NOTICE OF MEETING

Notice is hereby given of the Meeting of the Water Committee to be held in the Council Chamber, First Floor, Civic Theatre, 88 Tay Street, Invercargill on Tuesday 3 November 2026 at 9.00 am

Cr G M Dermody (Chair)
Mayor T Campbell
Cr S J Broad
Cr A H Crackett
Cr B R Stewart
Matua M Bain
Mr L Babe

MICHAEL DAY
CHIEF EXECUTIVE

Water Committee - Public

03 November 2026 09:00 AM

Agenda Topic — Page

1. Apologies

2. Declaration of Interest
   a. Members are reminded of the need 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.
   b. Elected members are reminded to update their register of interests as soon as practicable, including amending the register at this meeting if necessary.

3. Public Forum

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5. Water Services Business Unit Project Status Update — 11
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   - 6.2 Appendix 2 - Harrison Grierson: Bluff Wastewater Consent Strategy Report — 27

7. Primary Infrastructure Programme: Alternate Water Supply Project Update-October 2026 — 36
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10. Public Excluded Session

Public Excluded Session

Moved , seconded that the public be excluded from the following parts of the proceedings of this meeting, namely:

a) Minutes of the Public Excluded Session of the Water Committee held on 6 October 2026

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for the passing of this resolution
a) Minutes of the Public Excluded Session of the Water Committee held on 6 October 2026	**Section 7(2)(b) (ii)** Protect information where the making available of the information would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information **Section 7(2)(i)** enable any local authority holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations	**Section 48(1)(a)** That the public conduct of this item would be likely to result in the disclosure of information for which good reason for withholding would exist under Section 7

MINUTES OF WATER COMMITTEE, HELD IN THE COUNCIL CHAMBERS, FIRST FLOOR, CIVIC THEATRE, 88 TAY STREET, INVERCARGILL ON TUESDAY 6 OCTOBER 2026 AT 9.00 AM

Present:
Cr G M Dermody
Mayor T Campbell
Cr S J Broad
Cr A H Crackett
Cr B R Stewart
Matua M Bain, Pou Manawhenua – Waihōpai Rūnaka
Mr L Babe, Independent Member (Teams)

In Attendance:
Mr M Day, Chief Executive
Mrs P Christie, Group Manager – Corporate Services
Mr R Capil, Group Manager – Community Spaces and Places
Mr J Shaw, Group Manager - Consenting and Environment
Mr M Morris, Manager – Governance and Legal
Mr A Strahan, Three Waters Advisor
Mr B Staunton, Chief Financial Officer
Mr R Keen, Manager – 3 Waters Operations
Ms C Wright, Manager – Health, Safety and Wellbeing
Mr A Eng, Team Leader Communications
Ms M Broad, Executive Support

1. Apologies

Nil.

2. Declaration of Interest

Nil.

3. Public Forum

Nil.

4. Minutes of the Water Committee Meeting held on Tuesday 1 September 2026

Moved Mayor Campbell, seconded Cr Broad and **RESOLVED** that the Minutes of the Water Committee meeting held on Tuesday 1 September 2026 be confirmed.

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5. ICC Water Service Business Unit Project - Follow Up on Wastewater and Stormwater Lateral Ownership

Mr Andrew Strahan and Mrs Patricia Christie spoke to the report.

An outline of the issues occurring with ownership was given, noting work done on the laterals and costs being recorded under mains, yet the asset was not Council owned and depreciation not being captured.

In response to a query how much was being spent on lateral renewal it was noted the figures were not available as the lateral renewal was occurring at the same time as mains and cost had been included in that.

In response to figures on page 3 and why looking to raise funds when already in surplus, it was noted currently looking at in isolation, when rates need to be set would be looking at as a whole and when looking at funding across the board it may be lower.

In response to a query on blockages in the laterals, it was indicated in the Bylaw that if a blockage could be traced back conclusively to a property, payment would be sought, in regards to a collapse this would be repaired as it was treated as the Councils own.

In response to a query on the Wynn Williams report and how many properties may require an easement and how this would be funded, it was noted a number of mains in private properties was approximately 10%. Not many mains were in private property and policy was in place to move these to roads. It was clarified laterals were from property boundary to the mains which usually sat under Council land or pathways, within the property boundary was the landowners responsibility and mains were already under Council ownership.

In response to a query regarding liability if laterals connected incorrectly, it was noted would either be changed in the street or at the boundary and on a case by case basis.

In response to a query into research on other councils who had undertaken this work, it was indicated both Christchurch and Wellington had done this.

The Commerce Commission direction over mixed ownership was highlighted and noted Taumata Arowai was standardising ownership. Depending on the position taken it was anticipated the Commerce Commission would take a harder line resulting in this needing to be addressed at some stage. CCOs were already addressing during transition.

Discussion on ownership, and financial details related to decision. Agreement that Council should own laterals, concern of financial implications noted. Change to recommendation raised.

Clarified Reserves had always been operating with net debt accounts and those amounts for 3 Waters were moved over to the Water Services Business Unit, noted small deficit and operating surpluses so debt paid down.

Operating surpluses less breaks, repairs and maintenance would go into Long-term and ensure ability to repay debt. Currently funding laterals with mains renewals so would have greater depreciation funding and less reliance on debt. All would be considered

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along with comments to limit impact as much as possible. Confirmed surplus compounds each year, and running of net debt accounts so less was borrowed.

It was clarified that instances where charges were passed to the end user were very rare and had not been done in some time.

In response to a query when phasing into the Long-term Plan would occur, it was noted to keep in line with the strategy of 100% depreciation it would be in year 1, it was a lever for strategy and for water but need to see what it would look like from 1 July 2027 and various scenarios.

In response to query regarding Commerce Commission phasing on ownership, it was noted where not compliant the need to clarify why not fully funding or deferring depreciation and what steps would be to fund this, outlined information disclosure required. Currently unclear what level the Audit Office would be looking at water for the Long-term Plan.

It was noted that at the Financial Strategy Workshop there was discussion on the maturity of the organisations asset management and what impact this had on funding of depreciation and options on funding of asset replacement. Due to lower maturity in relation to asset maturity advice then was not to do immediately would be over the course of the LTP as better asset information available. Challenge with revalued assets due to do full revaluation of 3 Waters network for 30 June 2027, noting impact of what was happening around the world and value spikes could occur in revaluation and need to fluctuate between 95-100% and modelling would be required.

It was indicated the budget workshops would assist in clarifying the full funding impact, acknowledging ownership transfer and timeframe of 1 July 2027 when first information disclosure to be lodged. 100% of depreciation discussed and year which ownership would be, was noted would need to show on balance sheet from 1 July and analysis against accounting standards. Need to fund for depreciation of the assets irrespective of ownership, having a full view across water services and net impact in terms of charges. Discussion on ownership and deferring depreciation, changing laterals and current funding from mains renewals and need to show the Commerce Commission why not fully funding and when would fund.

It was indicated the Commerce Commission were keen to engage and aware of debates taking place. Their Asset Management had done a roadshow to councils and this had been conveyed to their help desk 2-3 weeks ago and still awaiting a response. Recommended that it be included in the Water Services Strategy/Long-term Plan with funding options so assets were in and what options would look like without depreciation, 50% and 100% and options and could be stress tested.

Moved Mayor Campbell, seconded Cr Stewart and **RESOLVED** that the Water Committee:

1. Receives the report "ICC Water Service Business Unit Project - Follow Up on Wastewater and Stormwater Lateral Ownership".

2. Notes that ICC already undertakes much of the repair and renewal of these laterals and that private ownership does not, on its own, determine their accounting recognition or remove the need to plan for their depreciation.

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Recommends to Council

3. That it includes in the Water Services Strategy / Long-term Plan Council formalising ownership of wastewater and stormwater laterals between the property boundary and the public main under section 462 of the Local Government Act 1974, following the required public notice and final asset identification.

6. ICC Water Services Business Unit Project Status Update

Mr Andrew Strahan took report as read and highlighted progress on the strategic and asset plans which had all been drafted, currently with project teams and on track to bring documents to 3 November Water Committee meeting.

Community Access to Drinking Water approximately 60 organisations supplying non reticulated water, draft stakeholder letter attached outlines their responsibility to work with Taumata Arowai and safety plans that may be required.

Trade Waste Discharge Plan was being redrafted. Existing Trade Waste Bylaw noted legislative requirement to have a trade waste discharge plan under this and consultation to occur end at the end of the Long-term Plan period and in place by August 2027.

It was noted the Water Services Business Unit was structurally in place ready for 1 July 2027 and active recruitment was underway for vacant roles.

In response to organisational structure, it was noted that would be brought back to the wider Council, regarding the internal business structure and recent Council alignment.

Concern raised that Taumata Arowai may not have local knowledge to assist, it was clarified discussions had taken place and Taumata Arowai would be first point of contact due to specialist skillset to assess suppliers and form recommendations. They also had a list of approved solutions on their website which was continually updated.

Moved Mayor Campbell, seconded Cr Stewart and **RESOLVED** that the Water Committee:

1. Receives the report "ICC Water Services Business Unit Project Status Update".

2. Notes the programme status and scope summary provided in the Project Dashboard at Attachment and the project milestones at Attachment 2.

3. Notes that the Strategic Asset Management Plan and three technical Asset Management Plans have been delivered in draft and are under review.

4. Notes the planned October and November 2026 delivery of the Community Assessment of Drinking Water engagement plan, supported by the draft customer communication at Attachment 3.

5. Notes that consultation on the Trade Waste Discharge Plan and associated water-services bylaw changes is planned for Q1 of 2027.

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6. Request the Chief Executive provide a report to Council outlining the organisational structure to support the Water Services.

7. 3 Waters Operational Performance – August 2026

Mr Keen spoke to the report. Noted Branxholme flow graph spike in March due to transformer replacement and no water out the day before. Health and Safety had been added to the report and going forward this would be included on a monthly basis.

In response to request for clarification on contractor events being captured, it was noted the dashboard covered the whole organisation, with the Council realignment from September going forward it would just be 3 Waters and ESG including contractors. Active engagement with ICC teams and contractors was taking place to ensure any incidences or near misses captured and any trends would be highlighted. Noted work underway to improve reporting from near miss through to critical risk across all Council functions.

In response to a query on the earthquake damage to the Bluff outflow, it was noted failure occurred in a 9 metre section of pipe. Contractors had been delayed however was back to normal operation within the week, acknowledged functions at the plant had been altered so flow was on the high tide and Environment Southland had been satisfied with this. A non-compliance notice from Environment Southland was received as the consent notes the structure not the pipe and there was a section of blue PE pipe in place. Still working to get structure into place noting delays caused by weather.

In response to how information was gathered, it was noted this was from the Scada system and rainfall data obtained from the Environment Southland site at the Waihopai and capital works from reporting structures.

Moved Cr Stewart, seconded Cr Broad and **RESOLVED** that the Water Committee:

1. Receives the report "3 Waters Operational Performance – August 2026".

8. Public Excluded Session

Moved Cr Stewart, seconded Cr Crackett and **RESOLVED** that the public be excluded from the following parts of the proceedings of this meeting, namely:

a. Minutes of the Public Excluded Session of the Water Committee held on 1 September 2026

b. Branxholme Duplicate Pump Station

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under Section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

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General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for the passing of this resolution
a. Minutes of the Public Excluded Session of the Water Committee held on 1 September 2026	**Section 7(2)(b)(ii)** Protect information where the making available of the information would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information **Section 7(2)(i)** enable any local authority holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations	**Section 48(1)(a)** That the public conduct of this item would be likely to result in the disclosure of information for which good reason for withholding would exist under Section 7
b. Branxholme Duplicate Pump Station	**Section 7(2)(b)(ii)** Protect information where the making available of the information would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information **Section 7(2)(i)** enable any local authority holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations	**Section 48(1)(a)** That the public conduct of this item would be likely to result in the disclosure of information for which good reason for withholding would exist under Section 7

There being no further business, the meeting finished at 11.15 am.

