

Three Waters Infrastructure and Environment Committee AGENDA

Notice of Meeting:

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

Date: Wednesday 10 February 2021
Time: 9.30am
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

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

2 February 2021

Principal Advisor

Carolyn Gallagher
Acting General Manager City
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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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Developing Resilience in the 21st Century

Strategic Framework

Whiria ngā whenu o ngā papa,
honoa ki te maurua tāuiki

Bind together the strands of each mat and join
together with the seams of respect and reciprocity

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

Community Outcomes

Resilient communities

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)

Liveable city

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

Healthy environment

Healthy water bodies
High quality drinking water
Unique landscapes and
indigenous biodiversity are
valued and stewardship
exercised
Sustainable use of resources
and minimising waste

Prosperous economy

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

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

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

THREE WATERS INFRASTRUCTURE AND ENVIRONMENT COMMITTEE OF THE WHOLE - TERMS OF REFERENCE / NGĀ ĀRAHINA MAHINGA

Chair	Councillor Cotter
Deputy Chair	Councillor Daniels
Membership	The Mayor and All Councillors
Quorum	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.
Meeting Cycle	Monthly
Reports To	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.

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.

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

An apology was received from Councillor Gough.

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, 16 December 2020](#) 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.

Three Waters Infrastructure and Environment Committee OPEN MINUTES

Date: Wednesday 16 December 2020
Time: 2.01 pm
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

Present

Chairperson	Councillor Pauline Cotter
Deputy Chairperson	Councillor James Daniels
Members	Mayor Lianne Dalziel – by audio visual link
	Deputy Mayor Andrew Turner
	Councillor Jimmy Chen
	Councillor Catherine Chu – by audio visual link
	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

16 December 2020

Principal Advisor

David Adamson
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Unconfirmed

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/2020/00034

That the apologies received from Councillors MacDonald, Gough and Turner for early departure be accepted.

Councillor Coker/Councillor Templeton

Carried

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/2020/00035

That the minutes of the Three Waters Infrastructure and Environment Committee meeting held on Wednesday, 25 November 2020 be confirmed.

Councillor Davidson/Councillor Mauger

Carried

4. Public Forum / Te Huinga Whānui

Part B

There were no public forum presentations.

5. Deputations by Appointment / Ngā Huinga Whakaritenga

Part B

The Committee received a deputation from Mark Christensen(Chair) and Maree Burnett (General Manager), Banks Peninsula Conservation Trust in relation to items 7, 8 and 9.

5 Banks Peninsula Conservation Trust

Attachments

- A Te Kāhahu Kahukura/ Banks Peninsula Conservation Trust presentation to 3 Waters Infrastructure and Environment Committee 16 December 2020

Councillor Keown arrived at 2.05pm during item 5.

Councillor Mauger left the meeting at 2.15pm and returned at 2.17pm during item 5.

6. Presentation of Petitions / Ngā Pākikitanga

Part B

There was no presentation of petitions.

7. Zone Committee Quarterly Update Report - March to November 2020

Committee Comment

1. The Banks Peninsula Zone Committee commented in its report that it had provided early input into the CCC LTP. One of this Zone Committee's top priorities for increased resourcing is that that CCC and ECan staff jointly fund sufficient staff time to support and advise landowners about effective management of onsite wastewater systems on Banks Peninsula. The Committee asked that staff note this request. The Committee also noted the request for the Council, through the Community Board, to provide greater certainty to the Wainui community about timeframes for a reticulated waste water system.
2. The Selwyn Waihora Zone Committee noted the strong support from Councillor Galloway and that they will work with the Council around alternates.

Officer Recommendations / Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Receives the information in the Zone Committee Quarterly Update report.
2. Notes the work of each water management zone committee.

Committee Resolved TWIA/2020/00036

Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receives the information in the Zone Committee Quarterly Update report.
2. Notes the work and recommendations of each water management zone committee and request a staff response and advice to inform the LTP.

Councillor Johanson/Councillor Coker

Carried

8. Biodiversity Fund Project Applications

Committee Resolved TWIA/2020/00037 Original Officer Recommendation Resolved without Amendment

Part C

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the report.
2. Approve full funding to the following four projects
 - a. Longridge Agriculture (Craw) - \$40,000.00
 - b. Isaacs Conservation and Wildlife Trust - \$40,000.00
 - c. Mt Herbert Station (Kyle/Harper) - \$40,000.00
 - d. Le Bons Valley Covenant - \$6395.00

Deputy Mayor/Councillor Davidson

Carried

Cr Daniels left the meeting at 2.56pm and returned at 2.58pm during the discussion on item 8

Cr Gough left the meeting at 2.57pm and returned at 3.01pm during the discussion on item 8

Cr Davidson left the meeting at 2.59pm and returned at 3.00pm during the discussion on item 8

9. Opawaho/Heathcote and Huritini/Halswell Stormwater Management Plans

Committee Resolved TWIA/2020/00038 Original Officer Recommendation Resolved without Amendment

Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Ōpāwaho/Heathcote and Huritini/Halswell Stormwater Management Plans Consultation report.

Councillor Cotter/Councillor Chen

Carried

Councillor Gough left the meeting at 3.09pm during the discussion on item 9 and did not return

Councillor MacDonald left the meeting at 3.15pm during the discussion on item 9 and did not return

Councillor McLellan left the meeting at 3.15pm and returned at 3.18pm during the discussion on item 9

10. Impacts of Earthquakes and Sea Level Rise on Shallow Groundwater

Committee Resolved TWIA/2020/00039 Original Officer Recommendation Resolved without Amendment

Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receive the 'Impacts of Earthquakes and Sea Level Rise on Shallow Groundwater Levels' report.

Councillor Coker/Councillor Chen

Carried

11. Three Waters Infrastructure and Environment Committee report - September/October

**Committee Resolved TWIA/2020/00040 Original Officer Recommendation Resolved
without Amendment**

Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters Infrastructure and Environment report for September and October 2020.

Councillor Cotter/Councillor Templeton

Carried

Deputy Mayor Turner left the meeting at 3.45pm at the conclusion of item 11 and did not return

12. Three Waters Infrastructure and Environment Committee - Resource Recovery Report - September / October

**Committee Resolved TWIA/2020/00041 Original Officer Recommendation Resolved
without Amendment**

Part B

That the Three Waters Infrastructure and Environment Committee:

1. Receive the information in the Three Waters and Waste Infrastructure and Environment Committee – Resource Recovery – September / October report.

Councillor Cotter/Councillor Daniels

Carried

Karakia Whakamutunga: Given by Councillor Daniels.

Meeting concluded at 4.05 pm.

CONFIRMED THIS 10th DAY OF February 2020

**COUNCILLOR PAULINE COTTER
CHAIRPERSON**

7. Water Zone Committees' Terms of Reference

Reference / Te Tohutoro: 21/1338

Report of / Te Pou
Matua:

Diane Shelander, Sr. Policy Analyst, diane.shelander@ccc.govt.nz

General Manager /
Pouwhakarae:

Brendan Anstiss, Strategy and Transformation,
brendan.anstiss@ccc.govt.nz

1. Purpose of the Report / Te Pūtake Pūrongo

- 1.1 The purpose of this report is to seek confirmation of the revised terms of reference for the water management zone committees (Attachment A).
- 1.2 This report has been written to
 - follow up on the 25 November 2020 report to the Three Waters Infrastructure and Environment Committee regarding the zone committee review process
 - respond to a request for each district council to initiate a similar confirmation process after the new terms of reference were confirmed by Environment Canterbury on 10 December 2020.
- 1.3 The decision in this report is of medium significance in relation to the Christchurch City Council's Significance and Engagement Policy. The level of significance was determined by the importance of water-related matters and their governance.

2. Officer Recommendations / Ngā Tūtohu

That the Three Waters Infrastructure and Environment Committee:

1. Endorse the revised terms of reference for the water management zone committees.

3. Reason for Report Recommendations / Ngā Take mō te Whakatau

- 3.1 In 2019 the Mayoral Forum initiated the Canterbury Water Management Strategy Fit for Future programme. As part of the programme Environment Canterbury was tasked with leading a review of zone committees, including their terms of reference.
- 3.2 The 25 November 2020 report to the Three Waters Infrastructure and Environment Committee included a consideration of the proposed changes to the terms of reference. The aim of the proposed changes to the terms of reference was to provide zone committees with clarity on their purpose and roles and to refine the zone committees' ways of working.
- 3.3 Environment Canterbury confirmed the revised terms of reference on 10 December 2020. Each district council has subsequently been requested to undertake a similar confirmation process.

4. Alternative Options Considered / Ētahi atu Kōwhiringa

- 4.1 The alternative option is to decline to confirm the revised zone committee terms of reference.
- 4.2 There are no advantages to this option.
- 4.3 Failure to confirm the revised terms of reference will likely lead to delays in community member recruitment, intended to be undertaken in the first half of 2021.

5. Detail / Te Whakamahuki

- 5.1 There have been several changes to the generic terms of reference that were originally created when the Canterbury Water Management Strategy was first adopted across the region in late 2009/early 2010.
- 5.2 The revised terms of reference are attached to this report (Attachment A). The changes to the original generic terms of reference are outlined below.
- 5.3 The revised terms of reference include changes to zone committees' purpose and functions.
 - 5.3.1 There is a new committee purpose: *To uphold the mana of the freshwater bodies within their zone by facilitating enduring land and water management solutions that give effect to the Canterbury Water Management Strategy vision, principles and targets in their zone.*
 - 5.3.2 There has been a change in zone committees' functions from developing, implementing, reviewing and monitoring progress of the zone implementation programme to
 - a) community engagement
 - b) enhancing delivery capability and coalition of the willing
 - c) progress reporting
- 5.4 A new requirement has been added for zone committees to produce Action Plans as well as providing annual progress reporting to relevant councils.
- 5.5 Changes have been made to zone committees' membership and the selection process for community members:
 - enabling Rūnanga representatives to nominate alternates if/when they are unable to attend
 - enabling the option for a youth member to join a zone committee
 - including an independent chair to each selection panel for community members, with two new assessment criteria
 - a) ability to focus on solutions taking into account future generations
 - b) ability to work with local Rūnanga.
- 5.6 The number of mandatory formal meetings have been reduced from eight to four per year.
- 5.7 The community support section was amended with the addition of a requirement for senior staff members from relevant district councils and Zone Manager/Lead from Environment Canterbury.
- 5.8 The revised generic terms of reference do not provide for district councils to nominate alternates, which was an amendment sought by the City Council. This has been acknowledged by Environment Canterbury and it is anticipated that the specific terms of reference for Banks Peninsula, Christchurch-West Melton and Selwyn-Waihora zone committees will include provisions to enable the City Council to nominate its alternates for these three zone committees.

