
Council Workshop

AGENDA

Notice of Workshop Te Pānui o te Hui:

A Council Workshop will be held on:

Date: **Tuesday 14 April 2026**
Time: **9.30 am**
Venue: **Camellia Chambers, Civic Offices,
53 Hereford Street, Christchurch**

Membership Ngā Mema

Chairperson	Mayor Phil Mauger
Deputy Chairperson	Deputy Mayor Victoria Henstock
Members	Councillor Kelly Barber
	Councillor David Cartwright
	Councillor Melanie Coker
	Councillor Pauline Cotter
	Councillor Celeste Donovan
	Councillor Tyrone Fields
	Councillor Tyla Harrison-Hunt
	Councillor Nathaniel Herz Jardine
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Sam MacDonald
	Councillor Jake McLellan
	Councillor Andrei Moore
	Councillor Mark Peters
	Councillor Tim Scandrett

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10 April 2026

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Note: This forum has no decision-making powers and is purely for information sharing.

To find upcoming meetings, watch a recording after the meeting date, or view copies of meeting Agendas and Notes, go to:

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



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Scheduled time – 9.30 am

*[Presenter: Gavin Hutchison, Head of Three Waters
Veronica Zefferino, Manager Infrastructure Planning
Allan Prangnell, Chief Executive, Taumata Arowai]*

1. Apologies Ngā Whakapāha

Apologies will be recorded at the workshop.

2. Chlorination Update

Reference Te Tohutoro: 26/47475

Gavin Hutchison, Head of Three Waters



Presenter(s) Te Kaipāhō: Veronica Zefferino, Manager Infrastructure Planning

Allan Prangnell, Chief Executive, Taumata Arowai

1. Detail Te Whakamahuki

Purpose and Origin	<ul style="list-style-type: none"> To brief Council on the pathway to obtain an exemption for chlorine residual disinfection in the Christchurch City Water supply network. Staff from Taumata Arowai will also present to Council
Timing	This information session is expected to last for 45 minutes.
Outcome Sought	<p>Elected members understand the following:</p> <ul style="list-style-type: none"> The scale of capital investment and ongoing operational to remove chlorine from the Christchurch City Water supply network. Why the level of investment is required to achieve an exemption for chlorine The time it would take to achieve an exemption The risk of committing to such an investment The alternatives to seeking an exemption This session is for information only.
ELT Consideration	
Next Steps	There are no further steps proposed unless staff are directed.
Key points / Background	<ul style="list-style-type: none"> The investment to achieve an exemption is significant High level cost estimates have been developed based on the assessed requirements. Should elected members wish to pursue the path to chlorine exemption, further work is required to develop a more accurate cost estimate. The timeline to achieve an exemption is a minimum of 20 years. There would still be a requirement to infrequently add chlorine to the network There is a risk that due to the time to achieve a chlorine exemption there could be changes to legislation that may require further investment, or not allow an exemption to be achieved
Useful Links	

Attachments Ngā Tāpirihanga

No.	Title	Reference	Page
A  	Christchurch Water Supply - Removal of Chlorine - Council briefing with Water Services Authority 2026-04-14	26/515095	7

Signatories Ngā Kaiwaitohu

Author	Veronica Zefferino - Infrastructure Planning Manager
Approved By	Gavin Hutchison - Head of Three Waters

Christchurch Water Supply – Removal of Chlorine

Council briefing with Water Services Authority
14 April 2026

Legislative Framework for Residual Disinfection

- Water Services Act
- Requires supplies to have a drinking water safety plan (DWSP) which must include the use of residual disinfection *unless* have an exemption (section 58)
- Exemption – consistent with main part of act (provide safe water)

Compliance status now in Christchurch

- Source water– **compliant** – Class 1 or UV treatment
 - Treatment plants (43) – **non compliant** – ‘Temporary’ chlorination lacks continuous monitoring (Tanner TP – compliant)
 - Network/distribution – **compliant** (required chlorine levels maintained and no E.coli transgressions)
 - Compliance with the drinking water quality assurance rules (DWQAR) is considered a **minimum** baseline for management of a water supply
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Compliance under old Drinking Water Standards

- Under the old regulatory regime, regularly found total coliforms and E.coli to a lesser extent
- Often associated with suction tanks and reservoirs
- High level of sampling still allowed for compliance despite some transgressions
- Total coliforms not part of compliance regime previously
- Since chlorination in 2018 Christchurch has had no E.coli within the distribution network

AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
08-12	13-17	18-22	E. coli Total 08-22		08-12	13-17	18-22	Coliforms Total 08-22		Grand Total	21-22 Total	Name
0	0	0	0		0	1	14	15		15	14	Addington Pump Stn
0	0	0	0		2	0	0	2		2	0	Aldvins Pump Stn
0	0	0	0		0	0	10	10		10	6	Aston Pump Stn
2	0	0	2		6	10	13	29		31	1	Auburn Pump Stn
0	0	0	0		1	0	4	5		5	0	Avenill Pump Stn
0	0	0	0		11	21	5	37		37	0	Avonhead Pump Stn
0	0	1	1		0	6	8	14		15	1	Aylmers Reservoir
1	0	0	1		8	1	0	9		10	0	Belfast Pump Stn
2	0	0	2		3	0	0	3		5	0	Berley Pump Stn
2	0	0	2		28	0	0	28		30	0	Birdling Flat Pump Stn
0	0	0	0		3	0	2	5		5	0	Blighs Pump Stn
0	0	0	0		2	3	1	6		6	0	Brooklands Pump Stn
2	3	0	5		21	15	1	37		42	0	Burkes Track 1 Reservoir
0	2	1	3		10	19	3	32		35	0	Burkes Track 2 Reservoir
7	2	0	9		45	24	14	83		92	7	Burnside Pump Stn
0	0	0	0		2	0	0	2		2	0	Burwood Pump Stn
0	2	0	2		2	14	0	16		18	0	Buxton 2 Reservoir
0	1	0	1		0	16	28	44		45	6	Camp Ground Reservoir
1	0	0	1		5	0	15	20		21	15	Carter's Pump Stn
0	0	0	0		0	0	2	2		2	2	Carter's Suction Tank
0	0	0	0		4	0	0	4		4	0	Cashmere Reservoir
0	0	0	0		4	1	0	5		5	0	Chapmans Pump Stn
0	0	0	0		2	4	0	6		6	0	Clifton 2 Reservoir
1	0	0	1		3	2	0	5		6	0	Clifton 3 Reservoir
0	0	0	0		2	0	0	2		2	0	Clifton 4 Reservoir
0	0	0	0		0	7	8	15		15	0	Crook's Pump Stn
1	0	10	11		4	19	103	125		138	6	Denton Pump Stn
0	0	1	1		0	0	9	9		9	0	Denton Suction Tank
0	0	0	0		0	9	4	13		13	0	Doris Faigan 2 Reservoir
1	1	1	3		11	11	39	61		64	20	Dunbars Pump Stn
0	1	0	1		0	2	0	2		3	0	Duvauchelle Treatment Plant Reser
3	1	0	4		13	30	2	45		49	0	Dyess Pass Reservoir
0	0	0	0		0	2	0	2		2	0	Ellingham Pump Stn
0	0	0	0		13	29	5	47		47	0	Ernest Adams 1 Reservoir
0	0	0	0		13	16	1	30		30	0	Ernest Adams 2 Reservoir
0	0	2	2		4	1	4	9		11	6	Estuary Pump Stn
0	0	2	2		0	0	2	2		4	4	Estuary Suction Tank
1	0	0	1		19	6	28	53		54	12	Exeter Reservoir
2	0	0	2		21	5	0	26		28	0	Farrington Pump Stn
0	0	0	0		0	0	7	7		7	0	Gardiners Pump Stn
0	0	0	0		0	0	1	1		1	0	Gardiners Suction Tank

Potential for a Chlorine exemption

- Remains a possibility but....
 - Long time frame (decades)
 - Significant costs
 - Ongoing costs and resourcing to retain exemption
 - Compliance yet to be achieved
 - Significant work required, especially in the network/distribution
 - Such an investment would come with risk
 - Regulator allows for an intermittent chlorinated supply (not fully chlorine free)
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Napier – Similar to Christchurch but smaller

- Moving towards chlorine free
- 2021 estimated cost of \$284 million to be in position to apply
- On going cost/year: \$4.5 million
- Timeframe – 20+ years



	Population (registered)	No. of water sources	No. of treatment plants
Christchurch (CHR009)	384,096	126	44
Napier (NAP001)	62,150	8	8

Network risks - Reservoirs - Hackthorne 2

- Partially buried, ponding on flat roof, close neighbours, trees, interior condition challenges.



Figure 19 Ponding in south-east corner.



Figure 20 Ponding in south-west corner.



Figure 25 Large area of lining lost from wall.



Figure 26 Large area of lining lost from wall and repaired crack.



Figure 27 Lining cementitious base layer with friable to layer over.



Figure 28 Sample of removed lining.

Scarborough 2

- Root intrusion, rust, deteriorating surfaces

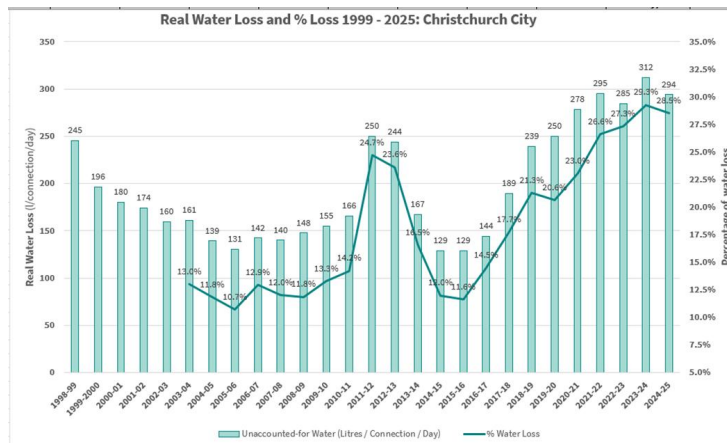
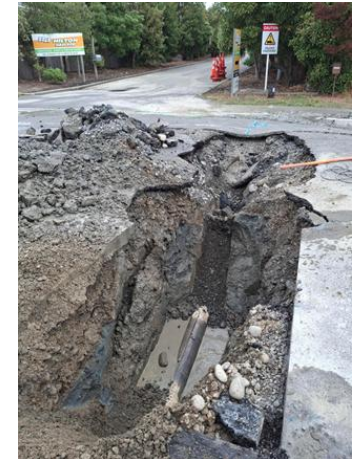
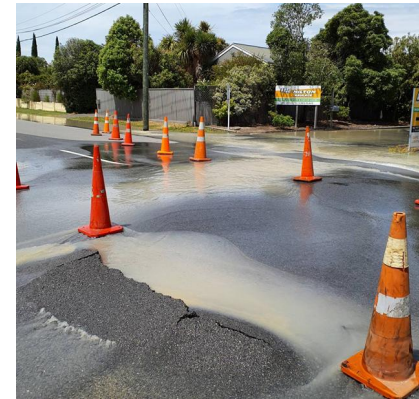