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Version: 9, Version Date: 21/10/2026

WATER SERVICE BUSINESS UNIT PROJECT STATUS UPDATE

To:	Water Committee
Meeting Date:	Tuesday 3 November 2026
From:	Andrew Strahan, Three Waters Advisor
Approved:	Matt Keil, General Manager - Water Services
Approved Date:	Wednesday 14 October 2026
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

To update the Water Committee on progress with the Water Service Business Unit programme, including key upcoming milestones and quarterly reporting requirements against Council's Water Services Delivery Plan.

Recommendations

That the Water Committee:

1. Receives the report "Water Services Business Unit Project Status Update".

2. Notes the Project Dashboard at Attachment 1 and updated milestone plan at Attachment 2.

3. Notes progress with the following legislative reporting outlining:
   a. Water Services Strategy (WSS),
   b. Investment Delivery Plan (IDP),
   c. Strategic Asset Management Plan (SAMP),
   d. Asset Management Plans (AMP)

   Works are inclusive of financial inputs being developed through the October 2026 and November 2026 budgeting workshops.

4. Notes that Community Access to Drinking Water engagement consultation is underway with affected private self-suppliers.

5. Notes that consultation on the Trade Waste Discharge Plan and associated water-services bylaw changes is planned for Q1 2027.

6. Notes the updated DIA quarterly status report at Attachment 3.

Document Set ID: 11305805
Version: 15, Version Date: 29/10/2026

Background

On 6 October 2026, the Water Committee received a project status report and noted progress with the draft asset-management plans, the planned drinking water engagement and the proposed Trade Waste Discharge Plan and bylaw consultation programme.

The Committee also requested a report from the Chief Executive outlining the organisational structure supporting the Water Services Unit.

This report updates the Committee on subsequent progress and the immediate delivery priorities.

Issues

Project Status

Overall project transition status remains Green. Scope remains stable through to 31 December 2026. Delivery is focused on the suite of Water Service Strategy and supporting Asset Management documentation, Community Assessment of Drinking Water engagement, Information Disclosure readiness, and the planning required for the Trade Waste Discharge Plan and water-services bylaw reviews, this is a large extensive suite of work that is requiring input from many areas of our organisation, which has been challenging given competing priorities.

Attachment 1 provides the dashboard and scope summary to the end of December. Attachment 2 provides the supporting milestone report extracted from Planner, including current owners, dates, dependencies and delivery status.

Key matters to note

Water Services Strategy Asset Planning and Investment Delivery

Our contracted Consultant-Stantec is incorporating ICC review feedback into the Water Services Strategy, Investment Delivery Plan, Strategic Asset Management Plan and drinking water, wastewater and stormwater Asset Management Plans.

A separate report has been prepared to present the draft documents to the 3 November Water Committee. This provides an opportunity for feedback on their direction, intent and content and nominates the process to engage with the community, secure and consider feedback, and finalise for submission by 1 July 2027.

The October and November 2026 budgeting workshops will inform financial forecasts, affordability, funding, investment priorities and delivery sequencing. Finance inputs are particularly important to Water Services Strategy and the Investment and Delivery Plan, with consequential updates required across the supporting plans.

Community Assessment of Drinking Water Engagement

Community Access to Drinking Water stakeholder engagement is underway and on-track.

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Trade Waste Discharge Plan and Bylaw Reviews

Drafting and review of the Trade Waste Discharge Plan and associated water-services bylaws are progressing through the remainder of 2026. Approval to consult is planned for early 2027, with community consultation planned for March and April 2027. The review will also account for consequential changes arising from the proposed wastewater and stormwater lateral ownership arrangements.

Wastewater and Stormwater Laterals

On 6 October, the Water Committee recommended that Council formalise legal ownership of wastewater and stormwater laterals between the property boundary and the public main, following the required public notice and final asset identification. This will be progressed through the Water Services Strategy and Long-term Plan, which also aligns with the expectation from the Commerce Commission of Water Service providers.

The approach to financial management, including accounting treatment, depreciation funding and associated rates impacts, will be considered through the October and November budgeting workshops. This will enable consideration of the full range of budget options and implications alongside wider water-services investment priorities, affordability and funding requirements.

DIA Quarterly Status Update

The updated DIA quarterly status report is included at Attachment 3. It records progress against ICC's Water Services Delivery Plan, changes to delivery timing and priorities for the next reporting period.

Implications and Risks

Strategic Consistency

The programme remains aligned with the approved Water Services Delivery Plan and Local Water Done Well framework.

Financial Implications

As of month end September 2026, $657,000 actual versus $1,134,000 budget (favourable $477,000). Approval of ICC Claim ($420,000) against Ministry for Cities, Environment, Regions and Transport (MCERT) Better Off Funding has progressed through the review process and has been approved.

Legal Implications

The principal legal requirements during this phase relate to preparation and consultation on the Trade Waste Discharge Plan, review of Council's water-services bylaws, compliance with Commerce Commission Information Disclosure requirements, and the statutory process for any change to wastewater and stormwater lateral ownership.

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Risk

Risk	Mitigation
Strategic and asset-planning outputs do not provide timely or sufficiently developed inputs to the Financial Strategy and Long-term Plan.	Maintain the integrated Planner schedule, manage review deadlines closely, and escalate dependencies or decisions through the Project Steering Group and Water Committee.
Internal review capacity delays finalisation of the Strategic Asset Management Plan and technical Asset Management Plans.	Confirm named reviewers and due dates, consolidate comments through a single review process, and prioritise feedback that affects strategy, investment or regulatory delivery.
Community Assessment of Drinking Water engagement does not reach affected customers or identify practical implementation needs.	Deliver the approved engagement plan during October and November, use targeted customer communication, and record feedback and follow-up actions.
Trade Waste Discharge Plan and bylaw review activity is delayed by the Long-term Plan programme.	Complete drafting and specialist inputs ahead of consultation, maintain the defined post-LTP timetable, and actively manage statutory decision points through to August 2027.
Legal, financial or operational uncertainty regarding wastewater and stormwater laterals delays a decision	Complete the option analysis using the valuation, legal advice and operational assessment, with Project Steering Group review in August and Water Committee consideration in September 2026.
Future structural reform arising from the Southland amalgamation proposal may affect the operating model	Monitor the amalgamation process and provide early advice on any implications for the WSDP and Water Services Business Unit.

Next Steps

Over the next reporting period, the project will focus on:

- Incorporate October and November budgeting outcomes into the WSS, IDP and supporting plans.
- Progress document assurance in preparation for audit and consultation approvals.
- Continue information disclosure preparation and CADW engagement.
- Progress the Trade Waste Discharge Plan and bylaw review for Q1 2027 consultation.

Attachments

1. Project Dashboard (11305800)

2. Project Milestone Plan (11305799)

3. DIA Quarterly Status Update (11305919)

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Version: 15, Version Date: 29/10/2026

Status Report

Project: Water Services Business Unit

10/28/2026 11:06:28 AM
Last Refresh

Total Budget	Total Forecast	Total Actual	Forecast to Complete	Overdue Tasks	Active Risks	Active Issues	Active Changes
$1.8M	$1.8M	$956.9K	$835.8K	4	14	0	0

Link	Report Date	Project Manager	Phase	Overall	Time	Cost	Scope	Start	Finish	Progress
	10/14/2026	Andrew Strahan	(3) Delivery					12/1/2025	6/30/2027	69%

Overall Comments	Additional Comments
Overall status remains Green. Scope and budget remain stable. Water Strategy and supporting Investment Delivery Plan, Strategic Asset Mgt Plan and Asset Management Plans (x3) drafted and ready for Water Committee review	Focus moved to bylaw reviews, tradewaste plan and June 2027 Information Disclosure readiness. Engaging with other Councils with internal Water Service Business Units. Investigating synergies in progressing stormwater service agreements (per Sec 211 Local Government (Water Services) Act 2025).

Completed Milestones

Milestone	Finish	Baseline Finish	Variance
WSDP - Water Services Business Unit in Place	9/30/2026		
Testing Complete	6/30/2026		
Pathway Config Complete	5/22/2026		

Accomplished Activities	Planned Activities
WSBU organisational transition completed. Water Committee recommendation secured to formalise WW / SW laterals ICC ownership Draft WSS, IDP SAMP and AMPs review completed and to submit to 3 Nov Water Committee for review Procurement for Water Service Valuation Service Provider commenced MCERT Quarterly Status drafted and to be submitted 30/10/26	Complete LTP and WSS Budgeting Workshops - update outcomes to WSS, IDP, SAMP & AMPS Finalise WSS, SAMP, AMPs and IDP for Water Committee Decision to proceed with Audit. Deliver CADW engagement Oct-Nov. Complete Trade Waste and bylaw drafting by December 26.

Upcoming Milestones

Milestone	Finish	Baseline Finish	Variance
Water Com. - Review Draft WSS / SAMP / IDP ...	11/3/2026		
CADW Stakeholder Engagement Completed	11/23/2026		
Council Meeting - Adopt LTP / WSS - for audit	11/24/2026		
Dec Water Committee Meeting - Adopt LTP / ...	12/1/2026		
Dec Council Meeting - Adopt LTP / WSS - for ...	12/22/2026		

