectare on Mount Lawry Station, including part of the Waipara River. The proposed project would involve fencing and covenanting four area on the station to exclude farmed stock and feral deer. The areas to be fenced consisted of a low nutrient sphagnum bog, primary beech forests, manuka, kanuka and several other nationally and locally rare plants. It was envisaged that by fencing the area, the native vegetation would be able to recover.

In response to questions Z Ploeg explained that it was anticipated that the project would cost approximately \$590,000, and application had therefore also been made to the Jobs for Nature Fund for \$400,000. Due to the high cost of the project it was recommended that the funding be allocated over two financial years.

A Reuben sought clarity on what would happen to Immediate Steps Funding, if the applicants were unable to raise additional funding. Z Ploeg confirmed that the funds would revert back to the Immediate Steps Fund.

Moved: D Ashby

Seconded: C Latham

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Supports** an allocation of \$50,000 of Immediate Steps funding for the Mt Lawry Covenant project over two financial years.

**CARRIED**

A Reuben Against

C Latham noted that the funding application was supported by the Biodiversity Working Group.

A Reuben advised that the Rūnanga did not currently consider the protection of these areas as a high priority from a cultural and fresh water perspective.

#### 3.2 Zone Implementation Programme Addendum Implementation – Second Quarterly Update 2020/21 - S Allen (WDC Water Environment Advisor) and M Griffin (CWMS Facilitator – Waimakariri, ECan)

M Griffin tabled a report on the Zone Implementation Programme Addendum (ZIPA) for the Waimakariri Water Zone for the period 1 October to 30 December 2020. He noted that the report had not been finalised at the time the CWMS Waimakariri Zone Committee agenda was being compiled, hence the tabling of the report at the meeting.

Subsequent to discussion, it was agreed that consideration of the Zone Implementation Programme Addendum Implementation – Second Quarterly Update 2020/21 lay on the table until the next meeting to enable the members to study the report.

Moved: Councillor S Stewart

Seconded: C Henderson

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Lay** the report on the 'Update on Zone Implementation Programme Addendum Implementation for the Second Quarterly 2020/21' until the next meeting of the committee.

CARRIED

**4 COMMITTEE UPDATES – M GRIFFIN (ECAN)**

**4.1 Proposed Plan Change 7 (Waimakariri)**

M Griffin noted that the Reply Hearing was concluded on 26 February 2021 and the ECan Council decision was expected in June/July 2021.

**4.2 CWMS Regional Committee**

The CWMS Regional Committee meeting scheduled for 16 February had been postponed and a rescheduled date would be advised shortly. M Griffin undertook to keep the CWMS Waimakariri Zone Committee updated on this matter.

C Henderson enquired if the CWMS Waimakariri Zone Committee would be able to provide input on the proposed new Terms of Reference for the CWMS Regional Committee. M Griffin explained that there was no formal feedback process, however, the Committee could make a submission to the ECan Council on this matter.

T Davie confirmed that the review of the Terms of Reference for the CWMS Regional Committee would be considered by the ECan Council on 11 March 2021.

**4.3. Zone Committee Working Groups**

• Landcare Working Group

C Henderson noted that the Waimakariri Landcare Trust main focus was on delivering the Next Generation Farming Project in conjunction with Water Strategies NZ.

• Biodiversity Working Group

C Latham reported that the Group was still in the process of ascertaining the need for a Waimakariri Biodiversity Trust. Next they would be focusing on finding potential trustees and investigating funding options for the proposed Trust.

• Coastal Catchments Working Group

The working group had a field trip to the Saltwater Creek on 23 February 2021, where S Allen demonstrated how to take a stream water sample and do a quick stream health assessment.

**4.4 Communications and Engagement**

• Zone Committee 2020 Annual Progress Report

No discussion emanated from this point.

• Other communications

G McKenzie from Real Communications would be assisting with communications for the Waimakariri Water Zone.

4.5 **WDC Land and Water Committee.**

No discussion emanated from this point.

4.6 **CWMS Zone Committee Review and Refresh Schedule 2021**

M Griffin provided a brief update on the proposed timeframe for the CWMS Zone Committee Review and Refresh.

4.7 **NIWA Advice – Aquatic Macrophyte loss in lowland waterways**

No discussion emanated from this point.

4.8 **Action Points from previous CWMS Waimakariri Zone Committee meetings**

- **Action point from the 7 December 2020 meeting:**

Councillor Stewart again stated that she found the information on the LAWA Website inadequate, as the data was 15 months out of date. She believed that the water quality and ecological data available on the LAWA Website was not sufficient for the Committee to make informed decisions about the districts waterways. Nor did the out-of-date information provide the general public with an understanding of the state of the ecology and water quality in the Waimakariri district.

Councillor Stewart therefore requested that the CWMS Waimakariri Zone Committee be updated on the uploading and maintenance of data on the LAWA Website.

T Davie explained where the data captured on the LAWA Website was sourced from. He noted that the website was designed to show state and trend over a period of time (mostly five, 10 and 15 years), and not to provide 'live data'. The data on the LAWA Website was therefore updated on an annual basis. However, ECan was currently working on the Water Data Project to 'clean-up' its data sets. As part of the project, a Water Quality Data Viewer was being developed, which would enable the public to access the latest water quality data.

In response to questions T Davie confirmed that the locations of the motoring sites would not be reviewed as part of the Water Data Project.

C Henderson requested that the CWMS Waimakariri Zone Committee be provided with information on how much funding would be available for the monitoring of water quality in the Waimakariri Zone, and what future monitoring was proposed. T Davie undertook to report back to the Committee on this matter.

- **Action points from the 1 February 2021 meeting:**

C Henderson reported that Waimakariri Irrigation Ltd had decided not to submit an application for funding to the Freshwater Improvement Fund, for the Bennett's Diversion Enhancement Project, at this time.

Moved: D Ashby

Seconded: J Roper-Lindsay

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Receives** these updates for its information, and with reference to the Committee's 2021 Work Programme and Community Engagement priorities.

**CARRIED**

**6 CONFIRMATION OF MINUTES**

6.1 **Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting – 1 February 2021**

Moved: D Ashby

Seconded: J Roper-Lindsay

**THAT** the CWMS Waimakariri Zone Committee:

- (a) **Confirms** the Minutes of the Canterbury Water Management Strategy Waimakariri Zone Committee meeting, held on 1 February 2021, as a true and accurate record.

**CARRIED**

6.2 **Matters Arising**

None

**7 GENERAL BUSINESS**

7.1 **Time of CWMS Zone Committee meeting**

A Reuben noted that due to other commitments he was struggling to attend the workshop being held prior to the CWMS Zone Committee meetings. He requested the Committee to consider rescheduling the workshops.

**KARAKIA**

A Reuben provided the karakia to close the meeting.

**NEXT MEETING**

The next meeting of the CWMS Waimakariri Water Zone Committee was scheduled for the 3 May 2021 at 3:30pm.

THERE BEING NO FURTHER BUSINESS, THE MEETING CLOSED AT 5.14 PM.

CONFIRMED

\_\_\_\_\_  
Chairperson

\_\_\_\_\_  
Date



## 8. Three Waters Bimonthly Report January-February 2021

Reference / Te Tohutoro: 21/300800

Report of / Te Pou Matua: Helen Beaumont, Head of Three Waters and Waste,  
helen.beaumont@ccc.govt.nz

General Manager / Pouwhakarae: Dawn Baxendale, Chief Executive, Executive Office  
dawn.baxendale@ccc.govt.nz

### 1. Brief Summary

- 1.1 The purpose of this report is to update the Three Waters Infrastructure and Environment Committee on work occurring in the Three Waters portfolio. The report has been written by staff.
- 1.2 Key Points in this report:
  - 1.2.1 Central government continues to progress the service delivery reforms for three waters – we are providing detailed information on our assets, network performance, service delivery costs and future investment requirements.
  - 1.2.2 Progress on the review of bylaw provisions for three waters services – proposed draft bylaws to be completed by April 2021.
  - 1.2.3 Operational updates, improvements in response and resolution times for water related service requests, and summer water restrictions.
  - 1.2.4 Quality assurance update – including compliance with resource consents, submission and approval of water safety plans, and actions in response to incidents and events.
  - 1.2.5 Overview of capital projects underway across the city.

### 2. Officer Recommendations / Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters Infrastructure and Environment report for January and February 2021

## Attachments / Ngā Tāpirihanga

No.	Title	Page
A <a href="#">↓</a>	Three Waters Infrastructure and Environment Committee Report - January- February 2021	47

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Not applicable	

## Confirmation of Statutory Compliance / Te Whakatūtutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

## Signatories / Ngā Kaiwaitohu

<b>Author</b>	Suzannah Clyne - Personal Assistant
<b>Approved By</b>	Helen Beaumont - Head of Three Waters & Waste Dawn Baxendale - Chief Executive



Temporary tank farm at L'Aube Water Treatment Plant, Akaroa

## THREE WATERS OPERATIONS

January / February 2021 report

## PLANNING AND POLICY

### Central Government Water Reform

Central Government launched the Three Waters Reform programme in July 2020 in response to significant challenges faced by New Zealand's three waters system. The programme will transform the delivery of three waters services. The government's preference is to create a small number of large scale water service entities which would be separate from the 67 local authorities currently delivering these services.

The timeline for the programme is ambitious:

- Engagement on options March 2021
- Policy decisions April / May 2021
- Public information and education campaign throughout 2021
- Legislation to create new entities introduced late 2021 and enacted mid 2022
- Entity establishment and transition 2022/23.

Local authorities were given a financial incentive, through stimulus funding for water services, to sign a Memorandum of Understanding agreeing to take a partnership approach to the reform process. The release of the stimulus funding was followed by a request for information, designed to support the detailed options analysis required to ensure the best service delivery arrangements for New Zealand.

In March 2021, the DIA will be holding a series of workshops across New Zealand, focused on what proposed entities could look like, how they could be set up and next steps for the programme.

### Department of Internal Affairs Stimulus Funds programme

The Council has received the first 50 per cent of the grant, \$20,260,000. The remainder of the funds will be paid as progress payments. All projects included within the programme are underway and the first quarterly report to the Department of Internal Affairs (DIA) was approved in February 2021.

The DIA released a change request process in February 2021. There is one project that will be swapped out due to time constraints (Scruttons Road). The change is expected to be prepared by 31 March with reporting focused on the original programme until the changes are approved.

A summary report is provided as part of monthly updates to the Finance and Performance Committee by our Programme Management Office.

### Canterbury service delivery review

The review, initiated by the Mayoral Forum, started in December 2020 and will be completed by May 2021. PricewaterhouseCoopers (PwC) are leading this work with support from Aurecon.

The review has three key stakeholder groups:

- Steering group (Mayoral Forum)
- Advisory group (Chief Executives Forum)
- Provision of data (Staff water reform lead / Engineering managers' Forum)