6. Policy Framework Implications / Ngā Hīraunga ā- Kaupapa here

Strategic Alignment /Te Rautaki Tīaroaro

- 6.1 This report aligns with community outcome of a healthy environment through the zone committees' focus on healthy water bodies.

- 6.2 The work of the zone committees aligns well with the Council's strategic priority of "Enabling active and connected communities to own their future".
- 6.3 This report supports the [Council's Long Term Plan \(2018 - 2028\)](#):
- 6.3.1 Activity: Strategic Planning and Policy
- Level of Service: 17.0.1.2 Advice to Council on high priority policy & planning issues that affect the City. Advice is aligned with & delivers on the governance expectations as evidenced through the Council Strategic Framework - Annual work programme aligned to Framework

Policy Consistency / Te Whai Kaupapa here

- 6.4 The decision is consistent with Council's Plans and Policies. The zone committees' activities, particularly with respect to community engagement, align well with the Council's *Te Wai Ora o Tāne Integrated Water Strategy*.

Impact on Mana Whenua / Ngā Whai Take Mana Whenua

- 6.5 The decision does involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does specifically impact Mana Whenua, their culture and traditions.
- 6.6 Two key policies in *Mahaanui Iwi Management Plan* address tāngata whenua rights and governance with respect to water:
- 6.6.1 WM1.1 Ngāi Tahu, as tāngata whenua, have specific rights and interests in how freshwater resources should be managed and utilised in the takiwā.
- 6.6.2 WM1.2 Te Tiriti o Waitangi is the basis for the relationship between Ngāi Tahu and local authorities (and water governance bodies) with regard to freshwater management and governance in the takiwā.
- 6.7 Each zone committee's membership includes representation from each of the rūnanga within their zone.
- Banks Peninsula zone committee: Wairewa Rūnanga, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourāata (currently vacant) and Ōnuku Rūnanga.
 - Christchurch-West Melton zone committee: Te Ngāi Tūāhuriri Rūnanga, Te Taumutu Rūnanga and Te Hapū o Ngāti Wheke
 - Selwyn-Waihora zone committee: Te Taumutu Rūnanga, Te Rūnanga o Koukourāata, Te Hapū o Ngāti Wheke, Ōnuku Rūnanga (currently vacant), Wairewa Rūnanga and Te Ngāi Tūāhuriri Rūnanga (currently vacant)

Climate Change Impact Considerations / Ngā Whai Whakaaro mā te Āhuarangi

- 6.8 Not applicable to the decision sought in this report.

Accessibility Considerations / Ngā Whai Whakaaro mā te Hunga Hauā

- 6.9 Not applicable to the decision sought in this report.

7. Resource Implications / Ngā Hiraunga Rauemi

Capex/Opex / Ngā Utu Whakahaere

- 7.1 Cost to Implement - Not applicable, as the zone committees are established and ongoing activities.

- 7.2 Maintenance/Ongoing costs - The decision sought in this report will not change ongoing operational costs for supporting the three zone committees. There are no capital costs associated with support of zone committees.

8. Legal Implications / Ngā Hīraunga ā-Ture

Statutory power to undertake proposals in the report / Te Manatū Whakahaere Kaupapa

- 8.1 Zone committees are joint committees of Environment Canterbury and the district council(s) within each zone, established as such under the Local Government Act 2002. As such the Council does have the statutory power to undertake the decision sought in this report.

Other Legal Implications / Ētahi atu Hīraunga-ā-Ture

- 8.2 There is no legal context, issue or implication relevant to this decision.
- 8.3 This report has not been reviewed and approved by the Legal Services Unit.

9. Risk Management Implications / Ngā Hīraunga Tūraru

- 9.1 There is a reputational risk if the Council fails to respond to the zone committee review process.
- 9.2 A failure to respond to the zone committee review process may also pose a risk on the Council's relationships with Environment Canterbury and neighbouring district councils.

Attachments / Ngā Tāpirihanga

No.	Title	Page
A ↓	Revised generic zone committee terms of reference endorsed by ECan 10 December 2020	20

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

Document Name	Location / File Link
Current terms of reference	https://api.ecan.govt.nz/TrimPublicAPI/documents/download/2341045
Banks Peninsula zone committee	https://api.ecan.govt.nz/TrimPublicAPI/documents/download/2341070
Christchurch-West Melton	https://api.ecan.govt.nz/TrimPublicAPI/documents/download/2341045
Selwyn-Waihora	https://api.ecan.govt.nz/TrimPublicAPI/documents/download/2341074

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

Author	Diane Shelander - Senior Policy Analyst
Approved By	Emma Davis - Head of Strategic Policy Brendan Anstiss - General Manager Strategy and Transformation

Confirmed by Canterbury Regional Council (10 December 2020) Zone Committee's Terms of Reference

Yellow = details that vary for each zone

Canterbury Water Management Strategy (CWMS) **xx Water Management Zone Committee** Terms of Reference

AREA

The area of the **xxx Water Management Zone** is shown on the attached map.

The **xxx Water Management zone** includes the takiwā of **xx Rūnanga and xx Rūnanga** and the administrative areas of **xx District Council, xx District Council** and Environment Canterbury.

BACKGROUND

The committee is an expression of the partnership between **xxx District Council, xxx District Council**, Environment Canterbury (the Regional Council), Rūnanga and local communities to implement the Canterbury Water Management Strategy.

The committee is established under the auspices of the Local Government Act 2002 in accordance with the Canterbury Water Management Strategy 2009.

The committee is a joint committee of **xx District Council, xx District Council and xx District Council** (the Territorial Authorities) and Environment Canterbury (the Regional Council).

Relevant Territorial Authority Standing Orders apply to the operation of the committee. This includes requirement to make a declaration of conflict of interest, keeping a register of interests and guidance on attendance and absences at meetings.

The committee will work as a committee and as individual members in accordance with Canterbury Water Management Strategy Zone Committee Code of Conduct.

PURPOSE AND FUNCTIONS

The Committee's purpose is to uphold the mana of the freshwater bodies within their zone by facilitating enduring land and water management solutions that give effect to the Canterbury Water Management Strategy vision, principles and targets in their zone.

The committee functions include:

- a. **Facilitating community engagement and collaboration** – continuing an active programme of engaging with communities on freshwater management matters; and
- b. **Facilitating the provision of advice** through to councils (relevant Territorial Authorities and Environment Canterbury) and others (eg. private sector) contributing to freshwater management; and
- c. **Enhancing delivery capability and coalition of the willing** – working with stakeholders across all sectors to extend the resources available to implement the CWMS, including connecting others to additional resources and seeking opportunities to promote, support, leverage and expand catchment-based initiatives that deliver the CWMS; and

- d. **Progress Reporting** – annual progress reporting to CWMS partners on progress towards delivery of the zone-specific priorities and CWMS target areas identified in the Zone Committee Action Plan.

ZONE COMMITTEE ACTION PLAN AND PROGRESS REPORT

1. Ensure the purpose and functions of the committee are fulfilled by preparing a Zone Committee Action Plan that;
 - a. Covers a three-year period
 - b. Focuses on three - five priorities
 - c. States objectives that the zone committee is seeking to achieve
 - d. States the actions that the zone committee will take to achieve the objective
 - e. States SMART measures to track actions and outcomes.
2. Review and amend the Zone Committee Action Plan at the beginning of every year to ensure the zone committee is still in agreement with the priority areas and the actions are still those the zone committee believes will achieve their objectives.
3. Prepare a Progress Report annually that;
 - a. Highlights the actions of the zone committee and the progress it has made toward its objectives.
 - b. Identifies the challenges and opportunities the zone committee see in the coming year.
 - c. Present the report to CWMS partners.
4. In developing the Zone Committee Action Plan, the committee must work within and be aligned to the;
 - a. Zone Committee Terms of Reference
 - b. Canterbury Water Management Strategy and Targets
 - c. The triennial 'letter of shared priorities' providing joint direction on priorities for the zone committee from the relevant Territorial Authorities, Environment Canterbury and Rūnanga.
5. In developing the Zone Committee Action Plan, the committee will also be guided by;
 - a. Committee's Zone Implementation Programme and Zone Implementation Programme Addendum
 - b. Iwi management plans that cover the zone
 - c. Community engagement and feedback

LIMITATIONS OF POWER

The Committee does not have the authority to commit any Council to any path or expenditure and its recommendations do not compromise the Council's freedom to deliberate and make decisions.

The Committee does not have the authority to submit on proposed Resource Management or Local Government Plans.

COMMITTEE MEMBERSHIP

The committee will comprise:

1. One elected member appointed by each Territorial Authority operating within the Zone Boundary
2. One elected member appointed by Environment Canterbury
3. One or two Rūnanga nominated representatives from xx Rūnanga and xx Rūnanga whose rohe covers the zone, with provision for an alternate Rūnanga member to attend zone committee meetings where desired
4. Between 4-7 community members with provision that this number may be exceeded if each Territorial Authority and Environment Canterbury operating within the zone boundary agree. Community members are to be appointed in accordance with the process below.
5. One youth representative may be added to committee (in addition to the 4-7 community members) on recommendation of the zone committee on a case-by-case basis.
6. Where a youth representative is recommended expressions of interest will be drawn from Environment Canterbury's Youth Rōpū, Territorial Authorities Youth Councils and Rūnanga and confirmed by XX District Council, xx District Council and Environment Canterbury.
7. XX District Council, xx District Council and Environment Canterbury, will appoint their own representatives on the Committee. Rūnanga will appoint their representatives and notify xx District Council, xx District Council and Environment Canterbury.
8. Proxies or alternates are not permitted except for Rūnanga representatives
9. Any Committee may co-opt such other expert or advisory members as it deems necessary to ensure it's able to achieve its purpose. Any such co-option will be on a non-voting basis

SELECTION AND APPOINTMENT OF COMMUNITY MEMBERS

Community representatives are appointed by a panel of CWMS partners – a councillor from each council and a Rūnanga representative from each Rūnanga whose takiwā is within the zone. The panel will be chaired by the Independent Chair.