Invercargill CITY COUNCIL

Status Detail

Project

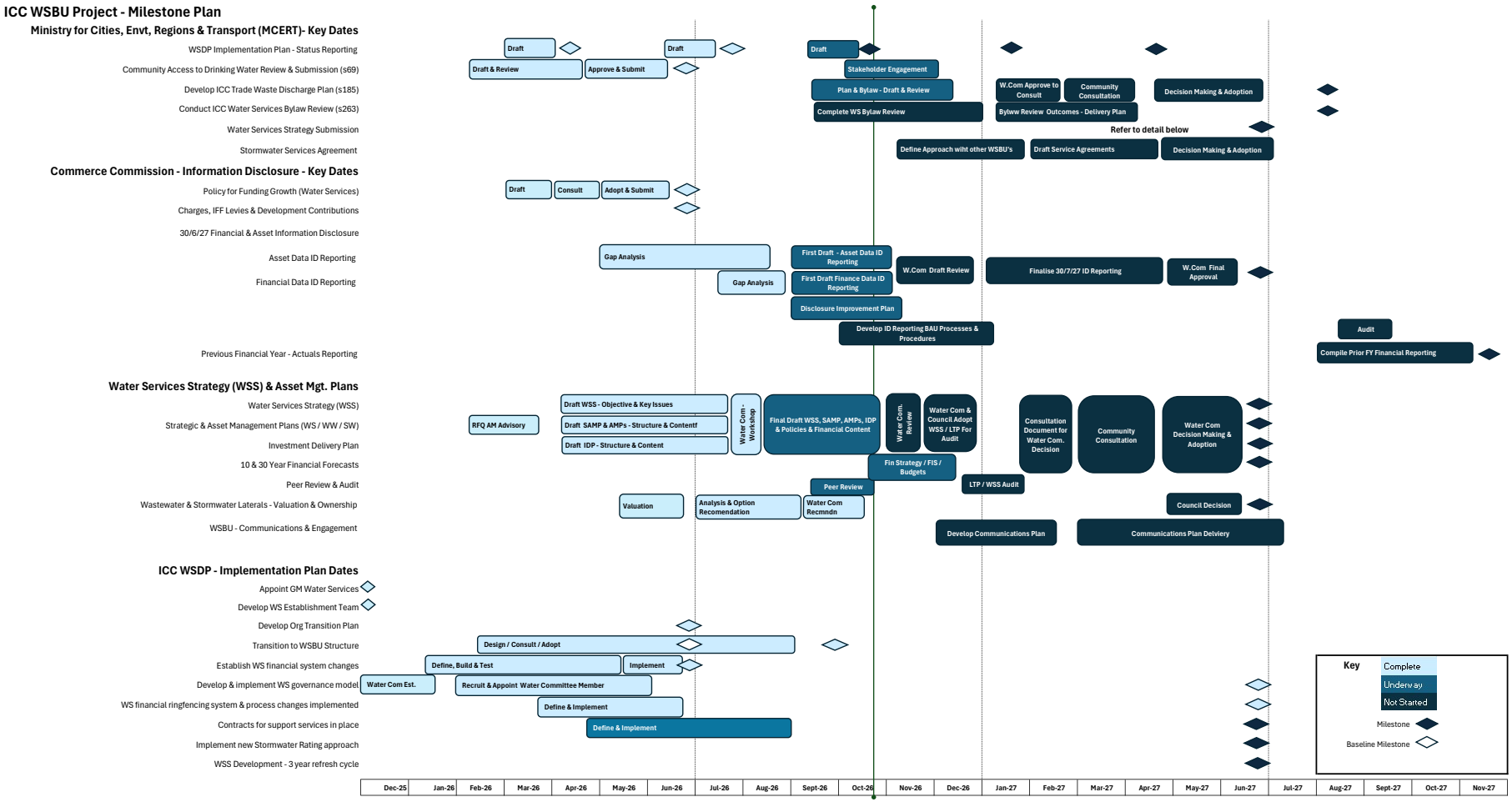
Water Services Business Unit

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Last Refresh

Total Budget	Total Forecast	Total Actual	Forecast to Complete	Overdue Tasks	Active Risks	Active Issues	Active Changes
$1.8M	$1.8M	$956.9K	$835.8K	4	14	0	0

Status	Indicator	Commentary
	Overall	Overall status remains Green. Scope and budget remain stable. Water Strategy and supporting Investment Delivery Plan, Strategic Asset Mgt Plan and Asset Management Plans (x3) drafted and ready for Water Committee review
	Benefit	- Demonstrable financial sustainability - Improve transparency and regulatory confidence - Strengthen asset planning and long-term investment discipline - Position ICC to meet Commerce Commission and Taumata Arowai regulatory and legislative requirements
	Cost	As of end Aug. 2026, $950k actual. Re-forecasted budget removes unused contingency and FY25/26 underspend.
	Time	WSS and IDP on watch given dependencies with ICC Financial Strategy. Otherwise on track for 30 June 2027 milestones. Asset Management Maturity Assessment to be scheduled post Asset Management System implementation.
	Scope	Stormwater/wastewater lateral decision made to formalise ICC ownership. Complete ID gap analysis and develop prioritised plan to resolve process/data/capability gaps. Management Reporting requirements scoping underway

Status	Indicator	Commentary
	Resource	Transition to approved WSBU organisational structure is complete. Placeholders for WSBU Management Reporting enhancements. Asset Management Maturity Assessment supplier proposals received.
	Health Safety and Environmental	No health, safety or environmental incidents to report.
	Stakeholder	Third Quarterly Report to MCERT in draft for end Oct 26 submission. Water Committee direction provided to present a Customer Engagement Plan to support establishment of the WSBU through to 1 July 2027.
	Quality	Quality focus is to achieve defensible regulatory alignment. Independent legal and specialist input embedded to ensure compliance robustness.
	Risk Issue	ICC Enterprise Risk Log updated with CADW and WSDP outcomes. Better Off Funding Claim approved - related issue closed.


ICC WSBU Project - Milestone Plan
Ministry for Cities, Envt, Regions & Transport (MCERT)- Key Dates
WSDP Implementation Plan - Status Reporting
Community Access to Drinking Water Review & Submission (s69)
Develop ICC Trade Waste Discharge Plan (s185)
Conduct ICC Water Services Bylaw Review (s263)
Water Services Strategy Submission
Stormwater Services Agreement
Commerce Commission - Information Disclosure - Key Dates
Policy for Funding Growth (Water Services)
Charges, IFF Levies & Development Contributions
30/6/27 Financial & Asset Information Disclosure
Asset Data ID Reporting
Financial Data ID Reporting
Previous Financial Year - Actuals Reporting
Water Services Strategy (WSS) & Asset Mgt. Plans
Water Services Strategy (WSS)
Strategic & Asset Management Plans (WS / WW / SW)
Investment Delivery Plan
10 & 30 Year Financial Forecasts
Peer Review & Audit
Wastewater & Stormwater Laterals - Valuation & Ownership
WSBU - Communications & Engagement
ICC WSDP - Implementation Plan Dates
Appoint GM Water Services
Develop WS Establishment Team
Develop Org Transition Plan
Transition to WSBU Structure
Establish WS financial system changes
Develop & implement WS governance model
WS financial ringfencing system & process changes implemented
Contracts for support services in place
Implement new Stormwater Rating approach
WSS Development - 3 year refresh cycle
Draft
Draft & Review
Approve & Submit
Draft
Draft
Stakeholder Engagement
Plan & Bylaw - Draft & Review
Complete WS Bylaw Review
W.Com Approve to Consult
Community Consultation
Bylww Review Outcomes - Delivery Plan
Decision Making & Adoption
Refer to detail below
Define Approach wiht other WSBU's
Draft Service Agreements
Decision Making & Adoption
Draft
Consult
Adopt & Submit
Gap Analysis
Gap Analysis
First Draft - Asset Data ID Reporting
First Draft Finance Data ID Reporting
Disclosure Improvement Plan
W.Com Draft Review
Finalise 30/7/27 ID Reporting
W.Com Final Approval
Develop ID Reporting BAU Processes & Procedures
Audit
Compile Prior FY Financial Reporting
Draft WSS - Objective & Key Issues
RFQ AM Advisory
Draft SAMP & AMPs - Structure & Contentf
Draft IDP - Structure & Content
Water Com - Workshop
Final Draft WSS, SAMP, AMPs, IDP & Policies & Financial Content
Water Com. Review
Water Com & Council Adopt WSS / LTP For Audit
Consultation Document for Water Com. Decision
Community Consultation
Water Com Decision Making & Adoption
Fin Strategy / FIS / Budgets
LTP / WSS Audit
Peer Review
Valuation
Analysis & Option Recomendation
Water Com Recmndn
Council Decision
Develop Communications Plan
Communications Plan Delviery
Design / Consult / Adopt
Define, Build & Test
Implement
Water Com Est.
Recruit & Appoint Water Committee Member
Define & Implement
Define & Implement
Key
Complete
Underway
Not Started
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Baseline Milestone
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Sensitivity: General

Quarterly monitoring report - water services delivery plan

In-House Business Unit

Invercargill City Council

Reporting for the period – 1 July to 30 September 2026

Submitted – October 2026

Document Set ID: 11305919
Version: 2, Version Date: 28/10/2026

Sensitivity: General

Part A: Progress updates

Quarterly reporting period: 1 April to 30 June 2026

Activity / milestone / deliverable	Expected completion date	On track to meet timeframe? (Yes/No)	Issues, risks and mitigations (if any)
Appoint General Manager Water Services.	31 December 2025	Completed	
Develop the Water Services establishment team (including but not limited to financial, regulatory and people advisory).	31 December 2025	Completed	
Develop Organisational Transition Plan.	30 June 2026	Completed	
Develop and transition to Internal Water Service Business Unit Structure (including staff transition).	~~30 June 2026~~ 30 Sept. 2026	Completed	
Establish Water Services Financial system within ICC Financial Group to treat the WSE in the same manner as our existing Council Controlled Organisations (CCO's).	30 June 2026	Completed	**Note:** As noted in previous monitoring report, ICC has adopted a revised approach to retain the WSBU within the existing ICC Finance System (rather than setup a separate entity per other ICC CCO's). Financial ringfencing requirements will be achieved through this approach. A future option remains to adopt a separate WSBU financial entity within the ICC finance system, once supporting system Land and Rating modules are implemented.
Develop and Implement Water Services governance framework.	30 June 2027	Yes	**No material risks or issues to highlight**
Water Services financial ringfencing system and process changes implemented.	30 June 2027	Yes	**No material risks or issues to highlight.**
Contracts for Support Services with Council and other entities in place.	30 June 2027	Yes	**No material risks or issues to highlight.**

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Implement new Stormwater Rate approach to transition from current part general rate funding.	30 June 2027	Yes	**No material risks or issues to highlight.**
Development of Water Services Strategy (WSS) (3-year refresh cycle) independent of the ICC Long-term Plan.	30 June 2027	Yes	**Issue** – ICC does not have sufficient in-house asset management resources to develop the Water Service Strategy, Strategic and Asset Management Plans to the required standard and in the time available. **Mitigation** External supplier appointed to augment ICC resources. Scope defined and progressing to plan.
Water Services Investment Update	N/a	N/a	For the 2026/2027 financial year, the Water Services capital programme has lowered from $37 million to $31 million in total for Water, Sewerage and stormwater services. The movement relates to the Mersey Street pipeline duplication project which was rephased to align with revised planned timeline. The capital programme will continue to be reviewed as part of the Water Services planning process.

Expected activity in next quarter: October to December 2026

Milestone / deliverable	Expected activity
Develop and Implement Water Services governance framework.	• Continue to support Water Service Committee Governance requirements, in particular, delivery of Water Service Strategy (WSS) and supporting Strategic Asset Management Plan (SAMP) strategic objectives, Trade Waste Plan Development and Water Service Bylaw Reviews.
Contracts for Support Services with Council and other entities in place.	• Finalise service agreements across ICC to support implementation of financial ring-fencing changes.
Implement new Stormwater Rate approach to transition from current part general rate funding.	• Finalise content and conduct Council Long Term Plan and Water Service Strategy workshops.
Development of Water Services Strategy (WSS) (3-year refresh cycle) independent of the ICC Long-term Plan.	• Progress Water Service Strategy, Investment & Delivery Plan, Strategic Asset Management Plan and Asset Management Plan reviews – and budget decision making, in preparation for public consultation, • Finalise Commerce Commission ID requirements prioritised gap delivery plan.

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Part B: Additional monitoring information – items noted in letters of acceptance

Items noted in letters of acceptance	Progress update
N/a - No items noted in the ICC letter of acceptance	***N/a - No items noted in the ICC letter of acceptance***

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PRIMARY INFRASTRUCTURE PROGRAMME - BLUFF WASTEWATER CONSENT

To:	Water Committee
Meeting Date:	Tuesday 3 November 2026
From:	Alistair Snow, Contractor – Senior Project Manager
Approved:	Matt Keil, General Manager - Water Services
Approved Date:	Thursday 15 October 2026
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

This report has been prepared to provide the Water Committee with an update of the progress to date surrounding the Bluff Wastewater Consenting Project.

Wastewater Environmental Protection Standards (WEPS), has extended the expiry date for existing consents relating to Wastewater Treatment Plants (WwTPs) to 27 August 2028, Council now needs to select its preferred long-term wastewater option and lodge a WEPS-compliant replacement application by 27 February 2028. The application must address the WEPS assessments, applicable Southland planning provisions, cumulative effects and cultural effects.