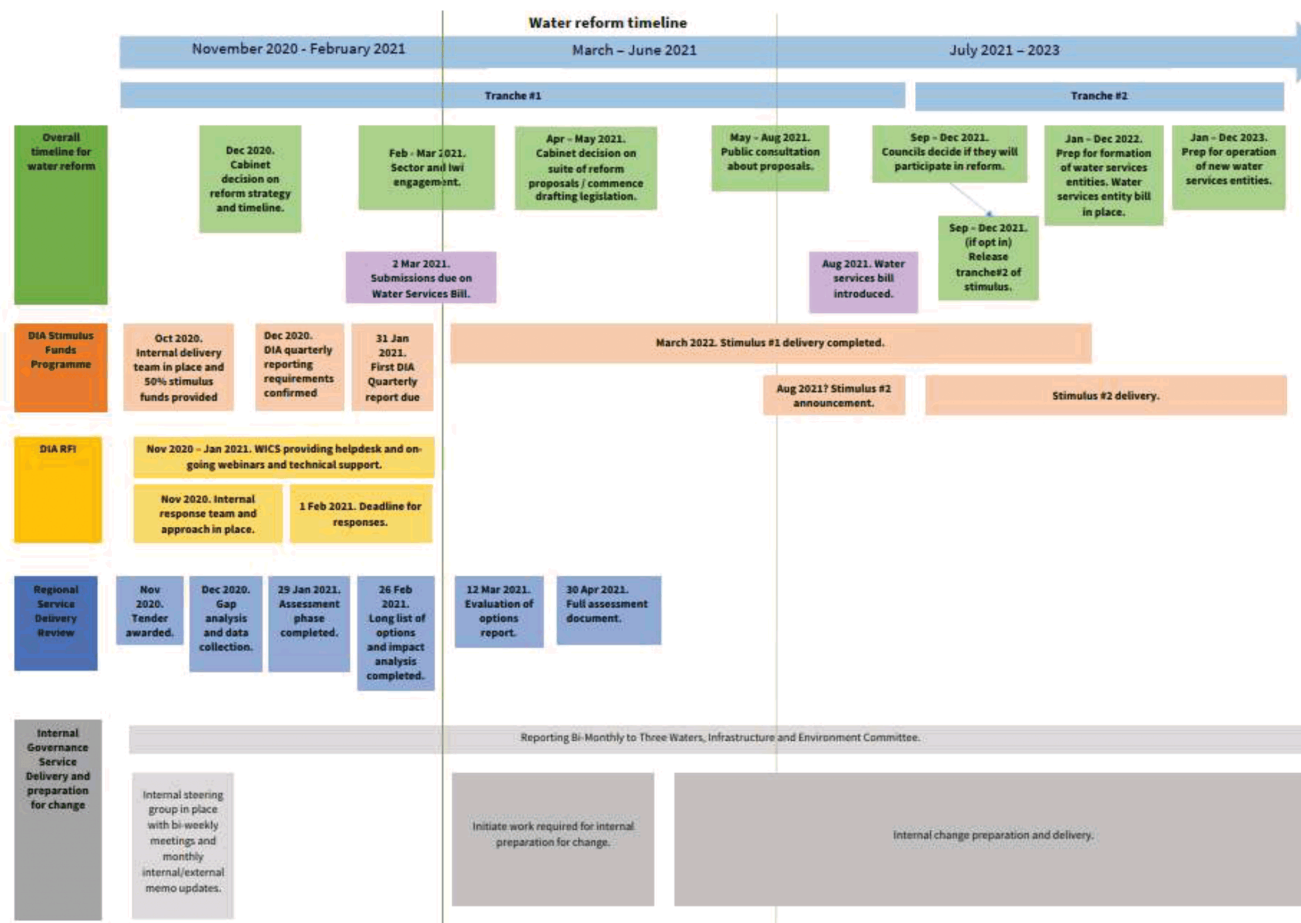
To meet the timeline required to contribute to the Government's Water Reform programme, PwC set up a series of three workshops. Each of these is attended by the advisory group and reviewed by the steering group. These are to compare options and evaluate indicative reform models. As of 10 March, the steering group are preparing to meet for the final workshop to evaluate water reform models.

#### [Department of Internal Affairs Request for Information](#)

The Request for Information was completed in February 2021, aimed at improving the state of knowledge and understanding about three waters assets, network performance, service delivery costs, commercial arrangements, and future investment requirements.

In March 2021, a feedback session was held with the internal team and the Chief Executive at the Water Infrastructure Commission for Scotland. The formal outcomes of the analysis are not yet available and are not expected to be included in the March 23 workshop.

The summary timeline for reference:



### Water Services Bill

The Taumata Arowai Water Services Regulator Bill (establishing Taumata Arowai as the new regulator for water services) was granted Royal Assent on 6 August 2020. This Water Services Bill (the Bill) is the second piece of legislation as part of the Government's Three Waters Reform Programme.

The Bill sets out the roles and responsibilities of Taumata Arowai as well as roles and responsibilities for drinking water suppliers and local authorities. It is a significant and complex piece of legislation that will repeal Part 2A of the Health Act 1956 and replace it with a stand-alone Act to regulate drinking water.

The first reading of the Bill was on 8 December 2020. The Bill has been referred to the Health Select Committee. The Chair of the Select Committee has called for public submissions on the Water Services Bill, with a closing date for submissions of midnight on Tuesday, 2 March 2021.

Council staff have collaborated with Waimakariri and Selwyn District Council staff on common issues. Two workshops were held in February with elected members to discuss the Bill. The draft submission was approved at the Finance and Performance Committee Meeting on 25 February 2021.

In addition to the Bill, Taumata Arowai has published exposure drafts of:

- the proposed drinking water standards and drinking water supply operational compliance rules
- an acceptable solution for rural and agricultural water supplies
- the methodology that water suppliers can use to calculate the number of consumers served by their supply.

### Three Waters bylaw review

#### Background and key issues

The review of the 2014 bylaw has been brought forward from 2024, primarily due to the obligations that the recently granted Comprehensive Stormwater Network Discharge Consent (Comprehensive Consent) places on the Council. The review also provides an opportunity to ensure the water supply and wastewater parts of the bylaw remain fit-for-purpose, particularly in light of the changing regulatory environment.

A staff working group is carrying out the internal phase of the bylaw review, analyzing the 2014 bylaw clauses, and identifying any new or emerging issues.

The review will propose that the bylaw is split into two separate bylaws going forward – one for water supply and wastewater, and the other for stormwater.

Key issues identified as matters that should be addressed in the bylaw include:

- Strengthening the security of water supply to meet more stringent standards, including the risks of backflow and contamination of source water as a result of chemical spills or aerial application.
- Addressing some of the practical issues that have become apparent in implementing the requirement for supplementary water storage tanks in restricted water supply areas of Banks Peninsula.
- Excessive inflow and infiltration and the impact of broken private laterals on the



public wastewater system

- Damage, blockages and increased costs due to common substances and materials (such as wet wipes and period products) which should not be disposed of through the wastewater system.
- A lack of application and approval requirements for connection to the wastewater system, and reasons for refusal.
- Restricted or inadequate access to water supply and wastewater infrastructure for maintenance purposes, particularly where parts of the public systems are in privately owned land.
- The Council's increased responsibilities under the Comprehensive Consent to manage the quality of discharges and to reduce contaminants in stormwater, particularly in relation to:
  - stormwater discharge from industrial premises, and
  - erosion and sediment control from development sites.

Recent work has included:

- A briefing to the Te Waihora Joint Officials Group on the review of the bylaw, including possible implications for Te Waihora and its catchment.
- Liaising with Mahaanui Kurataiao Ltd. to facilitate advice and feedback from Ngāi Tahu and the Papatipu Rūnanga on the direction of the proposed changes prior to the formal consultation process.
- For the Water Supply and Wastewater bylaw, preparation the following documents:
  - Review Report and section 155 analysis
  - Draft replacement bylaw
  - Clause by clause analysis
  - Statement of Proposal
  - Committee report

For the Stormwater bylaw:

- Analysis of options for connection and discharge approvals, including a proposed risk assessment and audit programme for industrial stormwater discharges, and associated funding mechanisms
- Drafting bylaw provisions.

#### Timeframe for review

Both proposed draft bylaws will be presented to the Three Waters Infrastructure and Environment Committee for consideration in July 2021. This has been delayed from April in order to allow the Stormwater bylaw work to be completed so that both bylaws to go to Committee at the same time. If adopted by the Committee for consultation, a special consultative procedure will commence in the second half of 2021.



## COMPLIANCE AND QUALITY ASSURANCE

### Comprehensive Stormwater Network Discharge Consent CRC190445

A consent variation is being drawn up to move the stormwater management plan (SMP) programme delivery out by six months. This is to provide adequate time to complete plans and to put them out for public consultation before they are presented to Council for adoption and approval to be submitted to Environment Canterbury. Moving the submission date from 30th June to 20th December 2021 for the Heathcote and Halswell SMPs means that it will not coincide with the LTP submission and hearings process. This should ensure better community and Council engagement on the SMPs.

The Community Water Partnership is being formally launched on Monday 22 March at Turanga.

### Health Safety and Wellbeing

There were a total of 24,576.45 hours worked in February, including Transport and Three Waters and Waste internal staff.

A total of 5 events were reported in February, a significant drop compared with previous months. The events include a total of 1 near miss, three first aid injuries, and one Chemical Spill/Leak.

Please see appendix 1 for the detailed statistics and the measures of LTIFR (lost time injury frequency rate) and TRIFR (total recordable injury frequency rate) for January-February.

### Resource consents

There are currently two significant non-compliance grades with Environment Canterbury across just one active issue in the three waters area. The situation relates to a project widening a waterway (St Albans Creek) and replacing the bank lining. Some sediment laden water was pumped out of the work area into the downstream water without adequate treatment. The situation was self-reported to both Council and Environment Canterbury. In this instance the volumes were small and the downstream effects not too severe. Enforcement action has been narrowly avoided.

### Water Safety Plans

Under the Health Act 1956 drinking-water suppliers have the duty to prepare and implement water safety plans for supplies serving more than 500 people. A water safety plan documents a public health risk-based assessment and management process that aims to ensure a safe and secure supply of drinking water for consumers, protecting public health. Water safety plans must be updated every five years – see table below.

Water supply	More than 500 people?	Previous expiry date	Date revised plan submitted	Revised plan status	Date new resubmission	Status
Little River	No	10 April 2019	30 April 2019	Not approved	26 February 2021	Submitted
Duvauchelle	No	14 May 2019	31 May 2019	Not approved	n/a	n/a
Wainui		26 June 2019	28 June 2019	Not approved	12 November 2020	No approved
Akaroa / Takamātua	Yes	27 September 2022 (A). 23 July 2019 (T).	31 July 2019	Not approved	18 September 2020	Approved
Pigeon Bay	No	18 August 2019	30 August 2019	Not approved	n/a	n/a
Christchurch / Lyttelton	Yes	9 March 2023	4 October 2019	Not approved	23 December 2020	Submitted
Birdlings Flat	No	29 September 2022	n/a	n/a	n/a	n/a

Table 1: Summary of WSPs for Council owned and operated water supplies

#### Progress made on updating the plans

The Drinking Water Assessor on behalf of the Ministry of Health approved Akaroa / Takamātua Water Safety Plan on 26 November 2020. This is the first Water Safety Plan approved for the Council and the second plan approved nationwide.

The adequacy report for the Wainui Water Safety Plan was received on 5 March 2021 and the Drinking Water Assessor's decision was 'not approved'. Staff will review the adequacy report and update the Wainui water safety plan in line with the findings.

Currently, the Drinking Water Assessor is assessing the Christchurch / Lyttelton and Little River Water Safety Plans.

Water supply	Task	Status	Planned date for resubmission
Akaroa/ Takamātua		✓ Approved	18 September 2020
Wainui		✓ Not approved	6 November 2020
Christchurch/ Lyttelton		✓ DWA Review	24 December 2020
Little River		Submitted	26 February 2021
Duvauchelle	49 actions and tasks, 10 completed, 11 require significant input from Citycare	In progress	30 April 2021
Pigeon Bay	27 actions and tasks, 1 completed, 14 require significant input from Citycare	In progress	30 June 2021
Birdlings Flat		Early draft	29 September 2022

Table 2: Summary actions required for water safety plan updates

### Unacceptable risks from the Christchurch / Lyttelton water safety plan

The risk assessment undertaken for the 2020 Christchurch/Lyttelton water safety plan identified four risks as being unacceptable and requiring corrective action – including ongoing chlorine treatment for two of these risks until they are satisfactorily addressed. None of these unacceptable risks are associated with the groundwater source but rather with water storage tanks and water distribution systems:

1. Major microbial contamination of storage tank serving >5,000 people due to cracks in roof or below ground walls allowing contaminated water to enter.
2. Introduction of contaminating material into the distribution system due to leaching of lead in lead jointed pipes.
3. Introduction of contamination due to no / inadequate / faulty / incorrectly installed backflow prevention device.
4. Civil emergency: earthquake or other large scale disruption.

Immediate measures were put in place to manage those risks, and longer term action plans are being developed with the ultimate goal of risk reduction and elimination. These measures are outlined below.

### Unacceptable risk 1 – major microbial contamination of storage tank serving >5,000 people due to cracks in roof or below ground walls allowing contaminated water to enter.

Immediate measures	Status	Longer term plan	Status
Richmond Hill reservoir replacement	✓	Undertake a comprehensive condition assessment of all suction tanks and reservoirs using recently revised condition assessment criteria, with a focus on partially buried tanks	In progress
External reservoir and suction tank inspections will be carried out over summer which will help inform the order of the remaining detailed internal and external inspections which will be undertaken as a longer term improvement action.	In progress	Develop a prioritised remediation programme to address contamination risks identified in the comprehensive condition assessment	In progress
Continue temporary chlorination at pump stations feeding affected reservoirs and suction tanks – target 0.2 mg/L residual at the outlet of the tank.	✓	Improve maintenance contract clauses and data capture for inspections of all water supply assets, including well heads and reservoirs.	In progress

Table 3: Measures to address unacceptable risk of microbial contamination of reservoirs and suction tanks.