To be eligible for appointment to a Committee the candidate must live in or be able to demonstrate a significant relationship with the zone.

The process involves:

1. A public call for expressions of interest.
2. Application
3. Interview and/or workshop

Assessment will be based on the:

- Ability of an applicant to:
 - o Work in a collaborative, consensus seeking manner
 - o Work with local Rūnanga
 - o Establish effective partnerships
 - o Understand the complexity of freshwater management issues

- o Focus on solutions and actions, considering future generations
- o Understand the CWMS, the vision, principles and ways of working
- o Demonstrate
 - Commitment to community
 - Existing community networks
 - Previous experience in a leadership role
 - Experience working with community processes and/or groups
 - Initiate and inspire local action
- The Committee's
 - o Geographic spread of members across the zone
 - o Balance of backgrounds, experience and interests

The selection process above will be primarily focused on appointment of community members to zone committee and may also serve to identify potential future appointees should a community member vacancy arise.

QUORUM

The quorum at a meeting consists of;

- 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

CHAIR AND DEPUTY CHAIR

Each year, the committee shall appoint the Chair and Deputy Chair from the membership by simple majority. There is no limit on how long a person can be in either of these positions.

TERM OF APPOINTMENT

Members of Committees are appointed for a term of three years, which may be extended on a case-by-case basis if each Territorial Authority operating within the zone boundary and Environment Canterbury agree.

Youth members will initially be appointed for a term of one year, with the option to extend their term up to three years subject to availability.

Each Committee requires confirmation of membership by each Territorial Authority operating within the zone boundary and Environment Canterbury.

Committee membership refresh will not occur within four months of Local Government elections.

There is no limit on the number of consecutive terms a member may serve.

FINANCIAL DELEGATIONS

None

OPERATING PHILOSOPHY

The Committee will always operate in accordance with the requirements of the Local Government Official Information and Meetings Act 1987 and Standing Orders of Territorial Authorities.

The Committee will observe the following principles:

1. Be culturally sensitive observing Ngāi Tahu tikanga
2. Apply a Ki Uta Ki Tai (from the mountains to the sea) holistic approach that also enables cultural elements including mahinga kai philosophies held by mana whenua to be encompassed
3. Consider and balance the interests of all water interests in the region in debate and decision making
4. Work in a collaborative solution-focused approach using best endeavours to reach solutions that take account of interests of all sectors of the community
5. Contribute knowledge and perspectives but not promote the views or positions of any interest or stakeholder group
6. Promote a philosophy of integrated water management to achieve multiple objectives of the range of interests in water; and
7. Seek consensus in decision-making. If neither unanimous agreement can be reached nor a significant majority view formed, in the first instance seek assistance from an external facilitator to further Committee discussions and deliberations. Where the Committee encounters fundamental disagreements, despite having sought assistance and exhausted all avenues to resolve matters, recommend that respective Councils disband them and appoint a new Committee.

MEETING AND REMUNERATION GUIDELINES

1. The Committee will formally meet at least four times per annum and will hold workshops and host additional community engagement opportunities as required throughout the year. At times, the workload will be substantially higher
2. Remuneration for members will be paid in the form of an honorarium currently set at the following levels
 - a. Appointed members \$ 4,000 pa
 - b. Deputy Chair \$ 5,000 pa
 - c. Chair \$ 6,000 pa
3. An expert or adviser who has been co-opted on to the committee is eligible for an honorarium at the same rate as an appointed member.
4. Staff or elected members of Territorial Authorities or Environment Canterbury are not be eligible for remuneration.
5. Mileage will be reimbursed.

COMMITTEE SUPPORT

The committee shall be supported by staff from the Territorial Authority and Environment Canterbury, primarily through the Committee Secretary and the Zone Facilitator and senior staff member from relevant Territorial Authority and Zone Manager/Lead from Environment Canterbury.

8. Three Waters Infrastructure and Environment Committee report - November/December 2020

Reference / Te Tohutoro: 21/10102

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

General Manager /
Pouwhakarae: David Adamson, General Manager City Services,
david.adamson@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 November and December 2020.

Attachments / Ngā Tāpirihanga

No.	Title	Page
A ↓	Three Waters Infrastructure and Environment Committee report - November December 2020	27

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

Document Name	Location / File Link
N/A	N/A

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

Author	Helen Beaumont - Head of Three Waters & Waste
Approved By	Helen Beaumont - Head of Three Waters & Waste Andrew Howe - Planning & Performance Advisor David Adamson - General Manager City Services



South New Brighton set-back bund

THREE WATERS INFRASTRUCTURE AND ENVIRONMENT COMMITTEE

November / December 2020 report

Christchurch City Council | January 2021

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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 (between 2 and 13) which would be separate from the 67 local authorities currently delivering these services.

The timeline for the programme is ambitious:

- Engagement on options February / 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 December 2020, the Cabinet released two further papers:

- December 2020 Cabinet Paper and minute – Progressing the Three Waters Service Delivery Reforms
- Economic analysis of water services aggregation – Briefing to the Minister

SOLGM subsequently released a practice note on how Three Waters Reform can be integrated into 2021-31 Long Term Plans. These documents provide an update on the reform programme including a refreshed timeline and indicative information on the regulatory approach to reform. The cabinet paper confirms that reform will be an opt-out process but will remain voluntary. The economic analysis notes a conservative estimate from the Water Commission for Scotland (WICS) that between \$27 and \$46 billion of additional investment (over and above that required to maintain and replace existing assets) will be required over the next 30 years to upgrade existing three waters assets to meet environmental and drinking water standards. It reviews eight option scenarios, concluding that all councils can be better off as a result of amalgamation. It notes that more than one entity on the South Island may disadvantage all those on the South Island.

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 with a number of tenders out to our delivery panels in early 2021.

A summary report is provided as part of monthly updates to the Finance and Performance Committee by our Programme Management Office. In addition the first round of quarterly reporting to the Department of Internal Affairs will be due on 31 January 2021. This will include updates on each of the stimulus funds projects as well as the delivery of water related projects in our current annual plan.

Canterbury service delivery review

The Mayoral Forum approved PricewaterhouseCoopers (PwC) as the preferred lead for a regional service delivery review. PwC are supported by Aurecon in their delivery of the review.

The review started in December 2020 and will be completed in May 2021. There are three groups involved directly in the process:

- Representatives from each council and Ngāi Tahu have provided support for the gap analysis and attended a workshop in December to identify issues, challenges, risks and opportunities. A spreadsheet has been provided to each Council requesting outstanding information required to support the analysis, to be completed by Monday 25 January.
- The Advisory Group consists of representatives from the Chief Executives forum. They will attend three workshops between late January and early March to determine the approach and long list of options, impact assessment and options evaluation and then preferred option evaluation.
- The Steering Group consists of representatives from the Mayoral Forum and will meet after each of the Advisory Group workshops to review and approve at each stage.

The final report will be delivered in May 2021.

Department of Internal Affairs Request for Information

Detailed information is being collected to improve the state of knowledge and understanding about three waters assets, network performance, service delivery costs, commercial arrangements, and future investment requirements. Commercial and financial advisors will analyse the data and provide advice on key aspects of the reform – including the number, size and boundaries of the new service delivery entities.

The Request for Information was released in October 2020. The deadline for completion is 1 February 2021. It is provided as a single spreadsheet, covering the following sections:

- A. Qualitative and base information
- B. Levels of service
- C. Quality and environment outcomes
- E. Operating costs and efficiency
- F. Current and forecast financial information
- G. Investment plan
- H. Asset replacement

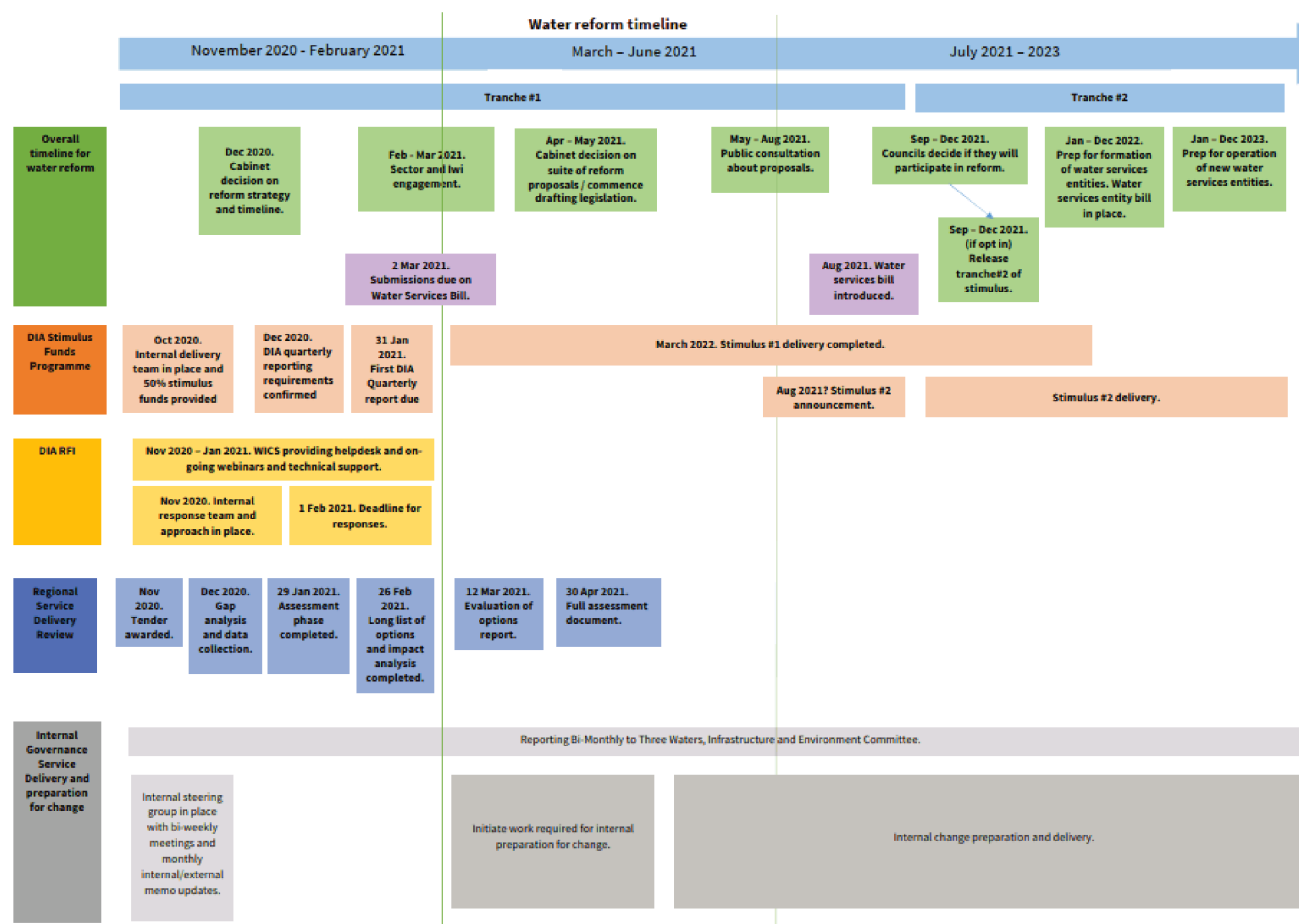
The Department of Internal Affairs has provided a number of support mechanisms:

- The process is led by the Water Industry Commission for Scotland. They provide weekly three hour clinics, support documents and videos on each part of the Request of Information. As further questions are asked, this is added to the support information with a summary send to each Council on progress and lessons learned each week.
- \$60,000 stimulus funds from the regional service delivery review project has been re-allocated to provide support to deliver the Request for Information. This has enabled our Council to hire two engineering graduates on a short-term basis to support data collection and quality assurance.
- New Zealand has been split into a number of groups, with an Account Manager and Water Industry Commission for Scotland support team allocated to each group. Christchurch is in group 6, with Paul Utting assigned as the Account Manager.

As of 13 January 2021, the Request for Information was 53.4 per cent complete. The key financial areas, in particular financial information and investment plan, show as the least complete and require a comprehensive review and internal sign-off process before release.

A quality assurance review of all information is expected to be completed by Friday 15 January. This will be followed by a final review and approval for release to the Department of Internal Affairs.

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 are collaborating with Waimakariri and Selwyn District Council staff on a combined submission which may be in addition to or instead of a single submission from Christchurch City Council.

In addition to the Bill, Taumata Arowai has published working 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, analysing 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.

The key issues identified and considered for possible bylaw amendments relate to:

- Better provisions for preventing backflow into the water supply
- Assessing how the new (2014) bylaw clause requiring supplementary water storage tanks in Banks Peninsula is working in practice
- Excessive inflow and infiltration and the impact of broken private laterals on the wastewater system

- Improving the application requirements and approval conditions for connections to the wastewater network
- Ensuring the Council has adequate access to infrastructure for maintenance purposes where parts of the public system are now 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:

- For the draft Water Supply and Wastewater bylaw:
 - Finalising the provisions of the draft bylaw
 - Preparing the section 155 report and clause by clause analysis.
- 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](#)

The review report and proposed draft bylaws will be presented to the Three Waters Infrastructure and Environment Committee for consideration in April 2021. If adopted by the Committee for consultation, a special consultative procedure will commence in mid-May, in conjunction with consultation on the Freedom Camping Bylaw. The final bylaws are expected to be in place by October/November 2021.

COMPLIANCE AND QUALITY ASSURANCE

Comprehensive Stormwater Network Discharge Consent CRC190445

A Sediment Discharge Management Plan has been developed and was submitted to Environment Canterbury on 17 December 2020 – as required by condition 43 of the Consent. The Plan sets out reasonably practicable processes and practices to be implemented to manage the discharges of stormwater from development sites into the stormwater network to mitigate adverse effects of discharges from the stormwater network on the receiving environment's water clarity and aquatic biota. The effectiveness of the processes and practices will be measured against the fine sediment and Total Suspended Solids Attribute Target Levels for waterways and coastal areas within Schedules 7 and 8 of the consent.

Annual meetings have been held with Mahaanui Kurataiao, River Care Liaison Group and the Industrial Liaison Group to update them and receive feedback on matters relating to the exercise of the Consent.

Planning is under way for the launch and signing of the Community Waterways Partnership Charter on 22 March 2021, at Tūranga. The partnership will look to establish a community water engagement programme involving Council, Canterbury Regional Council, Ngai Tahu, Department of Conservation, Ministry for the Environment, Canterbury District Health Board, Universities, schools, industry representatives, river care and community groups. The objective is to encourage awareness and community actions to reduce stormwater contaminant discharges and improve waterways through source control and behaviour change.

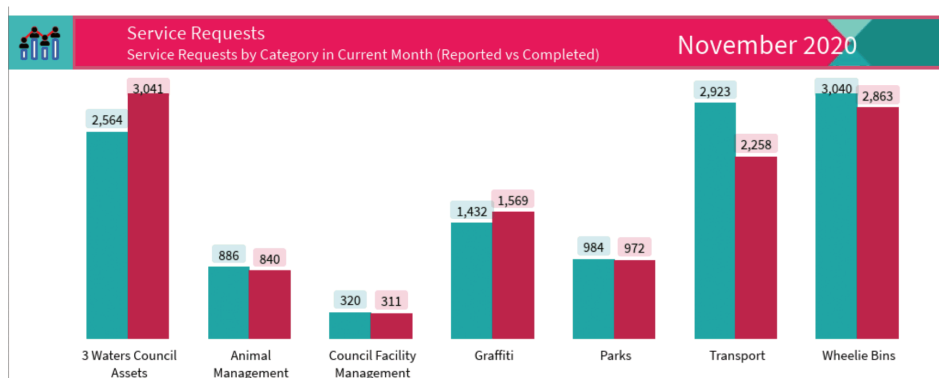
Customer service requests and level of service

Open service requests

There has been a targeted focus to close out historic service requests, particular for those sitting in the "Over 1 Year" category. We have engaged with the Continuous Improvement team to resolve those related to system issues.

This focus on closing out open tickets will improve over the coming months as Tickets Completed exceed Tickets Reported by 19 per cent for Three Waters Council Assets. Wheelie Bin ticket close out will improve in the coming months as agreed process improvements are implemented by Waste Management.

Service Requests Open Service Requests by Category by Month													
Category	# of Open Service Requests												
	Over 1 Year	December 2019	January 2020	February 2020	March 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020
3 Waters Council Assets	431	31	27	40	44	20	31	41	53	85	108	137	587
3 Waters Private Property	11	4	12	12	16	5	21	17	15	36	31	35	58



Request Resolution

Leaks from the water supply network are once again the lowest performing measure. A targeted effort to resolve leaks has resulted in an improvement in closing out of jobs over the last month with 685 more tickets being closed compared to the previous month.

3 Waters Council Assets	Resolution SLA Met	Resolution SLA Breached	Resolution SLA %	Number of Service Requests	Proportion of Category
Leak (Water Supply)	907	1,187	43%	2,094	68.9%
Council Water Supply Issues	134	97	58%	231	7.6%
Water Meter Box & Parts	96	108	47%	204	6.7%
Residential Water Connection (new)	109	50	69%	159	5.2%
Drainage Plan	108	10	92%	118	3.9%

The overall Resolution SLA increased to 49% this month.

There were 685 more 'Leak (Water Supply)' category tickets Completed this month compared to last month, and an improvement of the Resolution SLA for the category to 43%.

Health Safety and Wellbeing

There were a total of 91,483 hours worked in November, including Transport and Three Waters and Waste internal staff. It is too early to report on the December results at the time of writing this report.

A total of 34 events were reported in November, a significant drop compared with the previous months. The events include a total of 28 near misses and six first aid injuries, three in Resource Recovery, two in Transport and one intern.

- A staff member got verbally abused by a member of the public. This happened within the Council Chambers and outside during a break in the committee meeting.

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 November.

Resource consents

Good news for Lyttelton harbour with the Compliance Action Recovery Plan successfully returning the Lyttelton Wastewater treatment plant to compliance, within the 16 December 2020 deadline imposed by Environment Canterbury. As a result the threat of enforcement action has been lifted for now. The improved performance must be maintained for the rest of the plants life (approx. six months).

There are currently three significant non-compliance grades with Environment Canterbury across just one active issue in the three waters area.

On 28 October 2020, we sent contractors to investigate discoloured (black) water in the creek running off Takapūneke Reserve. They found the leachate capture pipeline from the Onuku Landfill to the wastewater reticulation had experienced a joint failure and was a likely source of the discolouration observed in the Creek. The pipeline was repaired on 28 October and over the following week or so we undertook clean-up actions and environmental impact assessments.

On 11 December, we replaced the majority (approximately 250m) of the leachate line in a more robust welded PE pipe and installed backflow prevention on the connection to the wastewater reticulation. A further remedial cleanup occurred on 14 December. We are comfortable that the site has been appropriately remediated.

Environment Canterbury undertook an investigation on 13 November and advised staff that consideration is being given to potential enforcement action. We have provided Environment Canterbury with a summary of the response actions described above.

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 1.

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	n/a	n/a
Duvauchelle	No	14 May 2019	31 May 2019	Not approved	n/a	n/a
Wainui	No	26 June 2019	28 June 2019	Not approved	12 November 2020	Submitted
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

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Water supply	More than 500 people?	Previous expiry date	Date revised plan submitted	Revised plan status	Date new resubmission	Status
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 approved the Akaroa/Takamātua Water Safety Plan on 26 November 2020. This is the first Water Safety Plan under the new framework approved for the Council and the second plan approved nationwide.

The Drinking Water Assessor is now considering the Wainui and Christchurch/Lyttelton Water Safety Plans.

Water supply	Task	Status	Planned date for resubmission
Akaroa/ Takamātua		✓ Approved	18 September 2020
Wainui		✓ DWA Review	6 November 2020
Christchurch/ Lyttelton		✓ DWA Review	24 December 2020
Little River	46 actions and tasks, 10 completed, 11 require significant input from Citycare	In progress	26 February 2021
Duvauchelle	49 actions and tasks, 11 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

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 initial response and associated disruption will almost always take longer than 24 hours therefore 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 Drinking Water Standards for New Zealand, 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.

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 in 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 Drinking Water Standards for New Zealand 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
- Ultraviolet 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. Ultraviolet 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 6 for those water supplies fed by groundwater.