A consenting strategy is developed and requires the selection of a preferred long-term wastewater treatment and discharge option, and to apply that option within a WEPS-compliant application for the treated of wastewater discharge and occupation of the Coastal Marine Area (CMA) located by the outfall pipeline. Those two permits (and any others specific to the preferred option) identified will be sought together as a single wastewater permit package under the Natural Environment Act. A clear understanding of the consent process risks (notified vs non notified) is required to inform Council of the preferred option selection.

Project establishment is well advanced with procurement of key technical and planning support completed. Technical assessment to better understand the WEPS characterisation of the receiving environment is underway and once established will support in the selection of the preferred option.

Mana whenua consultation has commenced with the likely requirement of a Cultural Impact Statement required to support any application.

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Recommendations

That the Water Committee:

1. Receives the report "Primary Infrastructure Programme - Bluff Wastewater Consent"

Background

In June 2025, Council lodged a short-term, like-for-like replacement application for the Bluff WwTP consents. The application was intended to maintain lawful operation of the existing system while the future local water services framework and the WEPS were being developed. It was supported by technical, planning and engagement work, including engagement with Te Rūnaka o Awarua, Te Rūnaka o Waihopai and Te Ao Mārama, and an options process undertaken through the project working group from 2023.

The regulatory position changed materially after the application was lodged. The local government water services reforms introduced a new national framework for municipal wastewater discharges, including the WEPS. This changed the requirements that a replacement application must address and meant that the 2025 application could not be progressed to secure the necessary authorisation. The WEPS also extended the expiry date for existing consents related to WwTPs to 27 August 2028, removing the immediate need to progress the short-term application. Therefore, Environment Southland withdrew the 2025 application in April 2026.

Regulatory Framework

The Natural Environment act 2026 is now enacted, and under transitional provisions the discharge of treated wastewater and the occupation and use of the CMA would require natural resource permits. The Act also provides for the relationship between wastewater environmental performance standards (WEPS), national rules, natural resource permits and plans.

The application will need to address and acknowledge its Treaty provisions, applicable settlement redress, Te Tangi a Tauira and interests under the Marine and Coastal Area (Takutai Moana) Act 2011. Engagement with Te Rūnaka o Awarua, Te Rūnaka o Waihōpai and Te Ao Mārama should continue early enough to inform option selection, the effects assessment and proposed permit conditions. TAMI as previously consulted have confirmed the requirement of a connection with Papatuanuku in the form of a land based cultural treatment.

A permit will also be required for works to extend the outfall pipeline and, if the constructed overland flow option is selected, additional permits may be required for earthworks, discharges, water takes or diversions, and effects on overland flow or other protected areas.

Consenting Pathway Assessment

The WEPS compliant application will consider the quality of the treated wastewater and whether it meets the standard for the relevant discharge environment. On the information available, the existing discharge would not meet the applicable low-energy coastal environment standard. Compliance would therefore require either improved treatment (to meet the low energy standard) or discharge to a high energy coastal environment, which the current plant performance can meet.

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Three options will consider (refer below); Options 1 and 2 provide for an extended pipeline outfall to a high energy discharge environment and option three is improved treatment to achieve the existing low energy coastal standard.

Option 1: Extended outfall

Option 1 would retain the existing treatment and extend the outfall, so the discharge reaches at least a high-energy coastal receiving environment. This is likely to have the lower capital cost, but in 2025 it was not supported by Mana Whenua. If that opposition remains, the application is more likely to be notified and proceed to a hearing, with associated delay, cost, relationship and consent risk. ICC would need strong evidence that the discharge meets the WEPS, applicable environmental limits and cultural and coastal requirements, and those adverse effects are acceptable.

Option 2: Constructed overland flow and extended outfall

Option 2 would add a constructed land based cultural treatment before a discharge through an extended outfall to at least a high-energy coastal receiving environment and impose additional capital and operating costs on the community but is more likely to receive iwi support and may reduce notification, hearing and appeal risk. ICC will need to confirm that the environmental and cultural benefits are proportionate to the whole-of-life cost and that the overland flow can perform reliably under Bluff's hydraulic, climatic and operational conditions.

Option 3: Enhanced treatment performance

The existing flows and outfall are assessed to discharge to a low energy coastal environment. To discharge to this location would require treatment improvements to enable the standard to be met. Option assessments from the previous application will inform the preferred option assessment.

Issues

Legal and Regulatory Risks

- The Natural Environment Act, transitional provisions, national rules and WEPS requirements may change before lodgement. Activity status, information requirements and continuation arrangements must therefore be confirmed once the final legislation and instruments are in force.
- Policy Guidance on Cost Effective Framework under the Local Government (Water Services) Act 2025, S17.
- On-going legal assessment of "Cost Effectiveness" issue for Bluff.
- Commerce Commissions Regulatory Role on a particular option.

Options and Cultural Risks

A direct discharge to the CMA through an extended outfall may carry a higher risk of Mana Whenua opposition, notification, hearing and appeal. Option 2 may be more likely to receive Mana Whenua support but requires ICC to justify its additional cost and demonstrate that the land based cultural treatment will deliver reliable environmental and cultural benefits. Option 3 their technical performance and whole-of-life cost comparison.

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Technical and Environmental Risks

ES can consider wider impacts on human health (including from shellfish gathering and recreation) under the New Zealand Coastal Policy Statement 2010 and the Coastal Plan for Southland. Clarification will be sought from ES during pre-application engagement as to whether additional technical assessment is needed to support an assessment of effects on human health.

Financial and Programme Risks

Options 2 and 3 may place a greater capital and operating expense on the Bluff community, while Option 1 may incur greater overall consenting and hearing costs. Delay in selecting an option, completing investigations or adequately engaging with Mana Whenua could risk Lodgement by 27 February 2028 and reduce the time available before the existing consents expire.

Next Steps

1. Continue technical assessments, cultural impact engagement and consultation to support option selection with both TAMI and Environment Southland.

2. Assess and prepare preferred option/s, risks and business case for Council consideration and decision.

3. Provide water committee with regular project updates.

Attachments

1. Dashboard Report Bluff Wastewater Consent – September (11307114)

2. Harrison Grierson: Bluff Wastewater Consent Strategy Report (11307120)

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Bluff Wastewater Consent PCG - September 2026

Project:	Bluff Wastewater Consent	Project Code:	100875	Report to:	Matt Keil	Project Manager:	Alistair Snow
Project Pha	Consent			PMO Manager:	Bruce Goodger	Sponsor:	Russell Keen

PROJECTS STATUS

PROJECT HEALTH STATUS: (1 = Green (OK), 2 = Amber (WATCH), 3 = Red (ESCALATE))

		Previous	Current	DESCRIPTION
1	Schedule			Revised Programme to be drafted
2	Financials			LTP review in progress
3	Scope			Planning Strategy drafting in progress Update Strategic Case to commence
4	Resources			Hydrodynamic Modelling tender closed, selection this week Waiver approved
5	Issues			NTR
6	Risks			NTR
7	Dependencies			NTR
8	Quality			NTR
9	Stakeholder			Iwi consultation on-going
10	Benefits			NTR
11	Health & Safety			NTR
OVERALL				On boarding is nearing completion, updating the strategic business case is to commence and reporting of planning strategy due in the coming week. The Hydrodynamic Modelling expertise is being procured with initial discussions with Iwi on-going.

Item	Amount	Notes
Project Budget (incl. contingency)	$ -	
Budget (incl. contingency)		
Commitments	$ 21,630.00	
Spend to date	$ 42,414.00	
Original contingency allowance	$ -	
Remaining contingency	$ -	
Estimate to completion	$ -	
Variance (ETC less budget)	$ -	

Key messages:
Strategic planning and framework has been on going, engagement with Iwi, environment southland and Taumata Arowai. Procurment of key resources has commenced and when engaged consenting strategy and WEPS criteria investigations to commence.

PSG COMMENTARY

Key Achievements:
*** On going engagement with ES and Taumata Arawai**
***Planning Strategy Report due next week**
*** Hydrodynamic modelling experts tender asseement to be concluded this week.**
***To develop onboarding documents, programme, risk register**

ESCALATIONS / DECISIONS

ID #	DATE RAISED	DESCRIPTION	ACTION (Include decision paper reference)	OWNER	STATUS / OUTCOME
1					
2					
3					

KEY PROJECT RISKS WATCH-LIST

ID #	RAG STATUS	DESCRIPTION	ACTION / MITIGATION
1		Timely lodgement of consent: WSA extension to August 2028, lodgement by Feb 2028.	Prepare programme / consenting strategy
2		Stakeholder and Partner Engagement.	Community Engagement and Partnering and key stakeholder engagment on-going.
4		Informed ELT, Infrastructure Committee, Governance Group	Regular reporting, Gateway decisions / notification to be identified.
5		Informed decision making on cost effective solution	Define Investment process and regulatory environement
6		Compliance with WSA & LGA	Business Case and Consenting Strategy development

ISSUES WATCH-LIST

ID #	RAG STATUS		DESCRIPTION	ACTION / MITIGATION	DATE RAISED	DATE CLOSED
1	Scope		Confirm WEPS consenting strategy, and investment process	Develop business case , strategy & methodology	13/02/2026	

Schedule Commentary

ID #	DESCRIPTION	START DATE	BASELINE CLOSE DATE	ACTUAL CLOSE DATE	RAG STATUS
1	Strategic Business Case - revised - Programme to be developed	1/01/2026			

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Version: 1, Version Date: 15/10/2026

Bluff Wastewater Consent Strategy

Bluff Wastewater Treatment Plant

Invercargill City Council

Date: 15 October 2026 **HG Project:** A2314086.01

1.0 Executive Summary

Invercargill City Council (ICC) currently holds coastal discharge and coastal occupation consents for the Bluff Wastewater Treatment Plant (WwTP) The discharge consent authorises the discharge of treated wastewater to the coastal marine area (CMA), and the occupation consent authorises the outfall pipeline at Ocean Beach, Bluff. Those consents were originally due to expire before the end of 2025.

In 2025, ICC lodged a short-term replacement application to enable the lawful operation of the Bluff WwTP and while the Local Government water services reforms and Wastewater Environmental Performance Standards (WEPS) were being developed. That application was deliberately framed as an interim, like-for-like consent, rather than as the long-term solution for Bluff wastewater. A statutory extension of the consent expiry to 27 August 2028 removed the urgency to pursue the 2025 application to a decision. The WEPS requires that new wastewater discharge consent applications demonstrate compliance with the regulations. The lodged application was subsequently withdrawn in April 2026.

The strategic decision is therefore which long-term wastewater option ICC should advance under the new framework. To achieve WEPS compliance three options are considered: to retain the existing treatment process and extend the outfall to a qualifying high-energy coastal receiving environment; add land-based treatment before discharge through an extended outfall; or improve treatment performance sufficiently to meet the WEPS for the existing outfall to a low-energy coastal receiving environment.

The extended-outfall-only option is likely to have the lower capital cost, but carries greater cultural, notification, hearing and appeal risk because we understand that it is not supported by iwi. The land-based treatment option has higher capital and operating costs and additional technical requirements but is more likely to receive mana whenua support and reduce consenting risk.

The preferred option will form the proposal in a bundled WEPS-compliant natural resource permit package. The application can build on the 2025 technical, planning and engagement work and will need to include verification of the current treatment performance, confirmation that the proposed discharge location qualifies as a high-energy coastal environment; assesses dilution, dispersion, shellfish and human-health effects through modelling and quantitative microbial risk assessment (QMRA); and, if relevant, confirm the land-based treatment concept, performance, constructability and whole-of-life cost.