### Unacceptable risk 2 – Introduction of contaminating material into the distribution system due to leaching of lead in lead jointed pipes

Immediate measures	Status	Longer term plan	Status
Sampling programme for water from lead jointed pipes	In progress	Accelerate replacement of lead-jointed pipes via the water supply mains renewal programme. Lead-jointed pipes will be prioritised for renewal in Long Term Plan.	In progress
Consider taking the lead jointed pipe in the rail tunnel out of service	✓	Investigate options for replacing the cast iron rail tunnel trunk mains to Lyttelton.	In progress
Budget reprioritised to provide short term alternative connections in Lyttelton	✓		
Determine whether short term alternative customer connections can be made to other pipes elsewhere	In progress		
Lead-jointed pipes information and map on our website	✓		

Table 4: Measures to address unacceptable risk 2

Unacceptable risk 3 – contamination of the water supply due to no / inadequate / faulty / incorrectly installed backflow prevention device.

Immediate measures	Status	Longer term plan	Status
Inspect commercial properties to evaluate the backflow hazard and assess the backflow prevention device.	✓	Create a dedicated backflow register with information about the backflow risk, backflow prevention device and annual testing records.	In progress
Install, or require the property owner to install, an appropriate backflow prevention device – where absent or inadequate.	In progress	Consider how to address residential properties that are medium risk.	In progress
Continue temporary chlorine at pump stations until backflow resolved – target 0.2 mg/L in the distribution network.	✓	Review the Water Supply, Wastewater and Stormwater Bylaw to improve its robustness relating to backflow.	In progress
Turn temporary chlorine back on or install chlorine equipment at pump stations where backflow risks in the surrounding network cannot be quickly resolved.	✓		
Three additional full time staff members to administer and manage the backflow prevention programme	✓		
Send letters to medium risk properties, and those properties where the risk may increase if the use was to change, informing them of the obligation to install a backflow device that is appropriate for the level of risk	In progress		

Table 5: Measures to address unacceptable risk 3

The backflow programme for those connections presenting an unacceptable risk is being rolled out in two tranches programmed to be completed by 30 June 2021:

Tranche 1 – high risk activities – identified 397 connections across the city of which 262 (66 percent) have been completed

Tranche 2 – medium risk activities and connection size 38mm and above – identified 116 connections across the city and 22 (19 percent) have been completed.

Unacceptable risk 4 – Civil emergency: earthquake or other large scale disruption

An earthquake or other large scale event could lead to a major disruption of service over 24 hours, requiring high level of monitoring and operational incident management. As earthquakes or other large scale natural events are somewhat unpredictable the residual risk rating remains 'High'. Since all of the Council's water safety plan improvement actions contribute to a safer water supply in terms of public health and water supply operations, no additional improvements have been assigned to this risk

Temporary chlorination

Temporary chlorination must continue in Christchurch and Wainui until all of the following requirements are met:

- all contributing wells at a pump station meet Criterion 2 for bore water security in DWSNZ, as determined by an expert in well head security, or have been isolated
- suction tanks and reservoirs supplying >5,000 people within the zone of influence of the pump station have condition grade 3 or better for hatch and seals, mesh on vents, mesh on overflows, roof condition and below ground wall condition
- within the zone of influence of the pump station, appropriate backflow prevention is installed and functioning for all sites with a high risk of microbial contamination.
- the revised water safety plans are approved by the Drinking Water Assessor (Matt Parkinson from Wai Comply Ltd).

#### Reconfirming the 'secure bore' status for Christchurch

Under the current drinking water standard, secure groundwater does not require treatment. Bore water is considered secure when it can be demonstrated that contamination by pathogenic organisms is unlikely because the bore water is compliant with the following criteria:

1. Not directly affected by surface or climatic influences (water must be at least one year old by which time any pathogens are assumed to have died).
2. The bore head that provides satisfactory protection from contamination.
3. *Escherichia coli* (*E. coli*) must be absent from bore water.

#### Bore water security criterion 1: bore water must not be directly affected by surface or climatic influences

The absence of surface and climatic influences will be demonstrated by determining the age of the groundwater in our wells and through groundwater modelling:

- Groundwater sampling programme is 80 per cent complete (4 out of 5 batches)
- All wells in batch 1 met bore water security criterion 1
- Laboratory turnaround time 5-6 months per batch, estimated completion late 2021
- Groundwater modelling methodology peer reviewed by modelling experts, estimated completion late 2021.

#### Bore water security criterion 2: bore head must provide satisfactory protection

Our well head security improvement programme (WHSIP) is the programme of works to upgrade the Christchurch water supply to meet the existing Drinking Water Standards and to provide future proofing for likely more stringent DWSNZ requirements is almost complete. The programme includes:

- Conversion of wellheads to above ground well heads to improve security from contamination and to make them easier and safer to access for maintenance
- Temporary remediation of below ground well heads where artesian pressure is sufficient to provide protection from contamination
- Drilling of new / replacement wells to replace shallow wells that are more vulnerable to contamination
- UV treatment at Main Pumps to provide protection against contamination of groundwater
- Other work to provide protection from contamination
- Well head security assessments are carried out by a qualified expert to confirm that the converted wellheads meet DWSNZ bore water security criterion 2.

So far 126 wells have been signed off as secure by the expert in well head security. UV treatment has been installed and is fully operational at Main Pumps (a further six wells). This is sufficient to supply Christchurch, Lyttelton Harbour, Brooklands/Kainga and Wainui almost entirely with water from secure wells, or with water from wells which receive UV treatment. Work is underway on a further three wells and planning and design is underway on 12 wells.

#### Bore water security criterion 3: *Escherichia coli* must be absent from bore water

This criterion is satisfied by our ongoing drinking water monitoring programme.

The compliance status for each of these three criteria is shown in table 8 for those water

supplies fed by groundwater:

Water Supplies & <a href="#">Water Supply Zones</a>	Population	Community Code	Water Source	Compliance with DWSNZ bore water security criteria			Water Treatment
				Criterion			
				1	2	3	
CHRISTCHURCH CITY							
Christchurch	381,816	CHR001	Groundwater				No treatment in some areas, temporary chlorination in the remainder, UV treatment at Main Pumps
Central	158,250			X	X	✓	
Northwest	86,160			X	✓	✓	
Parklands	20,139			X	✓	✓	
Rocky Point	2,500			X	✓	✓	
Riccarton	11,771			X	✓	✓	
West	57,811			X	✓	✓	
Ferrymead	16,847			X	✓	✓	
Rawhiti	30,838			X	✓	✓	
Brooklands/Kainga	1,629	BRO012	Groundwater	X	✓	✓	None
BANKS PENINSULA							
Lyttelton Harbour Basin	5,854	LYT001	Groundwater				Temporary chlorination
Lyttelton	3,273			X	✓	✓	
Diamond Harbour	1,701			X	✓	✓	
Governors Bay	880			X	✓	✓	
Wainui	124	WAI138	Groundwater	✓	✓	✓	Temporary chlorination

When age dating and modelling are complete in a water supply zone, a report summarising compliance with all three bore water security criteria will be submitted to the Drinking Water Assessor. The report for Brooklands/Kainga was submitted to the Drinking Water Assessor on 18 January 2021. The Drinking Water Assessor will review the report in conjunction with other evidence to make a decision whether or not the groundwater can be classified as secure.



## WATER SUPPLY

### Drinking Water Quality

This section provides drinking water quality monitoring related information for the two month period ended 28 February 2021.

### E. Coli Water Quality Monitoring

Figures 1, 2 and 3 show the number of E. coli samples taken by water supply zone. The number of E. coli samples taken exceeded the requirements of the Drinking Water Standards for New Zealand. Figure 4 shows the number of samples taken at the Banks Peninsula water treatment plants, for the parameters required by the Drinking Water Standards for New Zealand.

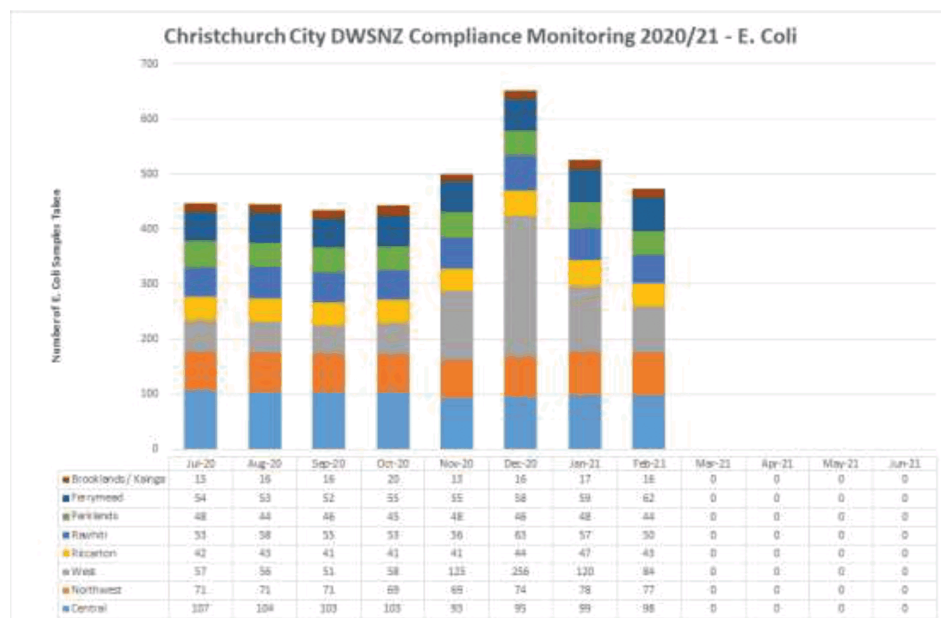


Figure 1: Number of E. coli samples taken for compliance monitoring purposes in Christchurch City



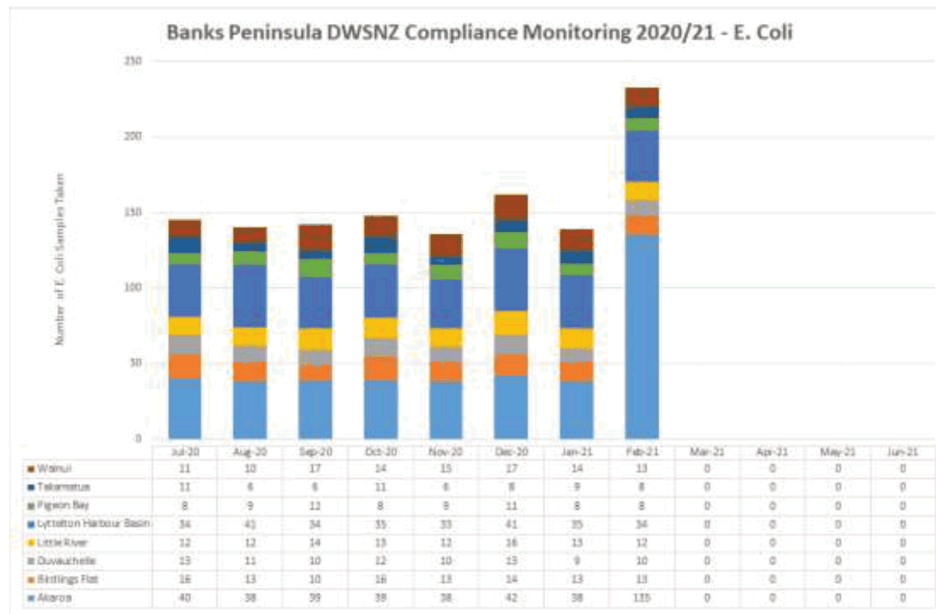


Figure 2: Number of E. coli samples taken for compliance monitoring purposes on Banks Peninsula

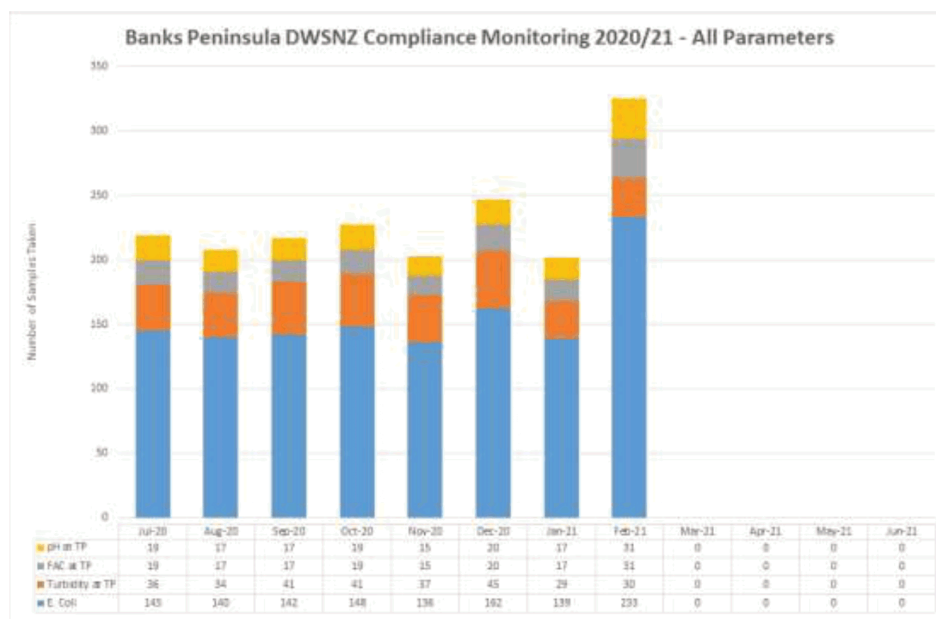


Figure 3: Number of pH, free available chlorine (FAC), turbidity and E. coli samples taken for compliance monitoring purposes at Banks Peninsula water treatment plants