Water Supplies & Water Supply Zones	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

Table 6: Compliance with DWSNZ bore water security for groundwater supplies

When age dating and modelling are complete, a report summarising compliance with all three bore water security criteria will be submitted to the Drinking Water Assessor. 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.

FINANCIAL OVERVIEW

The numbers

The operational results for November 2020 (the December results are not available at the time of writing) are a favorable variance of \$4.75 million year to date. The forecast for the end of the year for the unit is \$300,000 favorable to plan.

Recyclable materials collection and processing costs are \$1.6 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 \$1.6 million higher due to disposing recycled material directly to landfill as a result of contamination.

Operation of closed landfills is \$1.0 million higher than plan due to unplanned receipts of material into the Burwood Resource Recovery Park.

Stormwater drainage costs are \$1.2 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 & Waste Unit Financial Report for month of November 2020							
Year to Date \$000's			Activity Summary	Year to Date \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
4,700	6,348	1,649	Recyclable Materials Collection & Processing	15,008	15,234	228	1.5%
2,289	2,742	473	Residual Waste Kerbside Collection	6,430	6,580	150	2.3%
5,475	3,927	(1,548)	Residual Waste Disposal & Transport	10,662	9,426	(1,237)	-13.1%
110	129	19	Landfill Gas Capture & Treatment	307	309	2	0.5%
(21)	(108)	(87)	Refuse Transfer Stations	(1,035)	(724)	311	42.9%
(1,463)	(431)	1,032	Operation & Care of Closed Landfills	(1,338)	258	1,596	618.4%
6,370	6,258	(112)	Residual Waste Collection & Disposal	15,026	15,848	822	5.2%
3,267	3,331	63	Organics Kerbside Collection	7,940	7,993	53	0.7%
1,085	1,879	194	Organics Processing incl Composting Plant	4,370	4,509	139	3.1%
4,953	5,209	257	Organic Material Collection & Composting	12,310	12,502	192	1.5%
15,083	14,532	(551)	Wastewater Collection	24,050	23,536	(514)	-2.2%
3,136	3,025	(111)	Treat & Dispose of Wastewater Collected	6,528	6,999	471	6.7%
(103)	54	157	Laboratory Services - Wastewater	(323)	127	450	353.8%
3,033	3,079	46	Wastewater Treatment & Disposal	6,206	7,126	921	12.9%
13,049	13,167	118	Water Supply	22,725	22,761	35	0.2%
7,187	8,424	1,238	Storm Water Drainage	15,077	15,634	557	3.6%
1,865	3,153	1,289	Flood Protection & Control Works	4,490	4,680	190	4.1%
(192)	(163)	28	Three Waters Asset Management	2,641	2,878	237	8.2%
905	1,713	807	Plan/Prog Provision of Future Infrastructure	5,429	5,548	118	2.1%
714	1,549	836	Three Waters Asset Mgmt & Planning	8,071	8,426	355	4.2%
56,953	61,721	4,768		122,960	125,747	2,787	2.2%
Reconciliation to Controllable Net Cost							
()	(22)	(22)	Illegal Rubbish	(52)	(52)		0.0%
(2,312)	(2,308)	4	Internal Cost Inputs	(3,053)	(5,540)	(2,487)	-44.9%
54,641	59,391	4,750		119,855	120,156	300	0.2%

Capital expenditure year to date is \$20.0 million less than plan however forecast spend for the year is \$4.5 million higher than plan, to be funded from bring backs.

Year to Date \$000's			Operations Split	Year to Date \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
4,700	6,348	1,649	Recyclable Materials Kerbside Collection	15,008	15,234	228	1.5%
2,289	2,720	451	Residual Waste Kerbside Collection	6,378	6,528	150	2.3%
3,267	3,331	63	Organics Kerbside Collection	7,940	7,993	53	0.7%
15,083	14,532	(550)	Collecting Wastewater from Properties	24,049	23,536	(513)	-2.2%
3,136	3,025	(111)	Treat & Dispose of Wastewater Collected	6,528	6,999	471	6.7%
13,049	13,167	118	Supply Potable Water	22,725	22,761	35	0.2%
5,475	3,927	(1,548)	Residual Waste Disposal & Transport	10,662	9,426	(1,237)	-13.1%
110	129	19	Landfill Gas Capture & Treatment	307	309	2	0.5%
(21)	(108)	(87)	Refuse Transfer Stations	(1,035)	(724)	311	42.9%
(1,463)	(431)	1,032	Operation & Care of Closed Landfills	(1,338)	258	1,596	618.4%
1,685	1,879	194	Organics Processing incl Compost Plant	4,370	4,509	139	3.1%
(103)	54	157	Laboratory Services - Wastewater	(323)	127	450	353.8%
1	-	(1)	EQ - Wastewater Collection	-	-	0	0.0%
(192)	(163)	28	Three Waters Asset Management	2,641	2,878	237	8.2%
905	1,713	807	Plan/Prog Provision of Future Infrastructure	5,429	5,548	118	2.1%
9,052	11,577	2,525	Land Drainage Operations	19,567	20,313	747	3.7%
(2,312)	(2,308)	4	Cost Centre Balances	(3,053)	(5,540)	(2,487)	-44.9%
54,641	59,391	4,750		119,855	120,156	300	0.2%
Year to Date \$000's			Capital	Year to Date \$000's			
Actual	Budget	Variance		Forecast	Budget	Variance	%
9,776	14,929	5,153	Flood Protection and Control Works	43,551	34,178	(9,373)	-27.4%
338	651	314	Refuse Disposal	1,867	3,579	1,712	47.8%
3,835	7,643	3,808	Stormwater Drainage	18,709	22,890	4,181	18.3%
23,659	30,174	6,515	Wastewater	68,741	69,726	986	1.4%
11,625	15,888	4,264	Water Supply	43,575	41,540	(2,036)	-4.9%
24	-	(24)	Corporate Capital	18	-	(18)	0.0%
49,257	69,286	20,030		176,460	171,913	(4,547)	-2.6%

WATER SUPPLY

Drinking Water Quality

This section provides drinking water quality monitoring related information for the two month period ended 31 December 2020.

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.

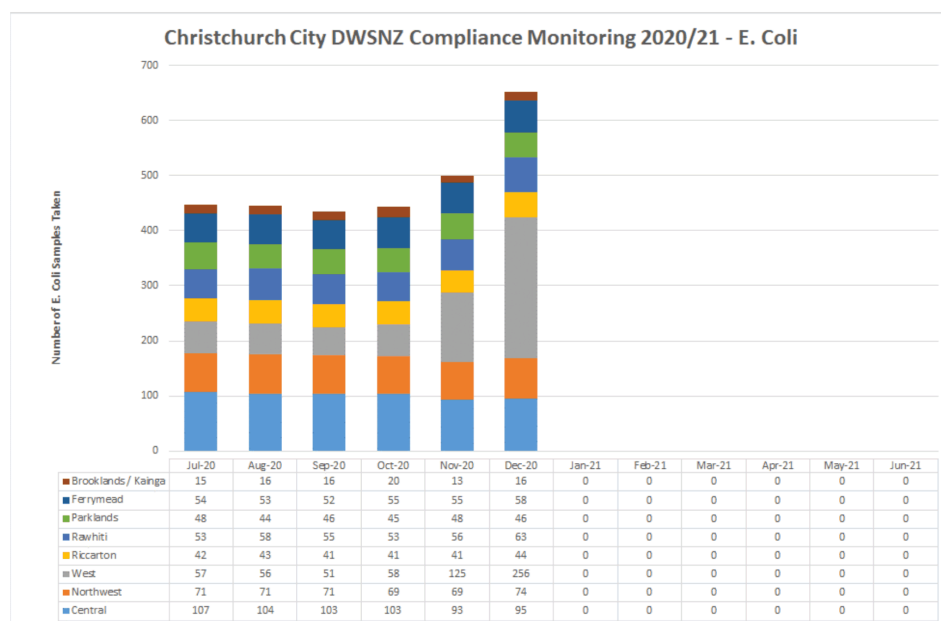


Figure 1: Number of E. coli samples taken for compliance monitoring purposes in Christchurch City

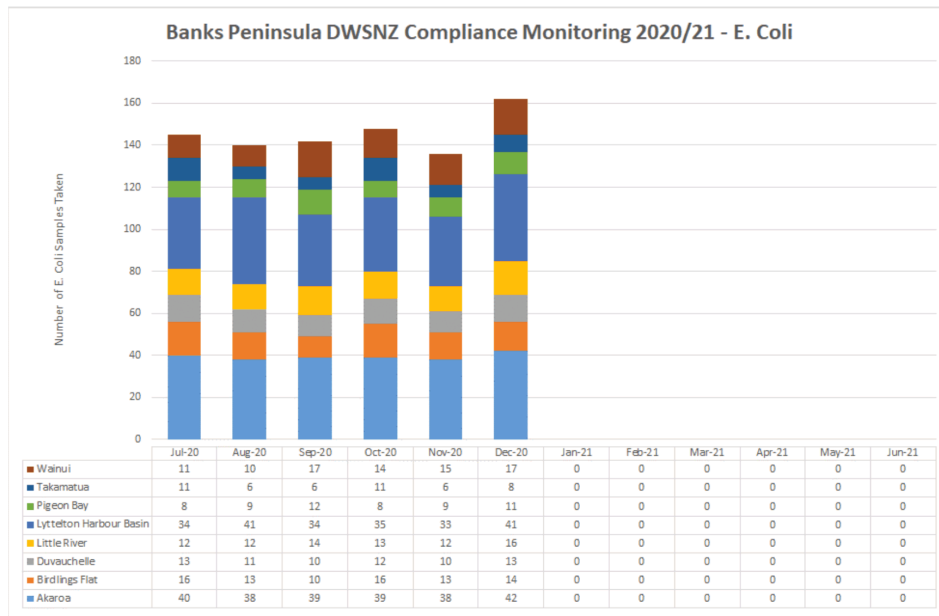


Figure 2: Number of E. coli samples taken for compliance monitoring purposes on Banks Peninsula