Engagement with mana whenua, Environment Southland, public health agencies, the Bluff community and industry should continue throughout option selection and application development. A complete application should be lodged before 27 February 2028 to allow the existing consents to continue to be exercised during the processing of the application in accordance with Section 124 of the RMA.

Auckland
Level 4, 96 St Georges Bay Road
Parnell, Auckland 1052

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2.0 Background and Context

The Bluff WwTP at 53 McGorlick Street treats residential, commercial and industrial wastewater from Bluff, including flows from seafood processing and related commercial activities. Treated wastewater is discharged through the Ocean Beach outfall to the coastal waters of Foveaux Strait.

ICC holds two coastal consents for the WwTP. AUTH-98236 authorises the discharge of up to 3,850 m³/day of treated wastewater to the CMA, and AUTH-99062 authorises occupation of that area by the outfall pipeline. Continued authorisation of these activities is necessary to maintain public health, community wellbeing and local economic activity.

2.1 Replacement Application and Subsequent Legislative Change

In June 2025, ICC lodged a short-term, like-for-like replacement application for the Bluff WwTP consents. The application was intended to maintain lawful operation of the existing system while the future local water services framework and the WEPS were being developed. It was supported by technical, planning and engagement work, including engagement with Te Rūnaka o Awarua, Te Rūnaka o Waihopai and Te Ao Mārama, and an options process undertaken through the project working group from 2023.

The regulatory position changed materially after the application was lodged. The local government water services reforms introduced a new national framework for municipal wastewater discharges, including the WEPS. This changed the requirements that a replacement application must address and meant that the 2025 application could not be progressed to secure the necessary authorisation. The WEPS also extended the expiry date for extant consents related to WwTPs to 27 August 2028, removing the immediate need to progress the short-term application. Therefore, Environment Southland withdrew the 2025 application in April 2026.

ICC now needs to select its preferred long-term wastewater option and lodge a WEPS-compliant replacement application by 27 February 2028. The application must address the WEPS assessments, applicable Southland planning provisions, cumulative effects and cultural effects.

3.0 Regulatory Framework

The Bluff wastewater consent application may be lodged after the Natural Environment Bill is enacted. The application should therefore be developed with reference to the Bill's proposed natural resource permit framework, while retaining sufficient flexibility to address changes made before enactment, commencement provisions and any applicable transitional instruments.

Under the Bill as currently drafted, the discharge of treated wastewater and the occupation and use of the CMA would require natural resource permits. The Bill also provides for the relationship between wastewater environmental performance standards, national rules, natural resource permits and plans.

An application prepared under the Bill as currently drafted would need to address its Treaty provisions, applicable settlement redress, Te Tangi a Tauira and interests under the Marine and Coastal Area (Takutai Moana) Act 2011. Engagement with Te Rūnaka o Awarua, Te Rūnaka o Waihopai and Te Ao Mārama should continue early enough to inform option selection, the effects assessment and proposed permit conditions.

A permit will also be required for works to extend the outfall pipeline and, if the constructed land-based treatment option is selected, additional permits may be required for earthworks, discharges, water takes or diversions, and effects on wetlands or other protected areas. These additional permits may be bundled with the wastewater discharge and occupation permit package or applied for separately, depending on the option selected, the final design and location, and whether the information needed to support the applications is available.

The relevant national instruments and regional provisions are appended.

4.0 Consenting Pathway Assessment

There is only one consenting pathway: a WEPS-compliant natural resource permit application under the Natural Environment Act. A Fast-track Approvals Act pathway was considered but discounted because the WEPS framework provides a standardised consenting pathway for municipal wastewater discharges that is expected to be more efficient and considerably less expensive than pursuing fast-track approval

The WEPS compliant application must consider the quality of the treated wastewater and whether it meets the standard for the relevant discharge environment. On the information available, the existing discharge would not meet the applicable low-energy coastal environment standard. Compliance would therefore require either improved treatment (to meet the low energy standard) or discharge to a high energy coastal environment, which the current plant performance can meet.

In assessing the preferred option in 2025, the Bluff working group identified two options; status quo (existing treatment performance and existing discharge point) and discharge to the existing discharge point a via a constructed land-based treatment area to mitigate adverse cultural effects of the discharge of treated wastewater directly to water. Neither of these are feasible options under the WEPS.

Three options are considered below; Options 1 and 2 are as above but with an extended pipeline outfall to a high energy discharge environment and option three is improved treatment to achieve the existing low energy coastal standard.

Option 1: Extended outfall

Option 1 would retain the existing treatment and extend the outfall, so the discharge reaches at least a high-energy coastal receiving environment. This is likely to have the lower capital cost, but in 2025 it was not supported by mana whenua. If that opposition remains, the application is more likely to be notified and proceed to a hearing, with associated delay, cost and consent risk. ICC would need strong evidence that the discharge meets the WEPS, applicable environmental limits and cultural and coastal requirements, and that adverse effects are acceptable.

Option 2: Constructed land-based treatment and extended outfall

Option 2 would add a constructed land-based treatment area before a discharge through an extended outfall to at least a high-energy coastal receiving environment. This would impose additional capital and operating costs on the community but is more likely to receive iwi support and may reduce notification, hearing and appeal risk. ICC will need to confirm that the environmental and cultural benefits are proportionate to the whole-of-life cost and that the land-based treatment can perform reliably under Bluff's hydraulic, climatic and operational conditions.

Option 3: Enhanced treatment performance

The existing flows and outfall are assessed to discharge to a low energy coastal environment. To discharge to this location would require treatment improvements to enable the standard to be met.

4.1 Option assessment criteria and preferred option

The options should be assessed against the WEPS and Natural Environment Act; effects on the coastal environment, shellfish and human health; cultural outcomes and the level of mana whenua support; technical performance, reliability and resilience; capital and operating costs and community affordability; consenting, notification and hearing risk; design time; and the time to prepare and lodge the resource consent application, which should be before 27 February 2028.

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The preferred option must meet the environmental limits and wastewater standards applying under the Natural Environment Act, protect coastal and human health values, and reflect Treaty settlement obligations, Te Tangi a Tauira and mana whenua input. It must also provide a reliable, resilient and financially sustainable wastewater service, based on transparent whole-of-life costs and efficient use of existing assets and technical work.

4.2 Other permits

A permit will be required to extend the pipeline and outfall. Option 2 may also require permits for earthworks to construct the land-based treatment, water takes, diversions and discharge activities. These additional permits may be bundled with the wastewater discharge and occupation permit package if the design is sufficiently developed and the information needed to support the applications is available within the programme. Otherwise, they may be applied for separately.

5.0 Information Requirements

The wastewater permit application will need clear evidence demonstrating WEPS compliance, the effects of the selected discharge option and the suitability of the proposed coastal receiving environment.

5.1 Technical Assessments and Evidence

For any option selected, current treatment performance, wastewater flows and variability, asset condition and the design basis for the extended outfall must be confirmed. Coastal investigations should establish the discharge environment, dilution and dispersion, mixing zone, effects on shellfish and public-health risk.

A mixing model to determine the location for the required quantitative microbial risk assessment (QMRA) is likely to be needed. The pathogen studies undertaken for the 2025 application may be utilised to prepare the application and will be useful in conjunction with the WEPS when assessing effects of the discharge on cultural values. The presence of:

- a mātaitai reserve,
- a MACA application area,
- customary harvest interests,

means that there likely to be effects on mana whenua that extend beyond the pathogen risk addressed by the QMRA and required by the WEPS. We recommend early engagement with mana whenua to ensure that the QMRA and any other assessments can assist with the necessary application assessments.

An application must show that the flows, treatment quality and outfall location meet the WEPS, that effects on shellfish are acceptable, and that consumption of shellfish presents an acceptable human-health risk.

For Option 2, a land-based treatment concept design, land and geotechnical investigations, and potentially hydraulic modelling will need to be provided and assessed. The assessment should test environmental and cultural benefits, reliability, constructability, consent risk and affordability.

5.2 Cultural, Statutory and Consultation Evidence

The application must include a cultural impact assessment or other assessment agreed with mana whenua, supported by a clear record of engagement and how it influenced option selection and proposed permit conditions. Consultation evidence should record engagement with Environment Southland, affected coastal interests, the Bluff community and industry.

6.0 Risk Assessment

The principal risks arise from the changing statutory framework and the 9-month period before the new application must be lodged. These risks should be managed through early option selection, targeted investigations and ongoing engagement with mana whenua.

Legal and Regulatory Risks

The Natural Environment Act, transitional provisions, national rules and WEPS requirements may change before lodgement. Activity status, information requirements and continuation arrangements must therefore be confirmed once the final legislation and instruments are in force.

Options and Cultural Risks

A direct discharge to the CMA through an extended outfall may carry a higher risk of mana whenua opposition, notification, hearing and appeal. Option 2 may be more likely to receive mana whenua support but requires ICC to justify its additional cost and demonstrate that the land-based treatment will deliver reliable environmental and cultural benefits. Option 3 requires ICC to establish the treatment upgrades needed to meet the applicable low-energy coastal standard and assess their technical performance and whole-of-life cost. Early engagement and a transparent assessment are necessary for all three options.

Technical and Environmental Risks

If current treatment performance is assumed to continue then WEPS compliance can only be achieved by discharging to a high-energy coastal environment. That assumption must be verified through effluent data, outfall design, coastal investigations, mixing modelling and QMRA. Uncertainty about shellfish and human-health effects, land-based treatment performance or asset condition could require redesign and delay lodgement.

A QMRA prepared in accordance with Regulation 65 will be sufficient for the purposes of addressing shellfish and human-health effects under WEPS; however, it is noted that ES can consider wider impacts on human health (including from shellfish gathering and recreation) under the New Zealand Coastal Policy Statement 2010 and the Coastal Plan for Southland. Clarification should be sought from ES during pre-application engagement as to whether additional technical assessment is needed to support an assessment of effects on human health.

Financial and Programme Risks

Options 2 and 3 may place a greater capital and operating burden on the Bluff community, while Option 1 may incur greater consenting and hearing costs. Delay in selecting an option, completing investigations or engaging with mana whenua could risk lodgement by 27 February 2028 and reduce the time available before the existing consents expire. ICC should maintain a critical-path programme, cost range and contingency for notification, hearing, design change and construction.

7.0 Stakeholder and Engagement Strategy

Engagement should support option selection, identify material effects and issues early, and reduce the risk of later opposition or delay. ICC should maintain an engagement plan recording who was consulted, the matters raised, ICC's response and any resulting change to the proposal.

An overview of key iwi and stakeholders for inclusion on project engagement is below.

Iwi / Stakeholder	Engagement focus
Mana whenua Te Rūnaka o Awarua, Te Rūnaka o Waihopai and Te Ao Mārama	Continue early and regular engagement and confirm cultural values and effects Seek mana whenua input before option selection and again while developing the application and conditions.
Regulators and statutory agencies Environment Southland, Te Rūnanga o Ngāi Tahu and public health authorities	Confirm with ES the permit pathway and the information required to support a resource consent application Engage other agencies where statutory interests are affected e.g. shellfish-consumption risk.
Community and industry Bluff community, seafood processors, recreational and customary users, and affected coastal commercial interests	Explain the options and risks; set out expected outcomes, cost and rates implications Identify local evidence and refine mitigation and communications before lodgement.