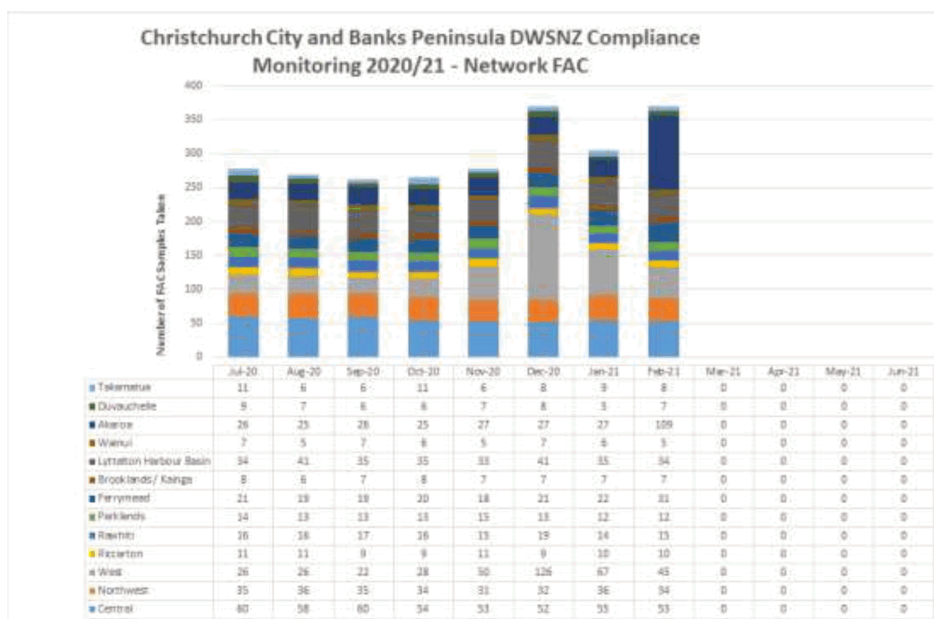


Figure 4: Number of free available chlorine (FAC) samples taken in the distribution system

### E. coli Transgressions

Figure 5 summarises the number of E. coli negative and E. coli positive samples taken each month.

While no E. coli transgression occurred in January or February 2021 a significant incident occurred in Akaroa in early February. Dead animals were found in the treated water reservoir at the L'Aube treatment plant during an inspection. This did not result in water samples exceeding the DWSNZ for bacteriological contamination as the Akaroa water supply is chlorinated and a chlorine residual is present in the reservoir.

A boil water notice was in place for Akaroa and Takamatua while we built alternative water storage. There were also several water tankers available where residents could fill water bottles. Additional water quality monitoring is undertaken to ensure the safety of the drinking water.

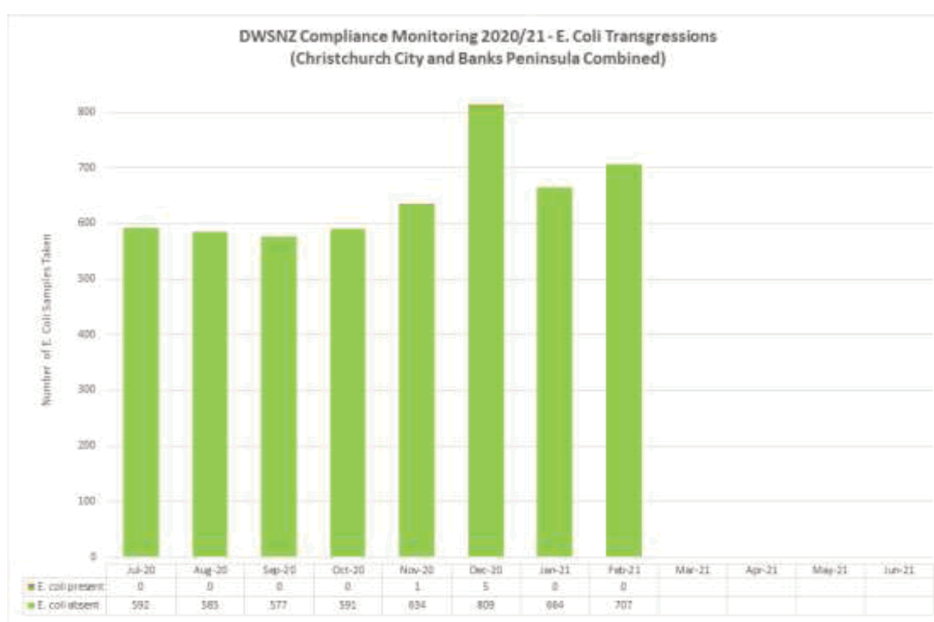


Figure 5: Number of E. coli negative and E. coli positive samples taken each month

### Nitrate sampling

The Council performs groundwater chemistry monitoring to better understand groundwater quality. The water from each aquifer at each pump station site is tested on a 5-year rolling programme. The Council has also established close working relationships with Environment Canterbury who is responsible for monitoring and safe guarding the general quality of Canterbury groundwater. Exchanges of water quality data take place on a regular basis.

The NZ Drinking water standard Maximum Acceptable Value (MAV) for nitrates is 11.3 mg/L nitrate-nitrogen (equivalent to 50 mg/L nitrate). This is aligned with the World Health Organisation (WHO) MAV based on acute risk of Infantile Methemoglobinemia (blue baby syndrome). Currently there is no MAV for the chronic (long term) effects of nitrate contamination in drinking water such as colorectal cancer.

A summary of the results from the Council's sampling programme is provided in Table 1. While all sample results are well below the MAV of 11.3 mg/L (Figure 1) there is an emerging trend of rising concentrations across the district. This is illustrated in Figure 2 which shows the maximum concentrations of nitrate-nitrogen in Council water supply wells for 2008–2020 and mean nitrate-nitrogen concentrations in private wells, collected by Environment Canterbury between 1957 and 2020.

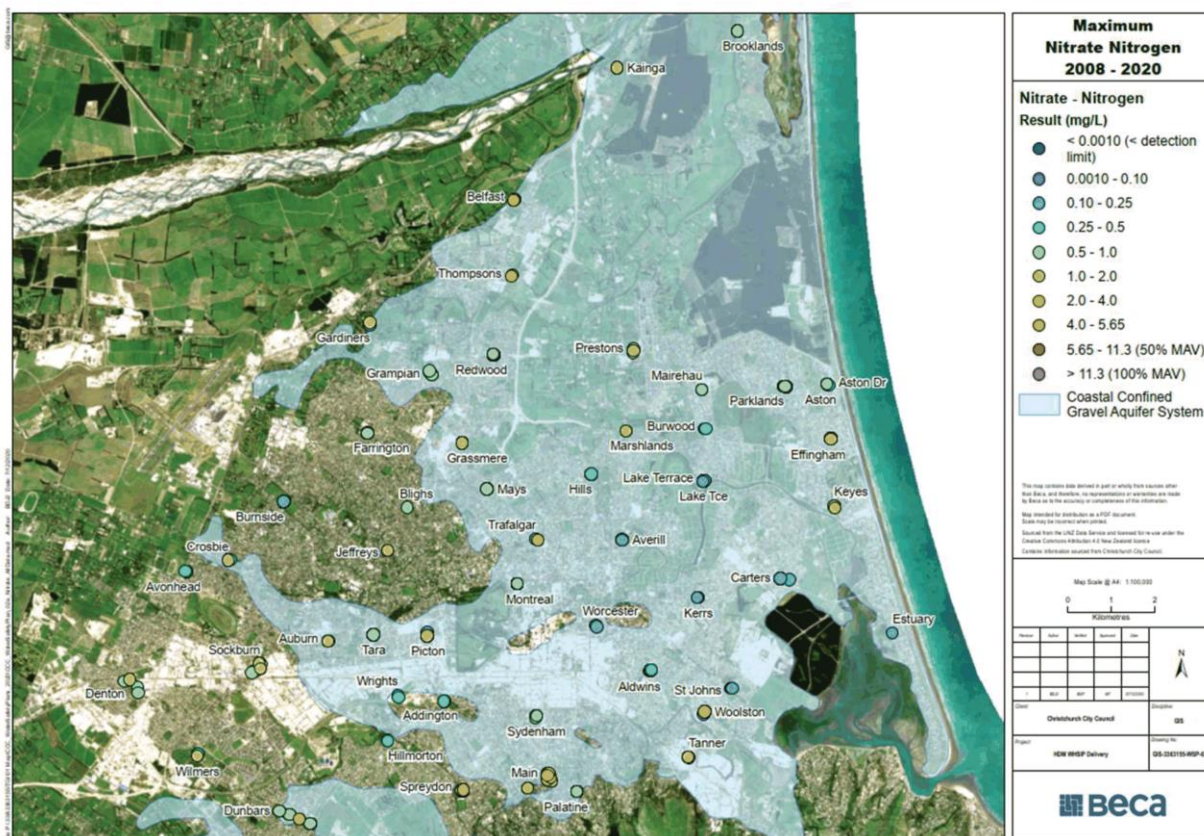
A further round of nitrate sampling for Christchurch water supply wells is expected to be completed by end of the 2020/2021 financial year.

Table 1: Nitrate sampling results for Christchurch water supply wells 2009 to 2020

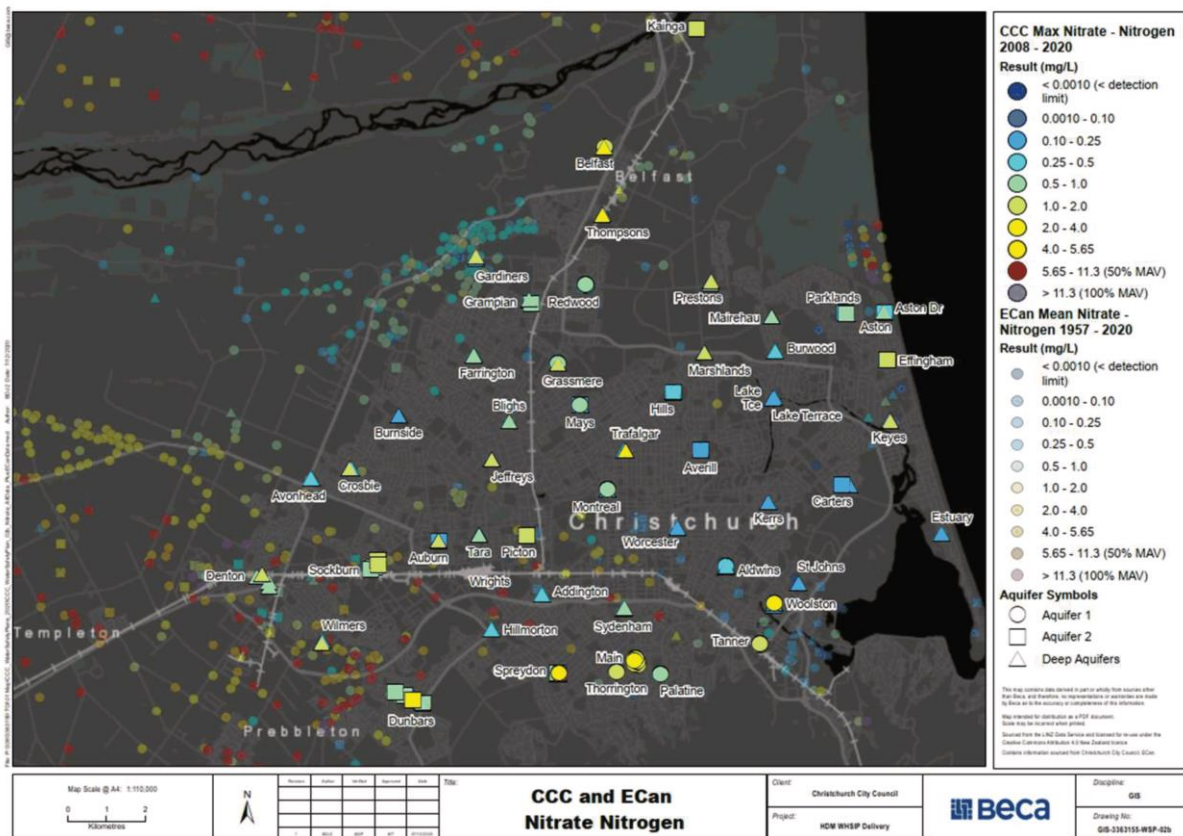
Status	Pressure Zone	Aquifer 1			Aquifer 2			Aquifer 3			Aquifer 4			Aquifer 5			Total Count of Cleaned Result		
		Sample Count	Maximum Result	Average Result	Sample Count	Maximum Result	Average Result	Sample Count	Maximum Result	Average Result	Sample Count	Maximum Result	Average Result	Sample Count	Maximum Result	Average Result	Sample Count	Maximum Result	Average Result
In service	Brooklands / Kainga				8	1.80	0.81										8	1.80	0.81
	Central	52	3.90	1.02	25	1.40	0.47	15	1.30	0.24	84	3.77	0.27	8	0.34	0.16	184	3.90	0.50
	Northwest	19	0.63	0.35	4	0.69	0.37	13	2.90	1.30	13	2.90	1.01	24	1.64	0.39	73	2.90	0.65
	Parklands				8	0.93	0.52	1	1.10	1.10	15	1.40	0.56				24	1.40	0.57
	Rawhiti				2	0.42	0.35	1	0.13	0.13	2	0.54	0.35	1	0.16	0.16	6	0.54	0.28
	Riccarton				6	1.30	0.40				12	0.55	0.21				18	1.30	0.28
	Rocky Point	8	1.40	0.36													8	1.40	0.36
	West				35	2.30	0.88	1	0.84	0.84	9	1.40	0.54				45	2.30	0.81
In service Total		79	3.90	0.79	88	2.30	0.66	31	2.90	0.73	135	3.77	0.39	33	1.64	0.33	366	3.90	0.56
Out of service	Central	20	4.20	1.61													20	4.20	1.61
	Northwest	6	1.90	1.07													6	1.90	1.07
Out of service Total		26	4.20	1.49													26	4.20	1.49
Grand Total		105	4.20	0.97	88	2.30	0.66	31	2.90	0.73	135	3.77	0.39	33	1.64	0.33	392	4.20	0.63