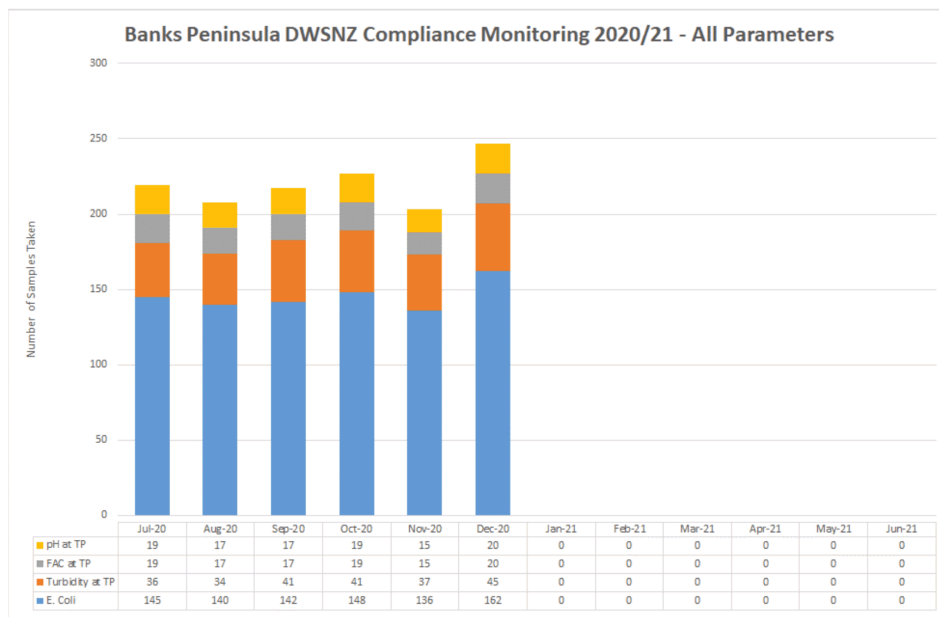


Figure 3: Number of pH, free available chlorine (FAC), turbidity and E. coli samples taken for compliance monitoring purposes at Banks Peninsula water treatment plants.

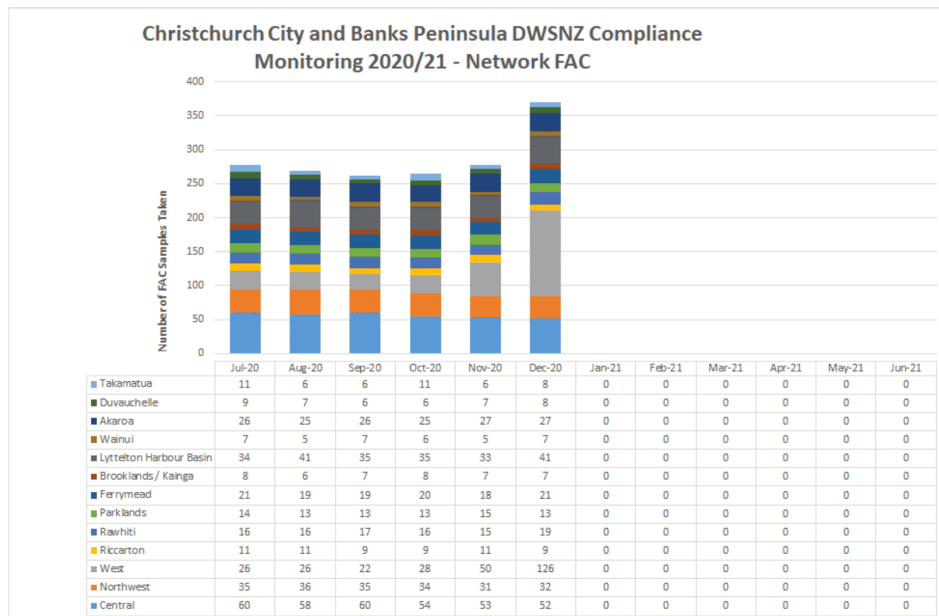


Figure 4: Number of free available chlorine (FAC) samples taken in the distribution system.

E. coli Transgressions

One E. coli transgression occurred on 25 November 2020 and one E. Coli transgression occurred on 24 December 2020. Both E. Coli transgressions occurred at Denton Pump Station which supplies the West distribution zone. The investigation carried out at the pump station showed the source of contamination was the suction tank due to defects in the suction tank roof. Denton Pump Station was disconnected from the network on 26 December for further investigation, options assessment and remedial works.

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

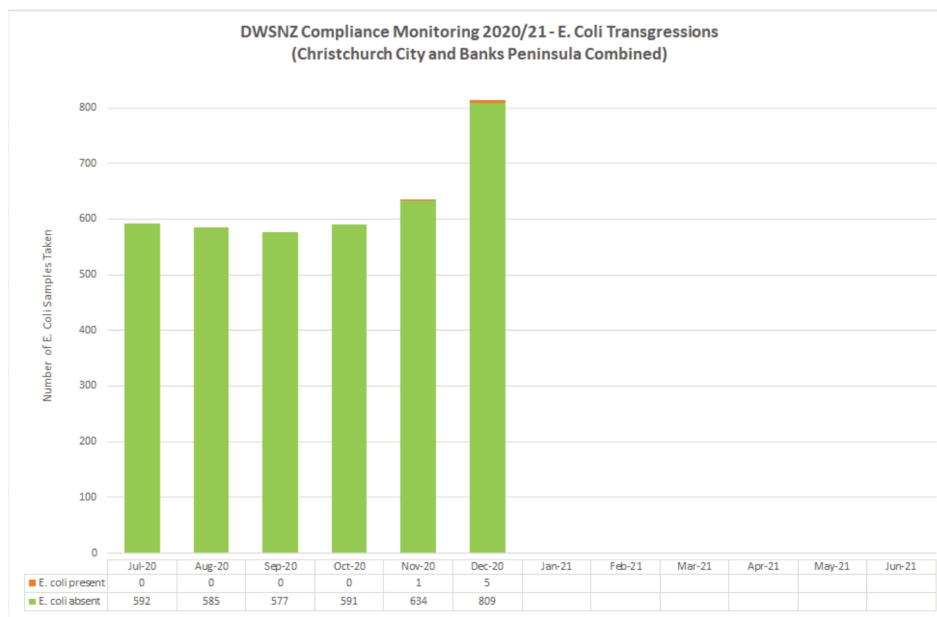


Figure 5: Number of E. coli negative and E. coli positive samples taken each month

Capital delivery – pump stations, wells and reticulation

Eastern Terrace 600mm diameter water main renewal

Status: Detailed Design

Budget: \$9 million

Update: The preferred pipe material has been agreed. Tender documentation is with Legal Services for review. Detailed design estimate is \$5 million above the current project budget prompting a value engineering exercise to find possible cost savings without increasing risks. The options include narrowing the trench width from 1.9m to 1.2m and reducing the number of value chambers. Programme funding is available in future years and could be transferred to this project. The tender package for the project will be ready in January 2021. The request for tenders is planned for March 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 by June 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.

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 is operational and is in the handover stage. Well 4 development is complete and the pressure testing and final commissioning is to be carried out in January 2021. Project delivery will be complete in January 2021.
- 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) commissioning took place on 2 December 2020 and the well is now in service. Well 1 (shallow aquifer) will be decommissioned after a proving period on well 4. Practical Completion Certificate is likely to be issued by end Jan 2021.
- Mays – Well drilling work commenced in August 2020 and the well has been drilled to 170m below ground level. Drilling will continue until a suitable aquifer layer is reached at which point the well testing will commence. The well is planned to be in operation in April 2021 with subsequent delivery in May 2021.



New Water Supply Well at Grassmere Pump Station

Wrights Road wells and upgrade works

Status: Handover

Budget: \$3.63 million

Scope: Construct scour line and two new wells. Demolish old wells and pump station building.

Update: All physical works are complete. Contractor delays with Quality Assurance documentation and administration have prevented final closeout of the project. Delivery planned for January 2021.

Completion date: January 2021

Jeffreys suction tank

Status: On hold

Budget: \$3.08 million

Project opportunities: The detail design was complete at the start of 2020 when new opportunities were identified to be included into this project for water supply security, cost and time efficiency. These opportunities include:

- Wooden screening of tank, instead of cladding, to facilitate easy access for tank inspection and meet the safety and security requirements of our Water Safety Plan
- Replacement of reticulation pumps to increase the water supply capacity of the pump station (funding to be confirmed)
- Future provision for water treatment
- Emergency provision – install a non-return valve along Fendalton Road to connect to Central Zone.

Update: Buy-in from both Community Board and the residents was received on the proposed changes. The user requirements for the replacement pumps have been discussed with the consultant. Designer's proposal for the balance scope change as a result of the opportunities as identified above is currently under review by the Council's project team. The project shows a budget deficit of \$1.83 million which is being discussed with the project sponsor. Scope, cost estimates and source of funding are being reviewed to address this shortfall.

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The design works will be restarted after Ben Rarere Pump Station tender closes so that all the improvements in the construction works tender for Ben Rarere are considered. The physical works tender is planned for end March 2021. The timeline depends on the Asset Management resource availability for documents review.

Completion date: 29 April 2022

Ben Rarere new pump station

Status: Tender evaluation

Budget: \$6.12 million

Update: The tender closed on 12 October 2020. There are four bidders and tender evaluation is in progress. Contract award is planned to be made by 18 January 2021.

Completion date: February 2022

Artist impression of the new Ben Rarere Pump Station.



Sydenham suction tank replacement

Status: Preliminary Design

Budget: \$2.55 million

Update: The designer has been requested to submit a revised methodology for detailed design based on a stainless steel tank. Construction is planned to commence in July 2021. A cost estimate based on the preliminary design is being finalised after which discussions on the project budget will be held with the Project Sponsor.

Completion date: June 2022

WS Suction tank and reservoir assessments

Status: Investigations

Budget: Under review

Update: Assessments have been completed at Sockburn, Hackthorne, Quarry, Keyes, Grassmere, Estuary, Halswell tank 2, Mt Pleasant 3 (tanks 1 & 2) and Mays tanks. All require some remedial action before they can be signed off as 'demonstrably safe'. The external inspections of tanks will continue through the summer months.

- Sockburn – contractor has been appointed for remedial works
- Hackthorne – preliminary design is being reviewed.
- Remainder – works programme will be developed for the autumn and winter months.

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

Quarry reservoir (Lyttelton) repairs

Status: Investigations

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. A consent has been approved for the earth works, and a tender package is being completed for the work to go out to tender early in 2021. Subsequently, tank 1 will be emptied and inspected internally.