8.0 Recommended consenting strategy

The recommended strategy is to select the preferred long-term wastewater option through the assessment described in Section 4 and use that option as the basis for a WEPS-compliant application for the treated wastewater discharge and occupation of the CMA by the outfall pipeline. Those two permits should be sought together as a single wastewater permit package under the Natural Environment Act.

Permits required to extend the outfall pipeline, undertake associated construction or disturbance, or establish and operate a constructed land-based treatment area may be bundled with the wastewater discharge and occupation permit package or applied for separately. The appropriate approach will depend on the option selected, the final design and location, the availability of supporting information and the timing of the relevant works. The permit requirements and preferred packaging should be assessed as soon as sufficient design information is available.

The wastewater permit application can build on the technical, planning and engagement work completed for the 2025 application. It will need to demonstrate compliance with the WEPS, confirm current flows and treatment performance, the classification of the proposed receiving environment, and assess dilution, dispersion, shellfish, human-health, cumulative and cultural effects. The assessment should be supported by modelling, a QMRA and ongoing engagement with mana whenua, public health agencies, the Bluff community and industry.

ICC should confirm the preferred option and advance the necessary investigations and engagement without delay. A complete wastewater permit application should be lodged by 27 February 2028 to enable the lawful exercise of the existing consents[1] while a decision is made on the application.

[1] After they expire

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9.0 Limitations

9.1 General

This report is for use by Invercargill City Council only and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Harrison Grierson Consultants Limited. No responsibility is accepted by Harrison Grierson Consultants Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.

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Appendix 1 – Relevant national instruments and plan provisions

National direction

Water Services (Wastewater Environmental Performance Standards) Regulations 2025

The WEPS came into force in December 2025 and specify wastewater environmental performance standards for discharges from WwTP to various receiving waterbody classifications, each with corresponding discharge limits.

Under the WEPS, the existing discharge is to a low energy coastal environment; the discharge does not meet the relevant standard. A treatment process improvement would be required to meet the standard at the existing outfall.

The existing flows and quality would meet the high-energy standard. The pipeline would need to be extended to achieve the high-energy conditions. A diffuser is required for all coatal outfalls.

For any effluent discharge located within 4 km of a shellfish gathering area in the CMA, a quantitative microbial risk assessment must be undertaken. A full summary of the risk assessment requirements is provided under Regulation 64 of the WEPS. Where a consent is granted for a discharge affecting a shellfish gathering area, an *E. coli* limit must be included.

Under the WEPS, a plant is classified as a small plant if:

a) *The plant takes in a daily average load of cBOD5 of less than 85 kilograms; or*

b) *The plant services wastewater from less than 1000 people and does not service a significant volume of industrial and trade waste.*

We understand that the plant meets a) above, but not b). However, given the additional tradewaste flows, and allowing for increasing flows to support the aquaculture industry, we recommend the Wastewater scheme is not considered as servicing a small community.

The resource consent to extend the pipeline will be subject to a condition of consent requiring the works to be undertaken no later than five years after the consent commences in accordance with Regulation 84 of the WEPS.

Marine and Coastal Area (Takutai Moana) Act 2011 (MACA)

As currently drafted, the Planning Bill and Natural Environment Bill maintain MACA rights.

Te Rūnanga o Ngāi Tahu, on behalf of Ngāi Tahu Whānui, has applied for Customary Marine Title in the coastal area affected by the current and proposed discharge. Consent applicants must demonstrate that consultation has been undertaken and provide the views expressed by iwi.

New Zealand Coastal Policy Statement 2010 (NZCPS)

The NZCPS sets national direction for the CMA which regional policy statements and plans must give effect to. The objectives of the NZCPS generally relate to safeguarding and sustaining the coastal environment and its ecosystems, preserving natural character, taking into account Treaty principles, maintaining and enhancing recreational values, and providing for social, economic and cultural wellbeing.[2]

National Policy Statement for Freshwater Management 2020

This document applies to the potential seepage from the aerated lagoon.

[2] Relevant objectives include 1, 3 and 6.

Document Set ID: 11307120
Version: 1, Version Date: 15/10/2026

The objective of the National Policy Statement for Freshwater Management 2020 (NPS-F) is to give effect to Te Mana o te Wai which first prioritises the health and wellbeing of freshwater, followed by the health needs of people and people's social, economic and cultural wellbeing.

Key objectives require tangata whenua involvement in freshwater management, that the health and wellbeing of freshwater (including groundwater) is maintained or improved, and that communities are enabled to provide for their social, economic and cultural wellbeing.[3]

Regional provisions

The application will be submitted under transitional legislation; the existing regional plans will still be operative at the time of lodgement.

Southland Coastal Plan

The Southland Coastal Plan generally implements the policies of the NZCPS and does not introduce new themes.

It is worth noting that this plan identifies the discharge of human sewage into the CMA as culturally and socially inappropriate, noting that it could pose a health risk to people who consume shellfish from the area, or use the CMA for recreational purposes (Issue 7.3.2.2).

Section 18.7 sets out information required for applications for structures (in this case the proposed pipeline), including the dimensions, the method of construction, an assessment on coastal process and the need for a permanent rather than temporary structure. Further information requirements are provided under Section 18.13 regarding the occupation of the CMA, including an assessment of navigational safety effects and alternatives.

Proposed Southland Water and Land Plan (Operative in Part)

Objectives are generally consistent with the SRPS in that tangata whenua values and mahinga kai, and mātaitai resources should be recognised and provided for, and infrastructure is enabled. Objectives relating to the potential seepage from the lagoon require the protection of groundwater and soils.[4]

Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008

General policies for the Southland coastal environment under Section 3.6.1 highlight respecting coastal areas, protecting and enhancing kaimoana and kaimataitai and ensuring the integrated management of the coastal environment.

Section 3.5.2 states that Ngāi Tahu ki Murihiku consider the discharge of wastewater to land a better option than a discharge to water.

Effluent Land Application Plan

This plan relates to the potential seepage from the aerated lagoon. Objectives under Section 4.1 generally relate to safeguarding the life supporting capacity of soils and water, ensuring effluent discharges to land do not adversely affect human and animal health or amenity, and provide for takata whenua values.

[3] Relevant policies include 1, 2, 5 and 15.
[4] Relevant objectives include 4, 5, 8, 9B and 13.

Document Set ID: 11307120
Version: 1, Version Date: 15/10/2026

PRIMARY INFRASTRUCTURE PROGRAMME - ALTERNATE WATER SUPPLY PROJECT UPDATE-OCTOBER 2026

To:	Water Committee
Meeting Date:	Monday 2 November 2026
From:	Alistair Snow, Contractor – Senior Project Manager
Approved:	Matt Keil, General Manager - Water Services
Approved Date:	Thursday 15 October 2026
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

This report has been prepared to provide the Water Committee with an update of the progress to date surrounding the Alternate Water Supply Project.

The project team continue to progress the development of the well field and the consenting application for a five-year water permit to enable a 36-month staged aquifer pumping investigation. The investigation will test and confirm the aquifer response and monitor environmental effects before Council determines whether to pursue the source as an emergency or alternate water supply source for the city. The consent application is to be drafted and lodged in November with Environment Southland. Drilling of 2 of the 3 wells is to commence early November 2026. The final well (PW3) remains on hold and is subject to land access negotiations. The project will incorporate an onsite water treatment facility when the supply is connected to community network.

Committing resources is nearing completion and the project forecast remains on budget of $23.9 million.

Recommendations

That the Water Committee:

1. Receives the report "Primary Infrastructure Programme: Alternate Water Supply Project Update-October 2026"

Document Set ID: 11306660
Version: 4, Version Date: 29/10/2026

Background

The overarching strategic objectives of the consenting strategy is to secure priority access to the groundwater resource ahead of any competing applicants, to retain flexibility to refine abstraction volumes as scientific understanding and knowledge improves within this location, to ensure that any approvals obtained are legally durable and resilient to challenge, and to future-proof the project against the impending transition from the Resource Management Act (RMA) to the Natural Environment Act. Four legislative regimes are relevant to the project, Fast-Track Approvals Act 2024, Resource Management Act 1991, Water Services Act 2021 and the, to be enacted, Natural Environment Act.

The project team continue to develop infrastructure to support the pumping programme, emergency supply, treatment and enable the future bore-field and network development.

A short-term water permit application is in the final stages of drafting for lodgment in November 2026. The application will seek a five-year consent term. This term will provide sufficient time to establish baseline conditions, undertake a 36-month pumping investigation, complete monitoring, and technical reviews, and report the results. The pumping investigation will be staged.

- **Stage 1:** will abstract up to 3,000 m³/day from production well PW3 for up to 18 months. After the first 12 months, the monitoring results will be formally reviewed.
- **Stage 2:** will proceed only if that review supports progression. Stage 2 would continue the PW3 take and introduce up to 2,000 m³/day from PW2, providing a combined take of up to 5,000 m³/day for a further 18 months.

The staged investigation will generate the critical information needed to refine the groundwater model, characterise the aquifer's response to sustained pumping, assess environmental responses and determine what long-term pumping rate and operating regime may be sustainable. Any long-term abstraction-take would require a separate resource consent application informed by the investigation results.

Consultation and community engagement information is on-going. TAMI are to provide a Cultural Impact Statement that will accompany the Water Take Permit application.

Environmental impact benchmarking and monitoring information continues to be collated and developed including detailed surface and building spatial benchmarking, Surface and ground water reference data, habitat identification and monitoring.

Key Programme Dates are:

Lodge consent (Adaptive Management)	End November 2026
Wells-constructed and monitoring equipment in place	January 2027
Estimated consent granting	May 2027
Pump testing commences	June 2027
Proposed initial aquifer capacity assessment milestone	July 2028

Document Set ID: 11306660
Version: 4, Version Date: 29/10/2026

Issues

Changing Legislation

The Natural Environment Act 2026 took effect towards the end October 2026, and under the transitional provisions our application will be treated similarly to previous RMA consent applications, with independent advice stating the transitional provisions will not increase to application process risks.

Access Agreements

Access agreements with private property owners and Department of Conservation concessions are progressing, uncertainty for likely conditions and timing of agreement remains high.

Permit Processing Uncertainty

The timing and outcome of consent processing workflow remain uncertain. Key variables include whether Environment Southland requires further information, whether the application is notified, and the time required to resolve any technical or affected-party matters raised during processing. The programme allows a nominal 6 month timeframe for processing and approval by Environment Southland.

Next Steps

1. Negotiate and complete land access agreements and concessions.

2. Complete procurement of the well power supply, communications, and monitoring equipment.

3. Continue stakeholder engagement (including Environment Southland, Mana Whenua and Department of Conservation) and project communications.

4. Continue baseline data, set up additional environmental monitoring sites and recording of data. Undertake benchmarking and dilapidation surveys, complete peer reviews and update assumptions and recommendations.

5. Complete the application, receive the Cultural Impact Statement, and lodge the water take permit (November).

6. Construct Wells (TW3 and TW4), PW3 is subject to land access agreements.

7. Report back to the Water Committee when the consent authority has confirmed the processing pathway or if a material change to the project programme is required.