Reservoir risks



Network risks

- Age and condition of pipework
- Backflow protection of our network
- Water loss / leakage
- Need a younger, 'tighter' water network



Chlorine Exemption Scope

- Additional reticulation renewals (focused on integrity and ingress risk reduction);
 - Refurbishment / Replacement of suction tanks and reservoirs;
 - Network rezoning and pressure management;
 - Enhanced network monitoring; and
 - Increase in operational effort, field services, Council governance and improvement of compliance capability.
-

High Level Capital Costs

Scope Item	Capital Costs	Scope
2.1 Accelerated reticulation renewal	\$920M – \$1,050M	Renewal of all AC mains and aged CI mains, including associated high-risk submains and Council-owned service connections where material to leakage/ingress. It also cover the incremental uplift assumed at ~20% above BAU.
2.2 Suction tanks, reservoirs renewal	\$250M – \$300M	Renewal and major refurbishment of 41 storage sites, including enabling works and land acquisition where required.
2.3 Reduce water supply zone size	\$ 40M – \$ 60M	Sector boundary and pressure management infrastructure, commissioning/changeover and operational integration, plus modelling/calibration sufficient for staged delivery decisions.
2.4 Enhanced network monitoring	\$ 25M – \$35M	Additional sensors, flow/pressure monitoring, telemetry and SCADA/OT integration required beyond existing meter rollout (meter rollout excluded).
2.5 Universal backflow prevention at point of supply	\$ 20M – \$30M	Network-wide rollout/rectification to achieve point-of-supply coverage across all residential and commercial connections; BAU typically targets high-risk connections, and any incremental uplift required to close residential gaps
2.6 Asset security uplift	\$15M – \$30M	Standardized uplift to fencing/access control/CCTV/alarms/lighting across critical assets, aligned to Council security standard.
2.7 Extended operational services	\$30M – \$45M	Increase to contracted service levels: intensified monitoring, flushing, inspection/hygiene assurance, response/repairs increase and discharge management interfaces.
2.8 In-house management & compliance	\$22M – \$35M	Additional internal capability: planning/coordination, performance reporting, audit/assurance, consenting/compliance oversight, BFP enforcement/certification management, contract management and training uplift.

Investment Required

Scope Item	Estimated Cost	Current LTP Budget FY27 – FY34	Additional Investment above LTP Budget
Accelerated reticulation renewal	\$920M – \$1,050M	\$427M	\$493M - \$623M
Suction tanks, reservoirs renewal	\$250M – \$300M	\$4.8M	\$245M - \$295M
Reduce water supply zone size	\$ 40M – \$ 60M	\$0.6M	\$39M - \$59M
Enhanced network monitoring	\$ 25M – \$35M	\$3M	\$22M - \$32M
Universal backflow prevention at point of supply	\$ 20M – \$30M	\$2.5M	\$17M - \$27M
Asset security uplift	\$15M – \$30M	\$0	\$15M – \$30M
Extended operational services	\$30M – \$45M	OPEX	\$30M – \$45M
In-house management & compliance	\$22M – \$35M	OPEX	\$22M – \$35M
Total	\$1,300M - \$1,600M	\$438M	\$862M - \$1,162M

Deliverability

- Significant increase in resourcing
- Uplift in operations
- Delivery of capital projects likely to be the limiting factor

‘Time required to meet the required scope for chlorine exemption would be approximately 20 years at best’

Key Considerations

- Before committing to such an investment we need to consider other needs for investment across all activities
- Commerce Commission and Department of Internal Affairs would question such an investment
- Cost estimates are based on key assumptions
- In the long-term the rate of asset renewals would be at a higher rate to maintain a chlorine exemption (approx. 2%)
- Achieving a chlorine exemption doesn't mean the supply will be chlorine free
- Investment risk – the rules could change

Alternatives

- Education (average one complaint/week)
- Dissipate naturally
- Bench top filter jug
- Shower filters or full householder filters that can be purchased.
- Community DW stations (Burnside and Keyes)
- Revised DWQAR may allow for taps on source water
- Dechlorination taps