Completion: To be confirmed

Richmond Hill break tank replacement

Status: Construction

Budget: circa \$72,000

Update: Construction work to replace the tank has been completed, apart from the new security box to be fitted around the Bermad valve. The work covered demolition and removal of the existing tank, new concrete slab, new retaining wall, installation of the new tank and associated pipe work, and installation of a new sampling point.

Completion: The tank is in service and minor defect work is being completed before handover.

WS reticulation renewals programme

Status: Design, construction and handover

Budget: circa \$117 million

Scope: The programme (78 projects) is to replace/upgrade reticulation water mains/sub mains.

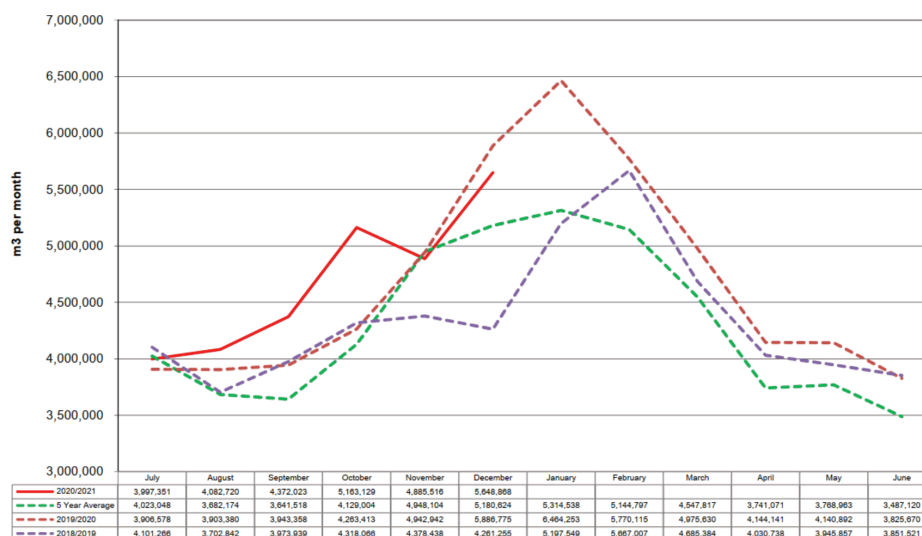
Update: These projects are currently going through various phases. 21 projects are in construction, eight in design and a number of projects in handover phase. The projects in design will be tendered to market from January 2021 to April 2021. Three construction projects are expected to be awarded by February 2021.

Completion: All design work to be completed in FY21 on a number of projects while construction works to be completed in FY22 and FY23.

Water Supply Operations

The majority of pump stations and wells continue to perform as expected. Year to date (six months to 31 December) water demand is tracking at 28.5 billion litres (an average of 1,803 litres/second). Whilst August, September and October 2020 saw well above average demand, cooler, wetter weather in November and December 2020 has seen water consumption drop back in line with last year's (2019/20) monthly demand – this is still above the five year average.

FY 2021 Monthly Water Consumption, Compared with Five Year Average and FY2020, FY2019



The temporary chlorination equipment continues to perform well. The continuous improvement programme and proactive asset replacement is ongoing to ensure the high standards that are required are being met. The equipment has been prepared to, and is meeting the summer demand peaks.

The UV water treatment installation at Main Pumps is undergoing further works, to install dual instrument trains, to improve resilience.

Improvements to operational documentation, in particular field validation and labelling of new above-ground wellheads, is continuing. The SharePoint site documentation continues to be extended out to include the Banks Peninsula supplies.

Water Supply Reticulation

From 1 January to 31 December 2020 16,269 requests for service were logged, averaging 1356 per month. This increased volume, sustained over the last 18 months, is likely to continue. The main categories of request are for leaks on connections, sub-mains, hydrants and valves.

For the same reporting period Citycare has completed:

- 7740 connection repairs
- 368 backflow prevention device installations
- 1559 new water connections.

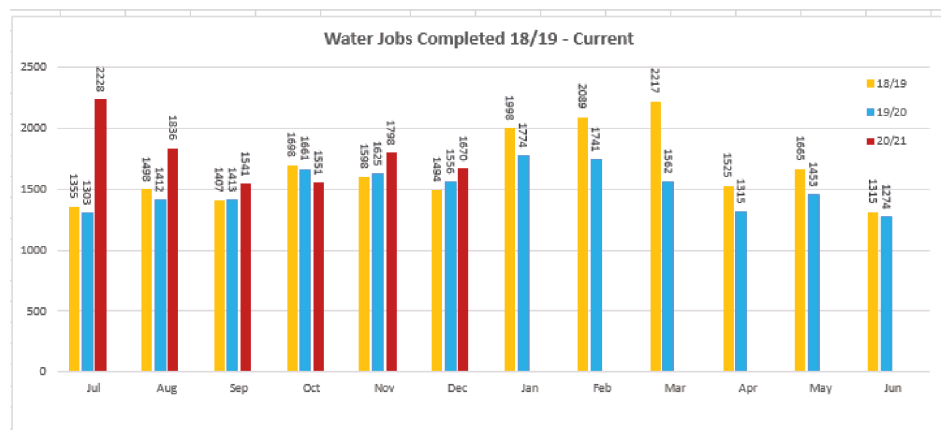
A number of actions have been undertaken previously to improve the time taken to complete jobs, including additional short-term resources and weekend work at Citycare.

Relaxation of timeframes around non-urgent jobs has allowed a more effective allocation of resource, improved workflow and timely completion of urgent jobs. However it also resulted in poorer outcomes for response times for jobs in the "three working days" category. Additional resource was brought in early September and has improved response times for all jobs.

KPI Target 95%

Type of Leak	KPI Target	CURRENT MONTH														
		Total Jobs	Responses in Target	KPIs Achieved	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 20	Feb 20	Mar 21	Apr 21	May 21	Jun 21
Major Urban	1 Hour (On Site)	138	134	97%	96%	95%	94%	96%	97%							
Major Rural	2 Hour (On Site)	4	4	100%	100%	100%	100%	80%	100%							
Medium	1 Working Day (Repaired)	116	108	93%	92%	87%	83%	87%	93%							
Minor	3 Working Days (Repaired)	1328	924	70%	39%	36%	40%	32%	70%							

Staff are working with Citycare to reset resource levels to better respond to the increased volume of requests and avoid having to cyclically inject additional resource. The number of jobs being completed each month continuing to trend upwards along with an improvement in response and resolution times.



Water usage

Christchurch City

Water use is high for the time of the year and we will focus on monitoring use, with clear communications to residents as to how they can help in reducing demand in peak periods. Water restrictions are often required over the summer to control volume and time of use, so 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 2 water restrictions were introduced for Banks Peninsula in December to address the low rainfall and stream levels. We will be utilising other sources than streams (our bores) to minimise the impacts on the environment and to ensure we stay within our consent conditions. Stream and source water assessments are occurring three times a week and we may need to go to level 3 restrictions.

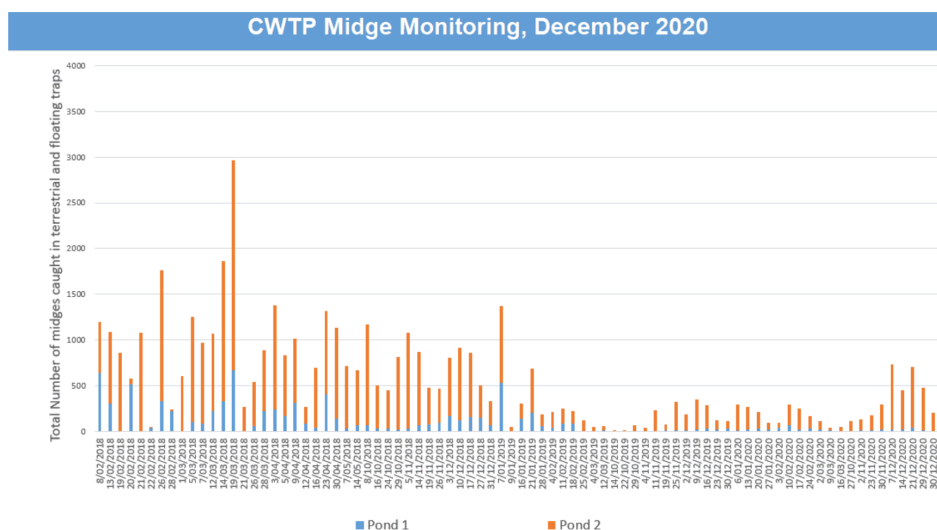
WASTEWATER

Oxidation pond midges

The midge control programme for this summer season is well underway with the following activities:

- The jet boat and midge dredge are now out on the ponds every fortnight
- The midge traps are out and midge numbers are being counted twice a week
- The additional monitoring of the pond water quality is now underway.

The midge monitoring for this season has shown midge numbers for this year to be higher than last year, as was anticipated due to the warmer drier weather. Despite these higher numbers, no complaints about the midges have been received by Council so far this season. It is likely that ongoing planting and growth of the native vegetation barrier in the paddock between the ponds and the adjacent residential area is working and off-setting the increased number of midges emerging from the ponds.



Wastewater planning

Akaroa reclaimed water treatment and reuse scheme

The Council decided on 10 December 2020 to approve the hearings panel recommendations for Akaroa's treated wastewater, to stop discharging treated wastewater to Akaroa Harbour and develop a new system where treated wastewater will be used to irrigate new areas of native trees in the Inner Bays area at sites in Robinsons Bay, Takamātua and Hammond Point. Work is underway to engage a consultant for progressing the design and 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

Long time series modelling is underway to determine whether we comply with our wastewater overflow consent. Fifteen years of rainfall data are being run through our recently updated and recalibrated wastewater network model. This will be completed in late January. Environment Canterbury has agreed to a delayed deadline for delivering our consent compliance report.

If the Council does not comply with its overflow consent, a wastewater optimisation project will be undertaken to determine the most cost effective suite of upgrades to reduce overflows and comply with the consent.

Wastewater implementation plan

Work continues on the implementation plan for the wastewater aspects of Te Wai Ora o Tāne Integrated Water Strategy. This is due to be complete by March 2021.

Capital delivery – wastewater treatment plants, pump stations and reticulation

Lyttelton Harbour wastewater scheme

Status: Construction

Budget: \$53 million

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

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

Full commissioning of the Simeon Quay pump station will not progress until the Heathcote pipeline has been completed. 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.