Attachments

1. Dashboard Report Alternate Water Supply – September 2026 (11306963)

Document Set ID: 11306660
Version: 4, Version Date: 29/10/2026

Alternate Water Supply PCG - September 2026

Project:	Alternate Water Supply	Project Code:	100549	Report to:	30/09/2026	Project Manager:	Alistair Snow
Project Phase:	Phase 1: Energency Water Source			PMO Manager:	Haydyn Taylor	Sponsor:	Matt Kiel

PROJECTS STATUS

PROJECT HEALTH STATUS: (1 = Green (OK), 2 = Amber (WATCH), 3 = Red (ESCALATE))

		Previous	Current	DESCRIPTION
1	Schedule			The project is tracking in accordance with the re-baselined programme. Draft consent documentation is nearing completion, with Council review scheduled for early November and consent lodgement anticipated in November 2026. Washingtons has been engaged, with mobilisation planned for late October and drilling commencing in early November. Critical path activities remain focused on consent preparation, ecological investigations and stakeholder approvals.
2	Financials			The Phase 1 budget remains $23.9M, with approximately $1.8M committed and actual costs of $563K to date. No significant financial issues were raised during the reporting period.
3	Scope			The Phase 1 scope remains unchanged and continues to focus on securing and testing a 5 MLD emergency supply under an adaptive management framework. Existing well surveys have been completed, and procurement for dilapidation, benchmark and monitoring surveys is progressing.
4	Resources			Washingtons has been appointed as the drilling contractor, with resources secured for mobilisation in late October. Technical specialists across groundwater, ecology, planning, hydrogeology and subsidence disciplines remain actively engaged in consent preparation and supporting investigations.
5	Issues			Uncertainty around DOC concession timeframes and outstanding access agreements continues to present a significant programme issue.
6	Risks			Key risks include delays in obtaining DOC concessions and land access land access for PW3. A project risk workshop is planned for November following review of the consent application.
7	Dependencies			Critical dependencies include completion of ecological assessments, affected party approvals, finalisation of the monitoring and management plans, PW3 access arrangements, monitoring infrastructure installation and consent lodgement.
8	Quality			Groundwater modelling, hydrology reporting, geotechnical peer review and technical integration reviews have been completed. Technical reports are being refined to address consent requirements, with no significant quality issues identified.
9	Stakeholder			Engagement continues with Environment Southland, DOC, Te Ao Mārama, affected landowners and internal Council stakeholders. Preparation for Council review and Water Committee consideration is underway, alongside ongoing landowner engagement activities.
10	Benefits			*Establishment of an Emergency Supply (5MLD) * Investigate potential development partners and provision for Economic Development
11	Health & Safety			Health and Safety planning continues for drilling, monitoring and survey activities. Contractor mobilisation planning is underway, with site-specific controls and risk management measures being prepared ahead of drilling commencement.
OVERALL				The project is progressing in line with the re-baselined programme, with strong progress being made across the consenting, technical, procurement and stakeholder engagement workstreams. Groundwater modelling and key technical assessments have been completed, the drilling contract has been awarded, and contractor mobilisation is scheduled for early November. Preparation of the adaptive consent application remains on track for lodgement in November 2026. Key focus areas for the coming period include securing remaining land access agreements, progressing DOC approvals, completing ecological investigations, and finalising supporting technical documentation. No significant financial, resource, or quality issues have been identified.

Item	Amount	Notes
Project Budget (incl. contingency)	$25,203,000	Annual plan bid $4.803M - 26' & 27' to be approved
Original exploration & investigations Budget - Business Case Development (incl. contingency)	$1,303,000	Committed $1,296,805
Phase 1 - Phase 1 Works Budget (incl. contingency)	$23,900,000	Annual Plan Bid / LTP to be approved
Spend to date - Original Exploration	$1,245,852	
Spend to date - Phase 1	$563,639	Commited $1,793,825.60
Original contingency allowance	$5,420,019	
Remaining contingency	$5,420,019	
Estimate to completion Phase 1:	$23,900,000	
Variance (ETC less budget)	$0	

Key messages:

*** Environmental and technical investigations are nearing completion, with the key baseline assessments and supporting technical reports substantially complete for the adaptive resource consent application. Procurement and planning activities for the pumping programme have also advanced, including the power supply, production and test wells, groundwater monitoring infrastructure, and drilling works. Independent peer reviews have strengthened confidence in the technical approach and understanding of the aquifer system, with the consent application now being finalised for Council review ahead of lodgement anticipated in November 2026.**

IWI and DOC conversations are ongoing.

PSG COMMENTARY
Key Achievements: *** Progressed the adaptive resource consent application to advanced draft stage, with Council review scheduled for November.** *** Completed groundwater modelling, hydrology reporting and supporting technical assessments.** *** Completed geotechnical peer review and multidisciplinary technical integration reviews.** *** Engaged Washingtons as drilling contractor, with mobilisation planned for late October and drilling commencing in early November.** *** Progressed ecological assessments, monitoring programmes and groundwater management planning.** *** Advanced procurement for dilapidation, benchmark and monitoring survey services.** *** Updated the project programme, cashflow forecasts and long-term funding assumptions to support Annual Plan and LTP processes.**

ESCALATIONS / DECISIONS

ID #	DATE RAISED	DESCRIPTION	ACTION (Include decision paper reference)	OWNER	STATUS / OUTCOME
1					
2					
3					

KEY PROJECT RISKS WATCH-LIST

ID #	RAG STATUS		DESCRIPTION	ACTION / MITIGATION
1	Technical		Aquifer Performance - Achieve Emergency 5 MLD	Develop adaptive Watertake Management Plan, Emergency Supply @ 5MLD
2	Technical		Reliable Technical Advise	Procure experienced resources, Peer Review advice, milestone key decisions, detailed investigations, accuracy of data, Coordinated
3	Stakeholder		Early & Constructive Engagement with TAMI	Ongoing engagement, ES, Taumata Arowai.
4	Programme		Delays to programme, changes to the LTP or other funding mechanisms.	Monitor Programme, Manage risks
5	Programme		DoC Concession, land Access Agreement	Confirm assessment sites in DoC, Early engagement, select best process.

ISSUES WATCH-LIST

ID #	RAG Status	DESCRIPTION	ACTION / MITIGATION	DATE RAISED	DATE CLOSED
1		prepare access agreements with property owners including Department of Conservation. Required by the 18th of August.	Assign access agreement lead.	1/04/2026	
2		Re-baseline project to reflect procurement process, planning strategy and key risk item mitigations	PM to draft revised Programme	1/04/2026	22/09/2026

Schedule Commentary ID #	Phase 1: Revison 2.0 - Draft	START DATE	BASELINE CLOSE DATE	ACTUAL CLOSE DATE	RAG STATUS
1	Project Establishment	5/09/2025	29/05/2026	2/06/2026	
2	Resource Consent - Adaptive Management	16/03/2026	15/06/2027		
3	Engineering & Design	17/11/2025	15/06/2028		
4	Construction - Production/Test Wells & Power Supply	10/04/2026	15/06/2026		

Active Site Information

Site ID	Man Hours Worked	First Aid	Lost Time Injuries	Near Miss	Incidents
NA					

3 WATERS OPERATIONAL PERFORMANCE – SEPTEMBER 2026

To:	Water Committee
Meeting Date:	Tuesday 3 November 2026
From:	Rob Hayes, Engineering Services Manager Russell Keen, Manager 3 Waters Operations Colin McManus, Contract and Relationship Manager Corrine Wright, Manager – Health, Safety and Wellbeing
Approved:	Matt Keil, General Manager - Water Services
Approved Date:	Thursday 15 October 2026
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

This report has been prepared to provide Water Committee members with an operational snapshot for the previous month of activities for September, delivered across all Invercargill City Council Water Service Operations defined as Treatment Operations, Environmental, Capital Delivery and Reticulation Operations, the report will outline operational milestones, challenges and risk(s).

Recommendations

That the Water Committee:

1. Receives the report "3 Waters Operational Performance –September 2026".

Background

The month of September 2026 saw another busy period for all Operational Water Services staff and contracted Suppliers alike.

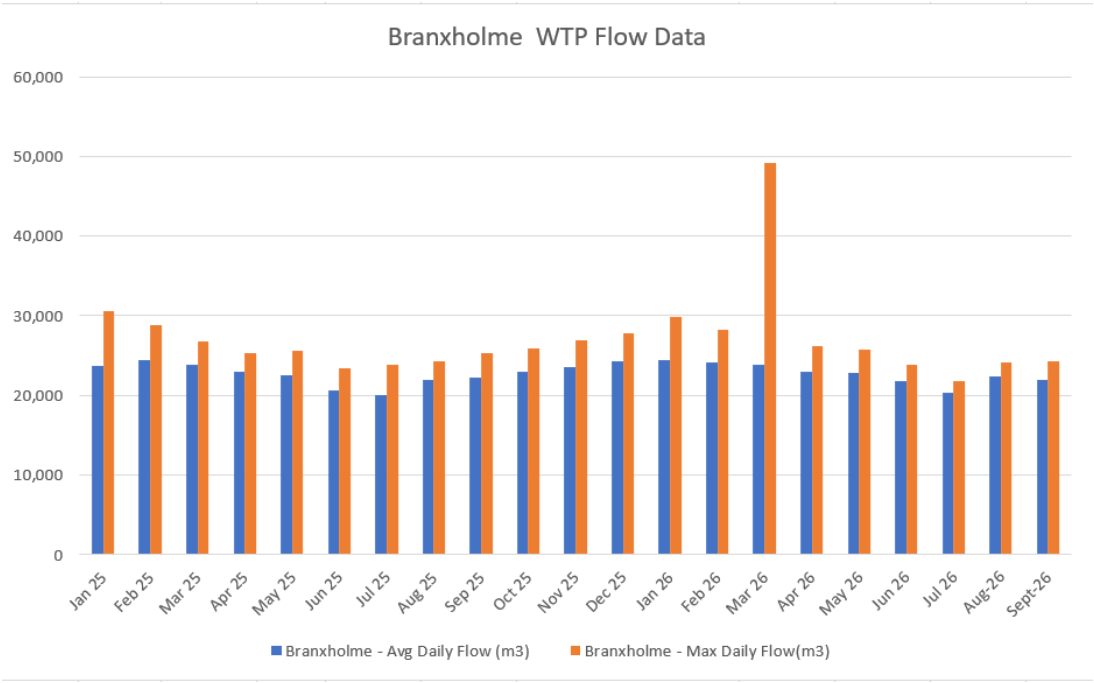
Water Treatment Operations

The Branxholme Water Treatment Plant produced 659,613 m^3 in September 2026 of treated water.

Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026

Branxholme Water Treatment Plant 2025/2026 SCADA Data

Branxholme Water Treatment Plant 2025/2026 SCADA Data Branxholme Water Treatment Plant		
Month / Year	**September 2025**	**September 2026**
Total Monthly Flow (m^3)	668,084	659,613
Average Daily Flow (m^3)	22,269	21,987
Maximum Daily Flow (m^3)	25,246	24,208
Minimum Daily Flow (m^3)	18,477	18,836
Monthly Rainfall (mm)	152.5	162.5



Awarua Water Supply update

A short term water permit application is now being drafted for lodgment in December 2026. The application will seek a five-year consent term. This term will provide sufficient time to establish baseline conditions, undertake a 36-month pumping investigation, complete monitoring and technical reviews, and report the results.

The pumping investigation will be staged approach with Stage 1 abstracting up to 3,000 m^3/day for up to 18 months, following acceptable results stage 2 will proceed with abstraction of up to 5,000 m^3/day for a further 18 months.

The staged investigation will generate the critical information needed to refine the groundwater model, characterise the aquifer's response to sustained pumping, assess environmental responses and determine what long-term pumping rate and operating regime may be sustainable. Any long-term take would require a separate resource consent application informed by the investigation results.

Document Set ID: 11301885
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The drilling will start early November with an anticipated completion date of end of February 2027.

Wastewater Treatment Plant Operations

All three plants continue to operate, as per their respective consent conditions.