Item 8

Attachment A







### Capital delivery – pump stations, wells and reticulation

#### Eastern Terrace 600mm diameter water main renewal

**Status:** Detailed Design

**Budget:** \$14 million

**Update:** Tender and value engineering review identified that the number of valve chambers could be reduced from six to three. However, the pipe manufacturer agreed that the valves will still require to be restrained. With the limited space in the corridor, “in line thrust blocks” might not be appropriate/sufficient. Alternative pipefitting might need to be incorporated.

Additionally, the lead-time on the pipe materials and fittings is 14 to 16 weeks taking into consideration the global Covid impact, and this is a major risk for successfully delivering this project. In order to mitigate this risk, all material sourced from abroad must be delivered to site and quality assured before the possession of site is granted. The project team is working with the designer to resolve these issues.

Programme funding has been reallocated as part of the draft LTP. The tender package for the project will now be ready by end of March. The request for tenders is planned for April 2021 with construction starting in July 2021.

**Completion:** Expected project completion is August 2023

#### Okains Bay new water supply

**Status:** Detailed design

**Budget:** \$2.6 million

**Update:** Detailed design of the scheme is underway and is planned to be complete in 2021. Water quality monitoring of the Opara Stream has required a more complex treatment process than was originally envisaged. The concept design is now complete and preliminary design is underway. Funding for the construction phase has been deferred until FY22 due to re-prioritisation of the Annual Plan. The latest cost estimate for the project has indicated that more budget will need to be found for the Construction Phase.

**Completion:** June 2022

#### Well head security improvement programme (WHSIP)

**Status:** Completed

**Budget:** \$14.47 million

**Update:** The programme is substantially complete and has merged into the Water Safety and Security Programme (WSSP).

**Completion date:** December 2020

#### New water supply wells

- Prestons – Well 2 and Well 4 development and commissioning is now complete. The review of close out documentation is in progress.
- Belfast – well drilling and development is complete. The pump station electrical upgrade is currently ongoing. Project delivery is planned for April 2021.
- Grassmere – The new well (well 4) is in service and the old well (Well 1) has been decommissioned. Project Delivery was completed in late February 2021.
- Mays – Well drilling work commenced in August 2020 and the well has been drilled to 196m below ground level. Drilling will continue until a suitable aquifer layer (number 5) is reached at which point the well testing will commence. The well is planned to be in operation in June 2021 with subsequent delivery in July 2021.
- Wrights Road – The two new wells are in service since July 2020. The project delivery is planned for April 2021 after the Contractor submits the handover documentation.

#### Jeffreys Suction Tank

**Status:** On hold

**Budget:** \$6.017 million

**Update:** The project is currently in the detailed design stage and has been on hold since September 2020 pending confirmation of Ben Rarere suction tank design – for consistency and cost efficiency. The detailed design of Ben Rarere pump station has now been completed, meetings have been held with the designer and it is expected that design work will recommence in late March 2021. There was previously a forecast budget deficit for this project however funding has been sourced from the LTP and the project budget is now sufficient.

**Completion date:** September 2022

#### Ben Rarere new pump station

**Status:** Tender evaluation

**Budget:** \$6.87 million

**Update:** The tender evaluation is complete and contract award is currently forecast for mid-March 2021. Construction is planned to commence in April 2021.

**Completion date:** April 2022



Artist impression of the new Ben Rarere Pump Station.

#### Sydenham suction tank replacement

**Status:** Preliminary Design

**Budget:** \$3.75 million

**Update:** This will be Council's first stainless steel potable water suction tank. The designer has been requested to submit a revised methodology for detailed design and a workshop was held to establish the best course of action in early March 2021. Construction is forecast to commence in November 2021. Additional funding has been provided as part of the LTP however the project still has a forecast deficit of \$1.3million. Efforts are underway to source the required funding.

**Completion date:** September 2022

#### WS Suction tank and reservoir assessments

**Status:** Assessments/Repairs

**Budget:** Under review

**Update:** Full assessments (internal/external) have been completed at Denton, Sockburn, Hackthorne, Quarry, Keyes, Grassmere, Estuary, Halswell tank 2, Mt Pleasant 3 (tanks 1 & 2) and Mays tanks. External assessments are being undertaken on the remaining tanks over the next 2 months (March/April). All tanks assessed to date require some remedial action before they can be signed off as 'demonstrably safe'.



- Denton – this tank has been given priority over Sockburn and the remedial work has commenced
- Sockburn – contractor has been appointed for remedial works and will establish after Denton is completed
- Hackthorne – preliminary design is being reviewed
- Remainder – works programme is being developed for the autumn and winter months.

**Completion:** The work will be ongoing for four to five years

#### Quarry reservoir (Lyttelton) repairs

**Status:** Procurement

**Budget:** Under Review

**Update:** Inspections have been completed on tank 2 and the preferred option for remediation is to internally line the existing tank and bring it back into service. Subsequently, tank 1 will be emptied and inspected internally before commencement of repairs. A consent has been approved for the earth works, and the project is out to tender.

**Completion:** To be confirmed

#### WS reticulation renewals programme

**Status:** Design, procurement, construction and handover

**Budget:** circa \$36 million

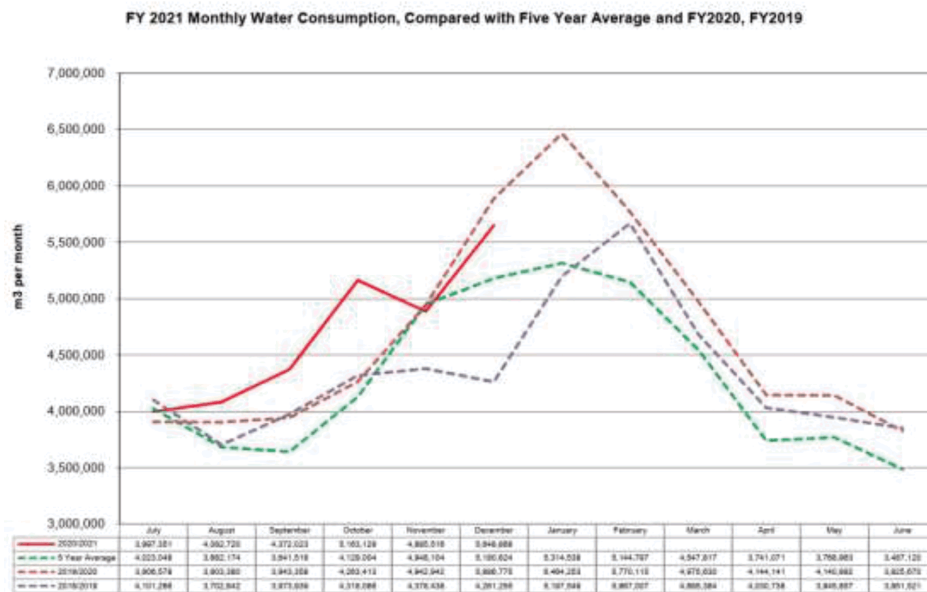
**Scope:** The programme (14 projects) is to renew existing water mains and sub mains within the reticulation network.

**Update:** A number of projects are completing construction phase milestones and handover. Eight projects are in procurement and contract award phase. One project is in design phase. There are additional package projects undertaken for sub mains replacement which are being scoped to deliver in FY21.

**Completion:** Construction works to be completed in FY21, FY22 and FY23.

### Water Supply Operations

The majority of pump stations and wells continue to perform as expected. Year to date (eight months to 28 February) water demand is tracking at 51 billion litres (an average of 2,439 litres/second). Whilst August, September and October 2020 saw well above average demand, the cooler than usual weather between November and February has seen water consumption drop back to be only marginally above the five year average.



The temporary chlorination equipment has continued to perform well, particularly over the higher water demand summer period. The continuous improvement programme and proactive asset replacement has continued. This includes upgrading pipework, replacing pump seals and pumps.

The UV water treatment installation at Main Pumps performed exceptionally well over the summer period, with no unplanned maintenance outages. The work to install dual instrument trains has continued over the summer, with the plan to integrate when the summer water demand peak has passed.

Improvements to operational documentation, in particular field validation and labelling of new above-ground wellheads, has been completed – a source of pride for the operational staff involved in the project.

### Water Supply Reticulation and Maintenance

A significant improvement in response times for water related service requests has been achieved over the last three months. An increase in compliments has been seen with residents thanking us for our quick response:

*Karl called to pass on a compliment for Jayden, who came out to a call out at 7B Indira Lane, Cashmere, early on Sunday morning.... Just wanted it passed on that he was so helpful, professional, great to deal with in general, and got the job completed quickly.*

We continue to manage response times for non-urgent jobs to enable a more effective allocation of resource, improved workflow and timely completion of urgent jobs. Further work is being undertaken in partnership with City Care to see how we can further improve on the efficiency of the team completing the work.

Type of Leak	KPI Target	Current Month			Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21
		Total Jobs	Responses in Target	KPIs Achieved												
Major - Urban	1 Hour (On Site)	160	157	98%	98%	95%	94%	96%	97%	100%	99%	98%				
Major - Rural	2 Hour (On Site)	0	0	100%	100%	100%	100%	80%	100%	100%	100%	100%				
Medium	1 Working Day (Repaired)	157	154	98%	92%	87%	83%	87%	93%	98%	99%	98%				
Minor	3 Working Days (Repaired)	1,188	1,169	98%	39%	38%	40%	32%	70%	99%	99%	98%				
TOTAL WATER JOBS					1,835	1,613	1,266	1,378	1,467	1,416	1,610	1,505				

Contract managers are focused on ensuring our contractor is keeping up with service requests. Where requests fall outside the contract KPI's the individual jobs are reviewed to ensure delays are acceptable. There can be a number of valid reasons for these such as a minor leak in the center lane of Moorhouse Ave or a leak on a state highway – where a planned lane shut down is required, the approval process can take some time.

CATEGORY	Jobs Logged	WIP		NOT COMPLETE - BREAKDOWN			
		Not Completed	Current 0-3 days	4-7 days	8-15 days	16-30 days	31+ days
1 hour	4	3	2			1	
2 hour		0					
1 day	6	6	3	1		1	1
3 day	56	88	73	6	5	3	1
Planned	5	21					
Delayed		18					
Total	71	136					

Data as of 5 March 2021.

### Water usage and restrictions

#### Christchurch City

Water restrictions are often required over the summer to ensure we have adequate pressure and flow for all users and for firefighting purposes. Level 1 water restrictions were introduced for Christchurch mid-January in response to the forecast for several hot, dry days.