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.



Left, pressure vessels at Simeon Quay PS, right: progressive cavity pumps at Power House behind Simeon Quay PS

Work Package 4 Heathcote Valley pipeline: the redesign due to incorrect mapping of the Orion services is in final review. Once finalised NZTA will be issued with the proposal for sign off and 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.

Coordination with other services:

- The water supply pipeline renewal along Port Hills Road is complete
- Kerb to kerb resealing of Port Hills Road is to be completed by Transport.

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 timed for February. Depending on the outcome of the testing the project will be closed out or advanced to the next stage of remediation works.
- The next stage work to replace the rising main of pump station 13 in Woolston is being completed in December. We will carry out performance trials of this, and other modifications in 2021. Depending on the results of these trials we will review the project scope as there is an opportunity to reduce the works.
- The final option for the upgrade of pump station 60 is to convert the existing dry well to a large wet well, and install two large pumps. The maximum pumping rate will be limited to 200L/s. It will be a new building with new MCC and a new valve chamber. Detail design is underway.

- 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: \$2.5 million

Update: Final lining works totalling fifteen meters remain and are programmed for completion in January.

Completion: scheduled January 2021

Reticulation renewals

Status: Investigation/design/procurement/construction

Budget: circa \$72 million

Scope: The programme is to replace/upgrade ageing wastewater reticulation network.

Update: These projects are currently going through various phases. 19 projects are in construction with a number of projects in handover phase. There are seven projects in design which will be tendered to market from January 2021 to April 2021. There are four construction projects in procurement which are expected to be awarded between January 2021 and March 2021.

Completion: Design work to be completed in FY21 on a number of projects while construction works to be completed in FY22 and FY23.

Mains renewal – Tuam Street brick barrel

Status: Construction

Budget: \$15.3 million

Update: Works continue to progress the project with the final portion of the deep wastewater mains now excavated and works to tie the replacement section of mains to the existing main underway.

We will continue to carry out peripheral works in January and February and then expect to carry out final sealing works in February, with some risk of completing sealing in March. We are working with the Transport team to undertake significant resurfacing works on Tuam Street. It is intended that we incorporate areas of surfacing beyond the wastewater works and complete them in one pass. This will avoid returning late in 2021 and introducing new disruptions and challenges to local businesses.

Completion: The current forecast completion is February 2021.



Tuam Street Brickbarrel – Portion of existing pipe to which we are connecting.

STORMWATER AND WATERWAYS

Stormwater and Waterways Operations

December 2020 was a relatively wet month, compared to the last 10 years, with between 50 and 70mm of rain falling across the city, the majority of which fell during the week between 20-27 December 2020.

In contrast to December, the total rainfall for the calendar year for both Christchurch City and Banks Peninsula was the lowest equal in the last 10 years ranging from approximately 375mm in the northern part of the city to 450mm to the south part of the city and less than 900mm on Banks Peninsula. As has been noted previously, the lack of rain has meant that there has been much less reactive work clearing blockages before, during and after rain events.

There have been very few service requests from customers over the holiday period other than a few small blockages in various waterways as a result of the rain moving and depositing debris - none of which have affected the drainage function of the waterways.

The CCTV programme in Akaroa has begun with a trial area completed to establish the extent of missing asset information. The data from this is still to be processed and the next stage will begin again in January 2021.

Council's Wet Weather and Tidal Response Plan is under detailed review to ensure all information is being captured in the document to make sound decisions during an event. This is being undertaken in conjunction with Citycare reviewing their response plan to ensure consistency between council and contractor plans.

Sumner beach outfalls are an ongoing and potentially increasing problem as the beach profile continues to change and rise. The Hardwicke Street outfall in particular appears to have risen in the order of 300mm in the last month. We have been able to maintain the function of these outfalls to date but, if the beach profile continues to rise, it will become increasingly difficult to do so.

Stormwater and Waterways Planning

The draft Opawaho/Heathcote River and Hurutini/Halswell River Stormwater Management Plans (SMPs) were presented to the Three Waters Infrastructure and Environment Committee on 16 December 2020. Members were informed of the key steps through to submission of the plans to Environment Canterbury later this year. Focus is on preparations for public consultation and completing the hydraulic modelling for the Opawaho Stormwater Management Plan. The latter has fallen behind programme for delivery by the due date of June 30 2020, due to Covid-19 impacts, and staff are in communication with Environment Ecan on this matter.

Staff have continued to plan for the coordination of works within the Otakaro/Avon River Regeneration Corridor, both within the operative Long Term Plan and provisionally for the proposed Long Term Plan.

Other coastal-related work, including the Multi-hazard Project, Coastal Hazard Adaptation Planning programme and the Southshore and South New Brighton earthquake legacy project, remains a key area where the team is providing ongoing, and in some cases, increased support.

The processing of those elements of building consents and resource consents which relate to stormwater/waterways, and provision of responses to internal and external customers, has been at and possibly higher than normal levels over past weeks.

In coming months our team's focus will be on finalizing the two draft Stormwater Management Plans, planning for implementation of the Otakaro/Avon River Regeneration Corridor works in coordination with other Council units, finalizing development and the draft Long Term Plan with internal Council engagement as necessary, preparation of additional bids in February 2021 for the 2nd tranche of Freshwater Improvement Fund funding, review and update of the Three Waters Bylaw, and supporting the implementation of the Comprehensive Stormwater Consent.

Capital Delivery

The Stormwater and Waterways Delivery Team are actively managing 111 projects with a current year budget total of \$55.2 million. Selected key project details are given below.

Cashmere Worsley flood storage

Status: Construction

Budget: \$ 27.1 Million

Update: Lower valley works complete and commissioned. Construction tender for upper valley works in procurement. Environment Canterbury recommended resource consents for upper valley dam to be limited notification.

Completion date: June 2022

Eastman Wetlands

Status: Detailed Design / Construction

Budget: \$9.6 Million

Update: Part of an integrated system with Sutherlands and Hoon Hay Basins. This project has now been combined into the Sutherlands & Hoon Hay project to improve efficiency.

Completion date: June 2024

Sutherlands and Hoon Hay Basins

Status: Detailed Design/Construction

Budget: \$15.1 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. The earthworks at Hoon Hay East are due to complete in January 2021.

Works on a further seven structures at Hoon Hay West will begin early 2021 with completion in FY22. The western area of Eastman wetland is complete apart from planting one area. Eastman's low flow channel will start on site in January 2021 while the Eastman Central wetland design will begin mid-2021, and the outlet structure will go out to tender in winter 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.

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 year.

Completion date: June 2021

Curletts Flood Storage

Status: Construction

Budget: \$9.6 Million

Update: This project is effectively complete and flood storage is now available. A separate project (budget \$1.8M) is progressing to optimise automated control of all the upper Heathcote storage basins.

Completion date: October 2020

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). Gabions on Riverlaw Terrace are now complete and the road reconstructed. Design and cost benefit analysis is underway for stage 4b (St Martins Road to Wilsons Road).

Completion date: August 2021



Before/after – both low tide downstream of Opawa Road (Stage 2)

[Coxs – Quaifes Stormwater Facility](#)

Status: Defects Liability

Budget: \$14.7 Million

Update: Construction complete, ahead of programme and under budget (\$10.5m).

Completion date: October 2020

[Canal Reserve Drain](#)

Status: Detailed design

Budget: \$8 Million

Update: The 2.1km lined drain alongside Marshlands Road is to be renewed and naturalised where possible, with construction planned to start April 2021. Some design options have been trialled.

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 and construction is planned to finish in March or April 2021.

Completion date: April 2021

[Jacksons Creek Brick Barrel near Ward Street](#)

Status: Construction

Budget: \$418,000

Update: Replacement of an 85 metre section of brick barrel stormwater pipe built in 1912 is now completed.

Completion date: November 2020

[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 Cycleway, Owaka Road and Wilmers Road (Warren Park).

Completion date: August 2021



Wilmers Basin

[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. Discharge canal bund construction underway. Main works contract awarded, and 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 due to start in January 2021.

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. Contract awarded and construction to start 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, but Covid-19 delays, bird nesting season, and Department of Conservation restrictions on relocating lizards means a start on the northern section is delayed – planned for February 2021.

Completion date: October 2021



[Blakes Road Stormwater Facility \(Works 1\)](#)

Status: Procurement

Budget: \$9.7 Million

Update: Project to construct a first flush basin and wetland. Main works contract being tendered with construction to start in February/March 2021.

Completion date: September/October 2021

[Temporary stop bank management - Avon](#)

Status: Construction

Budget: \$7.2 Million

Update: Temporary stopbank works and cycle trail is largely completed.

Completion date: June 2021

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

Status: Detailed design

Budget: \$12 Million

Update: Now being developed to align with Ōtakaro Avon River Corridor Regeneration Plan. Design planned to complete January 2021 with construction from April 2021.

Completion date: 2024

APPENDIX 1 – HEALTH SAFETY AND WELLBEING STATISTICS

Health Safety and Wellbeing Statistics

Three Waters Waste and Transport

Health Safety and Wellbeing Statistics - Month of November 2020	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	28	4	10	10	2	2
First aid injuries (FAI)	6	0	0	3	2	1
Medical Treatment Injuries (MTI)	0	0	0	0	0	0
Lost Time Injuries (LTI)	0	0	0	0	0	0
No. of days lost to LTIs	0	0	0	0	0	0
No. of hours worked	91,483	2,044	15,676	24,959	23,957	24,847
Health Safety and Wellbeing Statistics - Year to Date - November 2020	Totals	Land Drainage	Water Waste	Resource Recovery	Transport	Intern
Near Misses	267	16	84	78	79	10
First aid injuries (FAI)	40	2	6	24	5	3
Medical Treatment Injuries (MTI)	11	3	5	0	3	0
Lost Time Injuries (LTI)	9	2	7	0	0	0
No. of days lost to LTIs	12	0	12	0	0	0
No. of hours worked	600,778	21,959	121,091	113,235	219,684	124,809
LTIFR	15.0	91.1	57.8	0.0	0.0	0.0
MTIFR	33.3	227.7	99.1	0.0	13.7	0.0
TRIFR (LTI + MTI)	48.3	318.8	156.9	0.0	13.7	0.0