#### Banks Peninsula

Level 4 water restrictions were introduced for Banks Peninsula (Duvauchelle, Takamatua and Akaroa) in last month to address the low rainfall and stream levels. For Takamatua and Akaroa Level 4 water restrictions were not only implemented because of low stream flows but to support the bypass works at L'Aube hill due to the recent water contamination event.

## WASTEWATER

### Oxidation pond midges

The midge control programme for the 2020/21 summer season was a success. Zero complaints of midge nuisance were received by the operational staff over the summer period. Whilst higher midge numbers were detected in the sample traps at the start of the summer season, these numbers fell back in line with the previous year as summer continued. Whilst weather is likely to be a significant factor in the number (optimal growth conditions) and spatial distribution (wind speed/direction) of the midges, the data suggests that the ongoing midge controls are having the desired results.

The native vegetation barrier in the paddock between the ponds and the adjacent residential area had a great growing season. The irrigation system continues to perform well encouraging the plant growth.

Over the summer season, a minor civil project has been undertaken in Oxidation Ponds 1 & 2. This change will allow operations staff to reverse the flow through the Oxidation Ponds 1 & 2. This was installed following a trial two years ago which demonstrated that midge larvae was sensitive to fluctuations in water quality which can be controlled through this new installation.

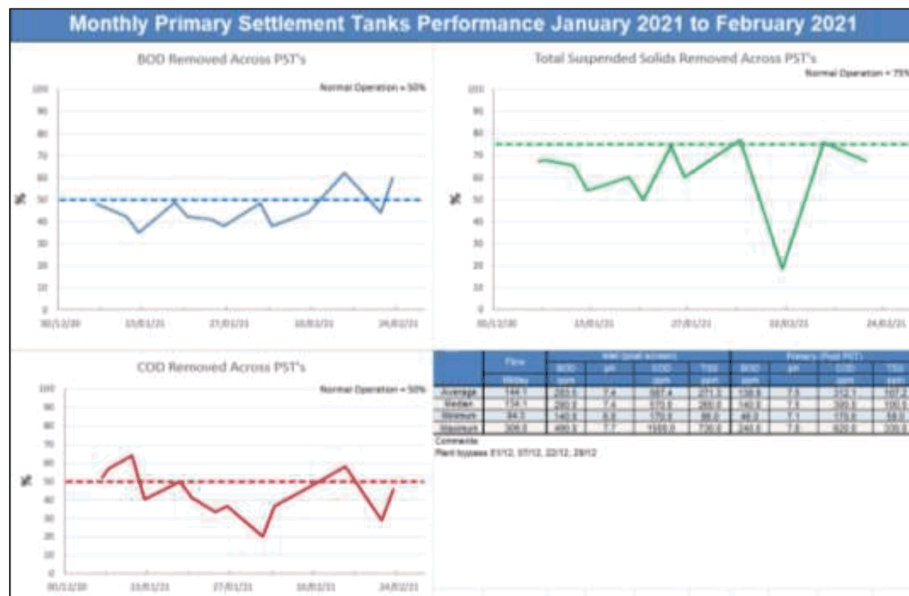


Photograph showing the new civil structures installed (center & top left) which allows the flow through Oxidation Ponds 1 & 2 to be reversed (previously an open channel)

### Christchurch Wastewater Treatment Plant Operations

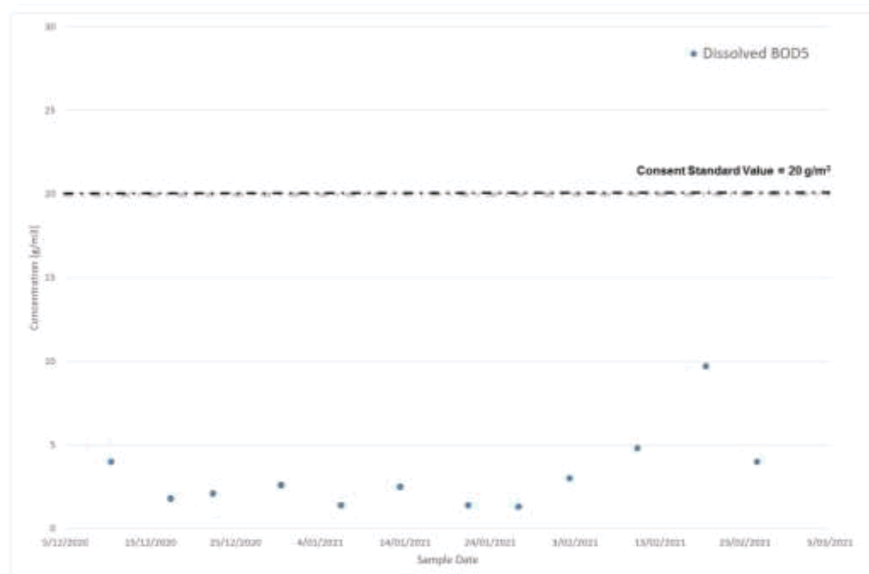
The Christchurch Wastewater Treatment Plant (the plant) performed well over the summer period.

Typically the performance of the plant drops marginally over the summer as the population of Christchurch varies and industry shuts down and starts up, (wastewater treatment plants operate best in stable conditions). This drop in performance is usually detected in the performance of the primary tanks (which settle the sludge from the wastewater). The graphs below illustrate the underperformance of the primary tanks as the amount of biological oxygen demand (BOD), chemical oxygen demand (COD) and total suspended solids consistently below the target.



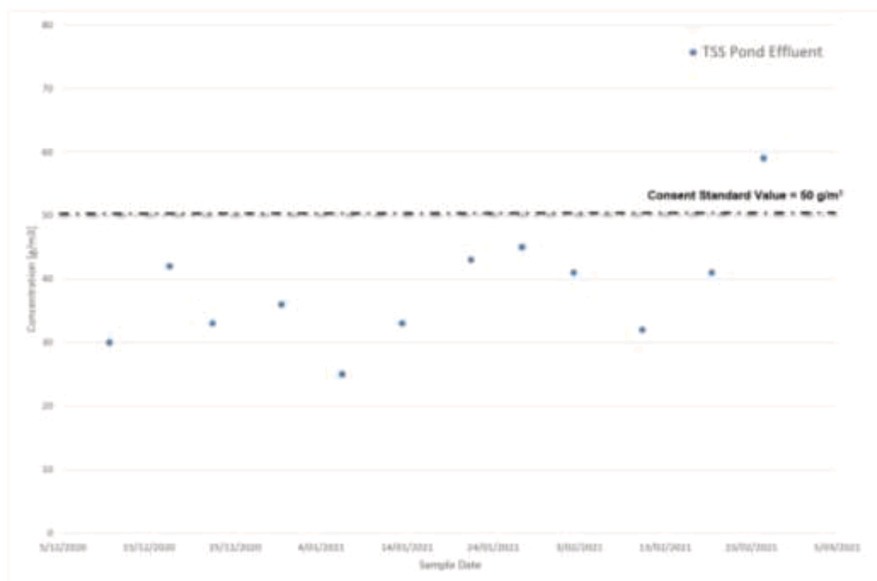
Operational monitoring charts for the primary tanks at the CWTP; the solids lines represent the results/performance, with the dashed lines representing the target.

The plant has final effluent consent limits for BOD, Total Suspended Solids, Ammonia-Nitrogen, Enterococci and Faecal Coliforms. The graphs below show the rolling three months performance of the final effluent against the consent limits for each of these parameters;

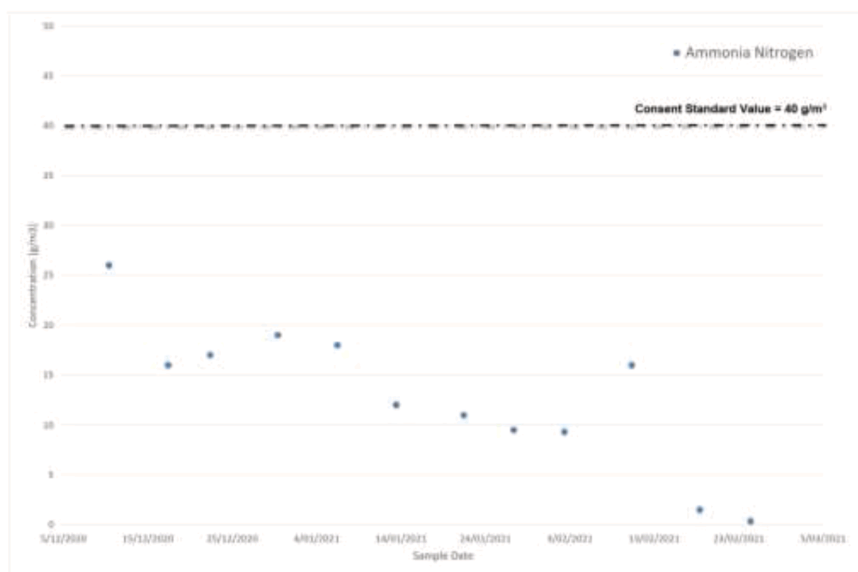


Graph illustrates how the BOD has remained compliant / under consent limit for the past three months.

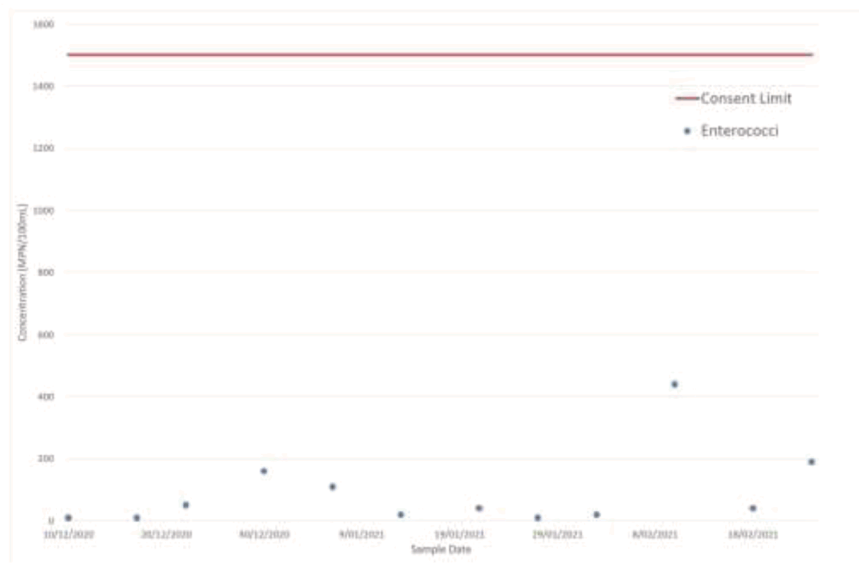




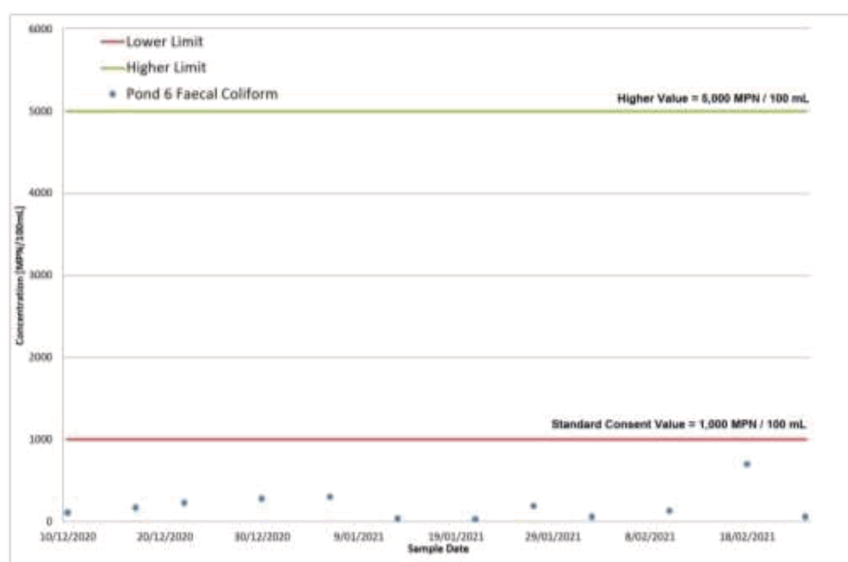
Graph illustrates how the Total Suspended Solids has remained under consent limit for the past three months, with only the last value higher than the limit. Performance is compliant as the resource consent allows up to 6 exceedances with an 8 week period



Graph illustrates how the Ammonia-Nitrogen has remained compliant / under consent limit for the past three months.



Graph illustrates how the Enterococci has remained compliant / under consent limit for the past three months.



Graph illustrates how the Faecal Coliforms has remained compliant / under consent limit for the past three months.

#### Christchurch Wastewater Treatment Plant Maintenance

With summer being the typical period when a lot of personnel take leave, the maintenance backlog traditionally increases as there are fewer personnel available to undertake the maintenance work. However, the maintenance backlog has remained steady and actually reduced over the summer period. This is potentially the consequence of a concerted effort over the past three years to undertake more planned maintenance and to change out or improve/modify assets which frequently required reactive maintenance. It is anticipated that with this continuing approach, it should bring the total maintenance backlog hours to the targets.





Graph illustrates how the maintenance backlog has trended over the past 5 months

#### Christchurch Laboratory

In addition to routine activities, Laboratory Team staff have been performing the following:

- Daily sampling and testing in response to the Boil Water Notice currently in place for the Akaroa and Takamatua water supplies. Included, are tests for E. coli, protozoa (subcontracted) and cyanide.
- Sampling and testing Denton Pump Station and the distribution after it was returned to service following the completion of works required after the detection of E. coli on Christmas Day.
- Sampling the water supply for chlorination by-products of health significance.
- Testing for lead in the water supply.
- Final sign off and completion of IANZ audit for 2020

Staff are also in the process of moving to a new laboratory building at the Wastewater Treatment Plant in Bromley.



#### Water supply planning

##### Water services needs assessment

A consultant has been engaged to support a drinking water supply and wastewater services needs assessment as envisioned by the Water Services Bill to be performed every 3 years (currently required as per s125 of the Local Government Act 2002). Staff will consult with stakeholders to support the identification of privately owned and operated water and wastewater services which serve more than one household. The focus of the assessment is to identify quantity and quality concerns, including assessing drinking water safety and public health risks.

##### Water supply rezoning master plan

Work is underway to deliver a water supply rezoning master plan for Christchurch city and the Lyttelton Harbour basin settlements which will include the optimization of the water supply zones to deliver the water services demand for the next 50 years. The setting of the design parameters and demand scenarios have been completed and the water hydraulic model is now being updated with the demand growth profile in 10 year increments.

#### Wastewater planning

##### Akaroa reclaimed water treatment and reuse scheme

Work is underway to appoint a consultant for preparing the assessment of environmental effects for the resource consent applications. Work is also underway to purchase the land required. Work to reduce inflow and infiltration into Akaroa's wastewater network is being fast tracked using central government funding.

##### Wet weather overflow consent

The 2020 wet weather overflow compliance assessment report was completed in January 2021 and provides the modelled annual overflow event frequency as determined when performing a continuous simulation of rainfall for the past 15 years (2005 to 2020) within the recalibrated wastewater network model. The continuous simulation found that:

*Condition 5a: Annual overflow event frequency targets per catchment*

*A reduction in annual overflow event frequencies per catchment is modelled when compared to the 2015 simulation, however, the targets set for 2020 cannot yet be substantiated by the model.*

*Condition 5b: Annual overflow event frequency per constructed overflow site included in Schedule 1*

*The model predicts that a total of 8 of the 53 Schedule 1 overflow sites should have exceeded the annual overflow frequency target of less than 2 spills per annum.*

*Condition 6: Volume of Overflows*

*The modeled volume of overflows far exceeds the compliance targets. A volume reduction of up to 75% in the Heathcote River Catchment and 96% in the Avon River Catchment is predicted by the model.*

As required by the wet weather overflow consent, a comparison of the modelled annual overflow event frequencies and volumes and recorded overflow event frequencies and volumes has been completed and submitted to Environment Canterbury. The recorded overflows confirm that the annual overflow event frequency target has been achieved but for 3 constructed overflow sites (versus 8 predicted by the model). Environment Canterbury is considering the outcomes of the above assessments and will provide a compliance report to further guide Council's wet weather overflow compliance programme.

The wet weather overflow compliance projects provided for in the LTP are targeted at reducing the modeled overflow event frequencies at the sites predicted to overflow in excess of Council's compliance targets. It has identified operational adjustments could be implemented to reduce the predicted overflow frequency at 3 of the sites identified as exceeding the compliance targets.

Work continues on the WW optimisation project which will outline the capital improvements required to ensure overflow compliance for both the current and expected future demands.

#### Wastewater implementation plan

Work continues on the implementation plan for the wastewater aspects of Te Wai Ora o Tāne Integrated Water Strategy. The Strategy outlines four goals to address key issues, relating to managing wastewater discharges, ensuring long term water supply, responding to stormwater management, flooding and potential sea-level issues, improving water quality and waterway health, and ensuring that the community values its many different types of water resources. The Strategy recommends the development of implementation plans for water supply, wastewater and stormwater in order to measure the achievement of the strategic objectives which have been developed to support the goals.

#### Capital delivery – wastewater treatment plants, pump stations and reticulation

##### Lyttelton Harbour wastewater scheme

**Status:** Construction

**Budget:** \$54.5 million

**Update:** Work packages 1 and 2 – are complete – the submarine pipelines from Diamond Harbour and Governors Bay to Lyttelton; the pipeline through the Lyttelton tunnel.

Work package 3 – is complete – Cashin Quay (Lyttelton), Governors Bay, Diamond Harbour and Simeon Quay pump stations.

Full commissioning of the Simeon Quay pump station will not progress until the Heathcote pipeline has been completed. This work is now part of the work package 3 contract. The outstanding valve design has been completed and manufacturing is underway – this valve is integral in the commissioning of the overall system and has a long lead time. Cost benefit analysis is being completed on a temporary sacrificial valve to limit extension of time claims. Valve chamber has been installed and pipe work connected.

Budget has been increased due to the number of variations required to ensure a fit for purpose series of assets.

Governors Bay pressure main and installation of the electrical cable between the Jetty Road pump station and the new Governors Bay pump station has been completed.

Cashin Quay and Diamond Harbour pump stations will be brought on line once Simeon Quay is commissioned. The conversion of the existing treatment plants into buffer tanks will then commence.

*Work Package 4* – in progress – the Heathcote Valley pipeline redesign, due to incorrect mapping of the Orion services, is in final review. Once final NZTA will be issued with the proposal for sign off. Hydraulic modelling is being completed to ensure the pipe grades are sufficient for the flows. Pipe procurement has been initiated as lead times for delivery are significantly extended due to shipping issues related to Covid-19. These works are to be transferred to work package 3 so this package can be closed out thereby removing any extension of time claims

#### Wastewater pump stations

**Status:** Investigation, design and construction

**Budget:** \$21.8 million

**Scope/Update:** A range of wastewater pump stations are undergoing renewals and/or capacity upgrades to address aging infrastructure risks, raw sewage overflows and increased population and loads. Works of note include:

- Minor modifications have been made to the pump station 31 and the rising main near McCormacks Bay with performance testing planned later in March. Depending on the outcome of the testing the project will be closed out or advanced to the next stage of remediation works.
- Performance trials of pump station 13 in Woolston were completed as planned and we are carrying out a review of the project scope for the next stage to identify potential savings. The project was aimed at reducing overflows due to inflows and infiltration in the PS-13 catchment. Other aspects of the project have delivered above expectations making the pumping upgrades originally planned unnecessary. A reduce final capacity for the upgraded station now seems likely.
- Design works for pump station 60 in Halswell to convert the existing dry well into a larger wet well, with two new large pumps, is approaching its conclusion and we expect to be preparing to tender the new works in the 3rd quarter of 2021. The works will include a new building, pumps, electrical and instrumentation systems, piping and valves.
- The programed pump station electrical upgrades are continuing for the assessment of aging controllers, switchgear and automation (SCADA) that have passed their end of asset life. The work is being managed as a single tranche and includes stormwater, water supply and wastewater pump stations as they are all electrically very similar.

**Completion:** Ongoing over the next 1-3 years

#### Woolston Village transport & wastewater works

**Status:** Construction

**Budget:** \$1.8 million

**Update:** Final lining works of fifteen meters delayed due to sourcing the pipe liner from overseas.

This insertion of the liner is non-invasive and will not obstruct the transport renewal works.

Budget reduced by \$700,000.

**Completion:** April 2021

#### Reticulation renewals

**Status:** Investigation/design/procurement/construction

**Budget:** circa \$68 million

**Scope:** The programme (16 projects) is to replace/upgrade ageing wastewater reticulation network.

**Update:** A number of projects are completing construction and handover of assets. Four wastewater projects are in construction, and three projects will be awarded soon. Four remaining projects are in final design phase and are planned to be tendered in April 2021. There are five water reform projects (central government funded) that are in construction with the completion planned for March 2022.

**Completion:** Construction works for these projects will be completed in FY22 and FY23.

#### Mains renewal – Tuam Street brick barrel

**Status:** Construction

**Budget:** \$15.3 million

**Update:** The final portions of the wastewater mains have been finished and road surfacing backfilling and restoration for the wastewater works is being completed in March 2021. Work to replace the water mains between Nursery Road and Suffolk Street is also being completed in March. Additional work in Philips Street included in scope to replace a small local main identified as significantly deteriorated during the works on the mains. Whilst this pipe was surveyed when the main works were scoped the deterioration identified during the Tuam street works was much worse than that seen in earlier CCTV inspections.

We expect the area roading contractor to undertake a full resurfacing of Tuam Street from Fitzgerald to Nursery Road commencing in March 2021.

**Completion:** Practical Completion certificates to be signed in April and the project will move into a 12 month defect period.

## STORMWATER AND WATERWAYS

### Stormwater and Waterways Operations

There has been very little rain over the last few months which has been helpful in some regards.

The levels in Wairewa/Lake Forsyth have been steady meaning it has only been opened once since November 2019 when it is typically opened 4 to 6 times per year.

The aquatic weed harvester is currently in the Avon River and has been vandalized, yet again, with two of its three moorings removed. Thankfully the harvester itself has not been damaged and can continue to operate.

This year from 1 January to 28 February 182 tickets have been logged. There is no apparent trend or particular issues that keep reappearing with service requests ranging across tree issues, pollution, litter and debris, general maintenance inquiries, bad smells (including stinky sea lettuce), low instream water levels, insects and pests, and blockages. We received the following compliment for working with customers:



*Jo, thanks so much for your help with this - it's much appreciated - and reflects well upon the council! I heard back last night from the neighbour who has agreed to remove the tree, albeit in 9-10 days time, but at least it will be gone.*

*If there are any serious issues I'll let you know. Otherwise thanks again!*

Luke

Preparing for a new maintenance contract continues with auditing of asset information being a focus. The procurement team have been engaging with us to ensure the proposed specifications are useful and ensuring progress is being made.

#### Stormwater and Waterways Planning

With the Draft 2021-31 Long Term Plan (LTP) being approved for issue for public consultation by Council, a focus of the stormwater and waterways planning team is now on the finalization of planning and project briefs for the capital programmes and projects proposed. This will enable a rapid implementation of projects once the Plan is operative from 1 July 2021. Key programmes and projects in this category are:

- Cashmere Stream Enhancement (augmented by a pending grant of \$1.5 million from the Ministry for the Environment's Freshwater Improvement Fund)
- a number of projects addressing some of the more pressing stormwater and flood protection infrastructure renewals issues,
- a number of stormwater and flood management facilities including those required for compliance with the Comprehensive Stormwater Consent including three facilities within the Otakaro Avon Regeneration Corridor (OARC) – Waitaki St, Waikakariki and Knights Drain Ponds
- commencement of preliminary design for the remaining stormwater, flood management and waterways works within the OARC.

The coordination of works within the OARC across all stakeholder will become increasingly important as work on the OARC projects identified above advance, particularly in regard to transport and ecological restoration works, and in consideration of third-party transitional and longer-term uses.

Increasingly we are providing direct input and support to initiatives in the climate change arena, both within Council (Multi-hazard Project, Coastal Hazard Adaptation Planning programme and the Southshore and South New Brighton earthquake legacy projects) and externally (such as to the Local Government Working Group for Risk Framework and the Regional Climate Change Working Group Regional Risk Assessment).

In February we submitted an application for the second tranche of Freshwater Improvement Fund funding, for Port Hills Stabilisation Planting, which will provide multi-value benefits including erosion protection, environmental amenity, sediment run-off mitigation and carbon sequestration.

The team's focus over the coming months will also be on finalizing development and the draft Long Term Plan with internal Council engagement as necessary, review and update of the Three Waters Bylaw, supporting the implementation of the Comprehensive Stormwater Consent and finalizing the two draft Stormwater Management Plans.

### Capital Delivery

The Stormwater and Waterways Delivery Team are actively managing 112 projects with a current year budget total of \$55.2 million. Key project details are given below.

#### Cashmere Worsley flood storage

**Status:** Construction

**Budget:** \$ 27.2 Million

**Update:** Lower valley works complete and commissioned. Construction underway for upper valley works. Cashmere Valley Dam resource consent application has been publically notified.

**Completion date:** June 2022

#### Eastman Sutherlands and Hoon Hay Basins

**Status:** Detailed Design/Construction

**Budget:** \$29.9 Million

**Update:** Eastman Wetlands project has been combined into this project to improve efficiency. Sutherlands basins and wetland are substantially complete and the facility has begun treating stormwater and the earthworks at Hoon Hay East are now complete.

Works on a further seven structures in Hoon Hay West will be on site mid March 2021. Eastman low flow channel work started on site in January 2021.

Cashmere stream control structure (and Hoon Hay outlet structure) contract is on site and progressing on programme.

Eastman Central wetland design will begin before July 2021.

The Eastman outlet structure will go to tender before the end of July 2021.

Halswell Downs First Flush and wetland will be complete in FY22. Pathways and final landscaping across the entire 50 hectare area will be completed over 2.5 years after the final updated landscape plan is approved this means planting will happen AFTER the completion date below, while the area is open to the public. This is due to the huge number of native plants required to “naturalise” a site the size of South Hagley park.

**Completion date:** June 2023

#### Wigram East Retention Basin

**Status:** Construction

**Budget:** \$10.5 Million

**Update:** The wetland and basin extension portion of this project is complete and flood storage and water quality treatment is available. Currently under manual control, the automated control and instrumentation works are being finalised and will be operational towards the end of this financial year.

**Completion date:** June 2021

#### Heathcote Dredging

**Status:** Construction

**Budget:** \$4.6 Million

**Update:** In river dredging is now complete for stages 1, 2, 3 & 4a (Woolston Cut to St Martins Rd). Final section of bank widening to be completed March 2021 with remaining landscape planting to follow.

**Completion date:** August 2021

#### Canal Reserve Drain

**Status:** Detailed design

**Budget:** \$8.2 Million

**Update:** The 2.1km lined drain alongside Marshlands Road is to be renewed and naturalised where possible, with construction planned to start June 2021 between McSavenys Road and Prestons Road. Some design options have been trialed. The section Prestons Road to Hawkins Road will be completed once there is enough understanding on lamprey habitats.

**Completion date:** September 2022

#### Jacksons Creek Brick Barrel near Selwyn Street/Brougham Street

**Status:** Construction

**Budget:** \$2.8 Million

**Update:** Replacement of a section of brick barrel stormwater pipe built in 1912 started late



September 2020, construction is now substantially complete and the road is fully open, with just some minor works to do.

**Completion date:** April 2021

#### Owaka Corridor and Wilmers Basin

**Status:** Construction

**Budget:** \$4.8 Million

**Update:** This project is substantially complete. Some planting has been deferred to the next planting season as there was a shortage of eco sourced plants. This facility includes a new basin and swales connecting to existing infrastructure and will treat and store stormwater from approximately 120 hectares of commercial/industrial development.

All pathways now open to the public, forming connections to the Southern Motorway Cycle way, Owaka Road and Wilmers Road (Warren Park).

**Completion date:** August 2021

#### Pump Station 205 - Avon

**Status:** Construction

**Budget:** \$6.8 Million

**Update:** Project to upgrade major pump station and create additional lift. Tide gates and stop logs complete. Main works contract underway with contractor procuring long lead time items.

**Completion date:** April 2023

#### Tennyson Street Brick Barrel

**Status:** Investigation and scheme design

**Budget:** \$630,000

**Update:** Investigations to determine which sections of the brick barrel stormwater pipe will be replaced and which will be repaired are complete with detailed design services now being procured.

**Completion date:** June 2022

#### St Albans Creek Slater Street to Hills Road

**Status:** Construction

**Budget:** \$1.25 Million

**Update:** Project to improve capacity of timber lined drain to reinstate pre-earthquake flood risk to upstream areas. Construction started in January.

**Completion date:** June 2021

#### South New Brighton set-back bund – Bridge Street to Jetty

**Status:** Construction

**Budget:** \$1.63 Million

**Update:** Construction of southern section completed in August. Works on the northern section started in February after delays caused by Covid-19 lockdown, bird nesting season, and Department of Conservation restrictions on relocating lizards.

**Completion date:** October 2021

#### Blakes Road Stormwater Facility (Works 1)

**Status:** Construction

**Budget:** \$9.6 Million

**Update:** Project to construct a first flush basin and wetland. Very late change to consent requirements driving some design changes before works can commence on site. Cost and time implications being assessed.

**Completion date:** September/October 2021

#### Temporary stop bank management - Avon

**Status:** Construction

**Budget:** \$7.2 Million

**Update:** Temporary stopbank works and cycle trail is substantially completed.

**Completion date:** June 2021

#### Waitaki Street (Ōtakaro Avon River Corridor) – Avon Flood Management

**Status:** Detailed design

**Budget:** \$12 Million

**Update:** Being developed to align with Ōtakaro Avon River Corridor Regeneration Plan.  
Finalizing detailed design and consenting, with construction planned from June 2021. Work will be done in stages with site establishment, followed by the stopbank, then the stormwater facility and finally landscaping. This project will integrate with other Council projects including New Brighton / Pages Road realignment project and cycle / pedestrian paths

**Completion date:** June 2023



## FINANCIAL OVERVIEW

### The numbers

The operational results for February 2021 are a favorable variance to plan of \$8.4 million year to date. The full year forecast of \$5.4 million is net of \$0.71 million carry forwards for the 20/21 financial year.

Recyclable materials collection and processing costs are \$2.9 million lower than plan due to lower recycled material processing fees as a result of material being diverted to landfill. However residual waste collection and disposal costs are \$2.1 million higher due to disposing recycled material directly to landfill as a result of contamination.

Operation of closed landfills is \$1.8 million higher than plan due to unplanned receipts of material, and subsequent increased maintenance costs, into the Burwood Resource Recovery Park.

Stormwater drainage costs are \$2.0 million favorable for the year due to lower maintenance costs. Flood protection and control costs are \$1.3 million lower than plan for the year due to lower than planned costs maintenance costs and costs associated with the Heathcote dredging project.

Three Waters Asset management costs are \$1 million favorable for the year due to Water Reform funding and lower than planned spend YTD. A \$450,000 carry forward is forecast for the year.

Three Waters & Waste Unit Financial Report for month of February 2021							
Year to Date \$000's			Activity Summary	Year End \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
7,289	10,156	2,867	Recyclable Materials Collection & Processing	11,868	15,234	3,366	22.1%
3,686	4,385	699	Residual Waste Kerbside Collection	5,610	6,580	970	14.7%
8,391	6,284	(2,107)	Residual Waste Disposal & Transport	11,853	9,426	(2,428)	20.3%
152	206	54	Landfill Gas Capture & Treatment	276	309	33	10.8%
(139)	(373)	(234)	Refuse Transfer Stations	(1,049)	(724)	325	44.8%
(1,805)	3	1,808	Operation & Care of Closed Landfills	(312)	1,258	1,570	124.8%
10,285	10,505	220	Residual Waste Collection & Disposal	16,379	16,848	470	2.8%
5,244	5,328	84	Organics Kerbside Collection	7,878	7,993	115	1.4%
2,721	3,006	285	Organics Processing incl Composting Plant	3,868	4,509	641	14.2%
7,965	8,335	370	Organic Material Collection & Composting	11,746	12,502	757	6.1%
18,654	18,268	(386)	Wastewater Collection	24,160	23,441	(719)	3.1%
4,838	4,843	5	Treat & Dispose of Wastewater Collected	6,811	7,130	320	4.5%
(160)	80	240	Laboratory Services - Wastewater	(433)	127	560	440.5%
4,678	4,922	245	Wastewater Treatment & Disposal	6,378	7,257	880	12.1%
17,662	17,578	(84)	Water Supply	23,163	22,721	(443)	1.9%
9,500	11,506	2,005	Storm Water Drainage	13,314	15,634	2,319	14.8%
2,551	3,815	1,264	Flood Protection & Control Works	3,959	4,688	729	15.6%
(261)	751	1,011	Three Waters Asset Management	2,270	2,379	109	4.6%
3,077	3,947	869	Plan/Prog Provision of Future Infrastructure	6,182	6,063	(119)	-1.9%
2,817	4,698	1,881	Three Waters Asset Mgmt & Planning	8,452	8,441	(11)	0.1%
81,401	89,782	8,381		119,419	126,767	7,348	5.8%
Reconciliation to Controllable Net Cost							
( )	(35)	(34)	Illegal Rubbish	(52)	(52)		0.0%
(3,758)	(3,681)	77	Internal Cost Inputs	(4,316)	(5,540)	(1,224)	25.1%
77,643	86,067	8,423		115,051	121,176	6,124	5.1%

Capital expenditure year to date is \$24.6 million lower than plan. Forecast spend for the year is \$6.5 million lower than plan.

Year to Date \$000's			Operations Split	Year End \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
7,289	10,156	2,867	Recyclable Materials Kerbside Collection	11,868	15,234	3,366	22.1%
3,686	4,351	665	Residual Waste Kerbside Collection	5,558	6,528	970	14.9%
5,244	5,328	84	Organics Kerbside Collection	7,878	7,993	115	1.4%
18,653	18,268	(385)	Collecting Wastewater from Properties	24,160	23,441	(719)	3.1%
4,838	4,843	5	Treat & Dispose of Wastewater Collected	6,811	7,130	320	4.5%
17,662	17,578	(84)	Supply Potable Water	23,163	22,721	(443)	1.9%
8,391	6,284	(2,107)	Residual Waste Disposal & Transport	11,853	9,426	(2,428)	25.8%
152	206	54	Landfill Gas Capture & Treatment	276	309	33	10.8%
(139)	(373)	(234)	Refuse Transfer Stations	(1,049)	(724)	325	44.8%
(1,805)	3	1,808	Operation & Care of Closed Landfills	(312)	1,258	1,570	124.8%
2,721	3,006	285	Organics Processing incl Compost Plant	3,868	4,509	641	14.2%
(160)	80	240	Laboratory Services - Wastewater	(433)	127	560	440.5%
1	-	(1)	EQ - Wastewater Collection	1	-	(1)	0.0%
(261)	751	1,011	Three Waters Asset Management	2,270	2,379	109	4.6%
3,077	3,947	869	Plan/Prog Provision of Future Infrastructure	6,182	6,063	(119)	-1.9%
12,051	15,320	3,269	Land Drainage Operations	17,273	20,322	3,048	15.0%
(3,758)	(3,681)	77	Cost Centre Balances	(4,316)	(5,540)	(1,224)	22.3%
<b>77,643</b>	<b>86,067</b>	<b>8,423</b>		<b>115,051</b>	<b>121,176</b>	<b>6,124</b>	<b>5.1%</b>
Year to Date \$000's			Capital	Year End \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
19,111	20,637	1,525	Flood Protection and Control Works	39,701	32,379	(7,322)	22.8%
690	1,479	789	Refuse Disposal	2,740	3,579	839	23.4%
7,151	15,542	8,390	Stormwater Drainage	19,381	24,689	5,308	21.5%
32,645	41,282	8,637	Wastewater	61,920	69,726	7,806	11.2%
16,215	21,474	5,259	Water Supply	41,677	41,540	(138)	-0.3%
34	-	(34)	Corporate Capital	30	-	(30)	0.0%
<b>75,846</b>	<b>100,413</b>	<b>24,567</b>		<b>165,448</b>	<b>171,913</b>	<b>6,465</b>	<b>3.8%</b>

APPENDIX 1 – HEALTH SAFETY AND WELLBEING STATISTICS

Health Safety and Wellbeing Statistics						
Three Waters Waste and Transport						
Health Safety and Wellbeing Statistics - Month of January- February 2021	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	82	9	34	34	5	1
First aid injuries (FAI)	11	1	1	5	4	1
Medical Treatment Injuries (MTI)	2	1	1	-	-	
Lost Time Injuries (LTI)	1	-	-	-	1	
No. of days lost to LTIs	1,251	-	1,250	-	1	
No. of hours worked	134,829	5,146	35,714	27,691	65,932	24,576.45
Health Safety and Wellbeing Statistics - Year to Date - February 2021	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	486	38	209	141	98	
First aid injuries (FAI)	65	4	12	40	9	
Medical Treatment Injuries (MTI)	1,169	5	1,160	1	3	
Lost Time Injuries (LTI)	11	-	9	-	2	
No. of days lost to LTIs	1,268	-	1,265	-	3	
No. of hours worked	970,668	35,107	364,414	188,592	382,555	
LTIFR	11.3	0.0	24.7	0.0	5.2	0.0
MTIFR	1215.7	0.0	3207.9	0.0	13.1	0.0
TRIFR (LTI + MTI)	1227.0	0.0	3232.6	0.0	18.3	0.0

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