Clifton Wastewater Treatment Plant

The Clifton Plant received 1,566,878 m^3 of influent in September 2026.

The infiltration rate for September 2026 is nil as there was no average dry weather flow events for this period.

Bluff Wastewater Treatment Plant

The Bluff Plant discharged 39,684 m^3 of treated effluent for the month of September 2026.

The infiltration rate for September 2026 is nil as there was no average dry weather flow events for this period.

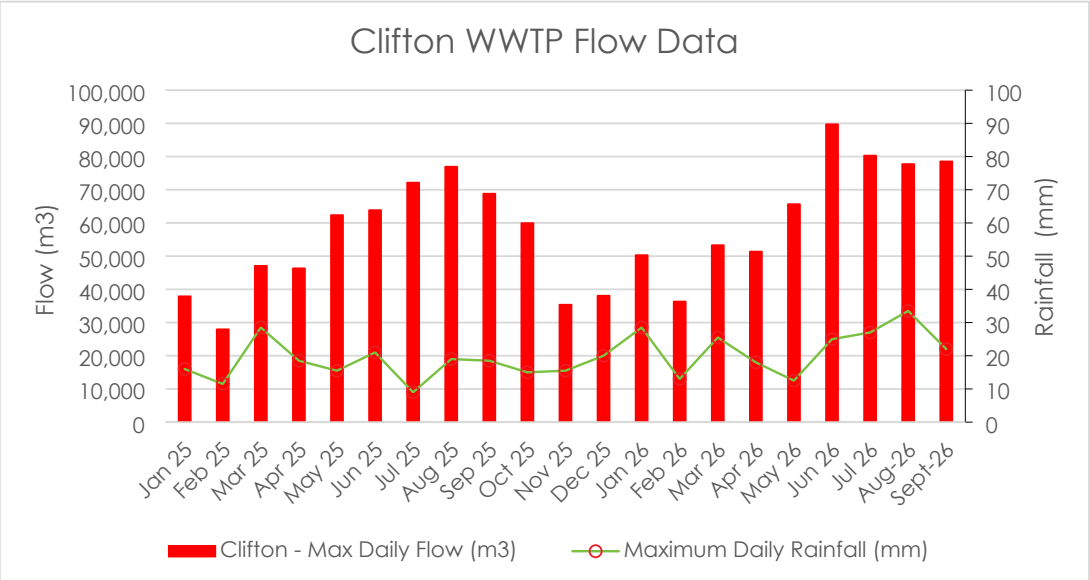
Clifton and Bluff Wastewater Treatment Plants September 2025/2026 Data:

Waste Water Treatment Plants				
Measures	Clifton		Bluff	
Month / Year	September 2025	September 2026	September 2025	September 2026
Total Monthly Flow (m^3)	1,042,429	1,566,878	41,548	39,684
Average Daily Flow (m^3)	34,748	52,229	1,385	1,323
Maximum Daily Flow (m^3)	68,803	78,521	2,229	2,347
Minimum Daily Flow (m^3)	15,8390	33,864	718	748
Maximum Daily Rainfall (mm)	18.5	22	18.5	22
Average Dry Daily Flow (m3)	Nil	Nil	Nil	Nil
Infiltration rate (times)	**NA**	**NA**	**NA**	**NA**

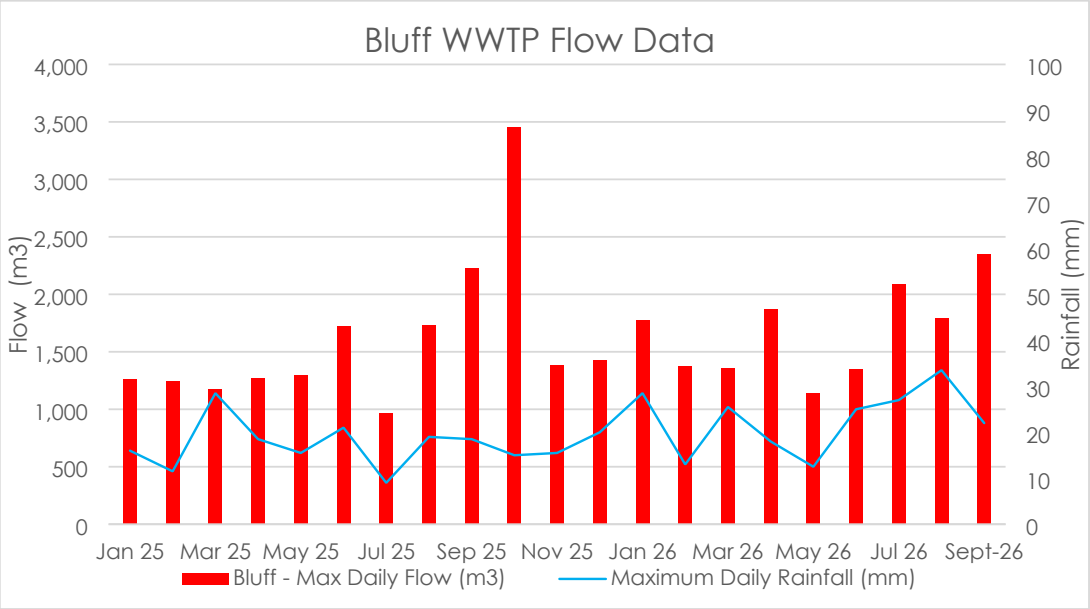
Note – Rainfall data is from the Environment Southland Waihōpai dam site Invercargill

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Clifton Flows



Bluff Flows



Omaui Oxidation Pond

The Omaui oxidation pond is operating well and within its consent conditions. Flow monitoring equipment is still being investigated to confirm flows.

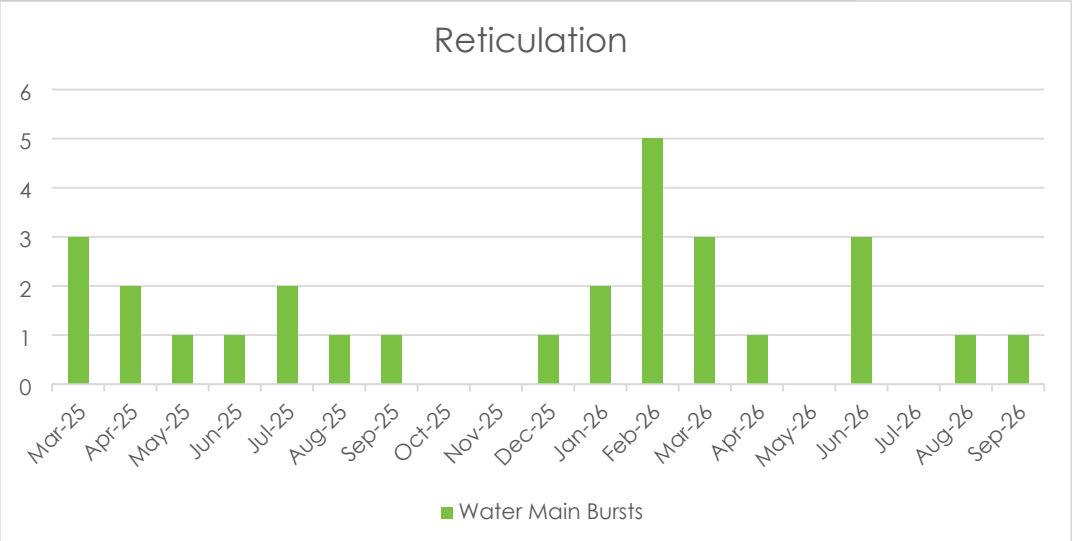
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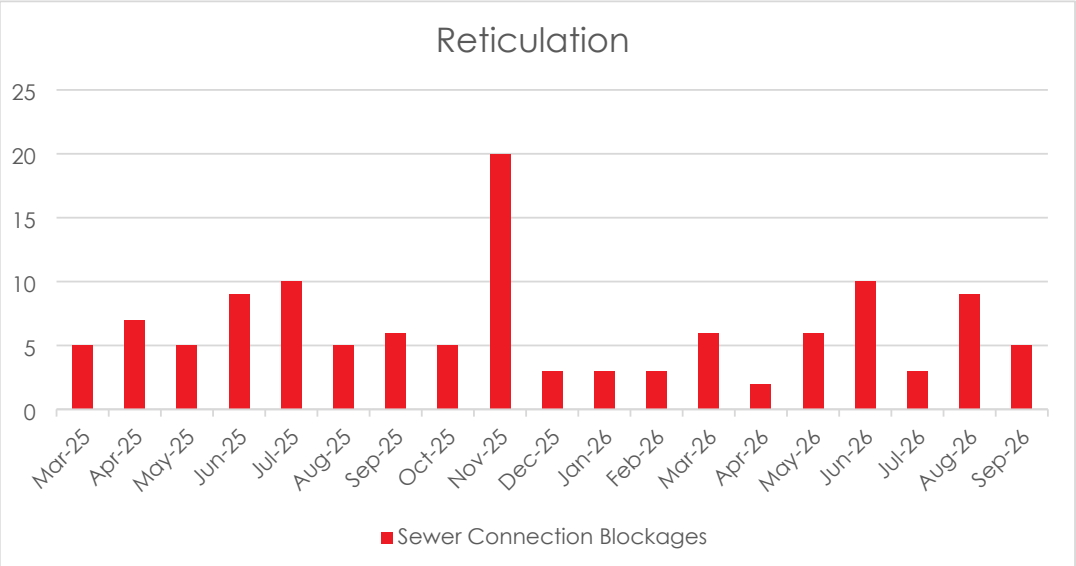
Reticulation Operations

Water/Sewer/Storm

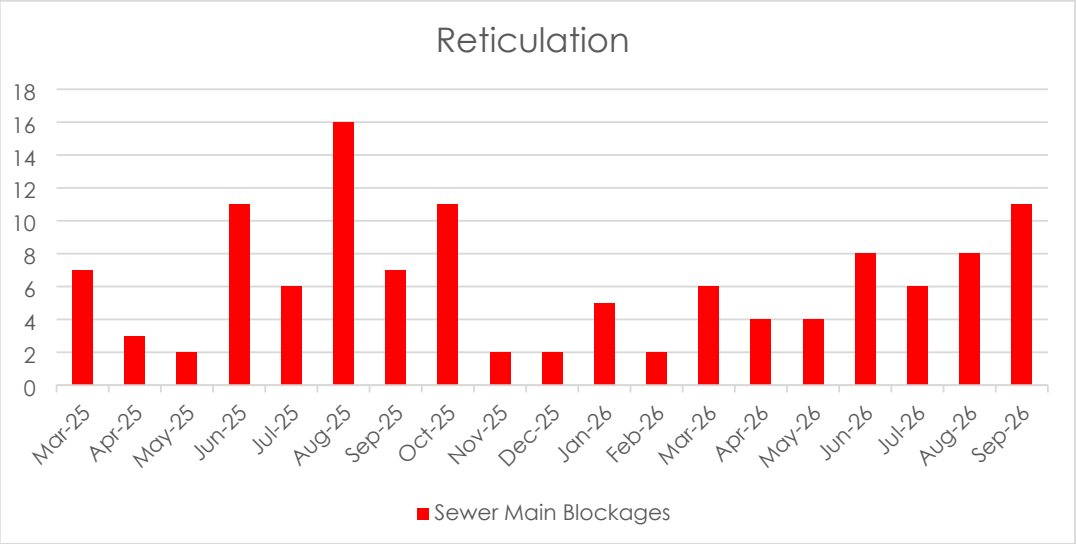
During the month of September 2026, the reticulated network had the following events compared to 2025:

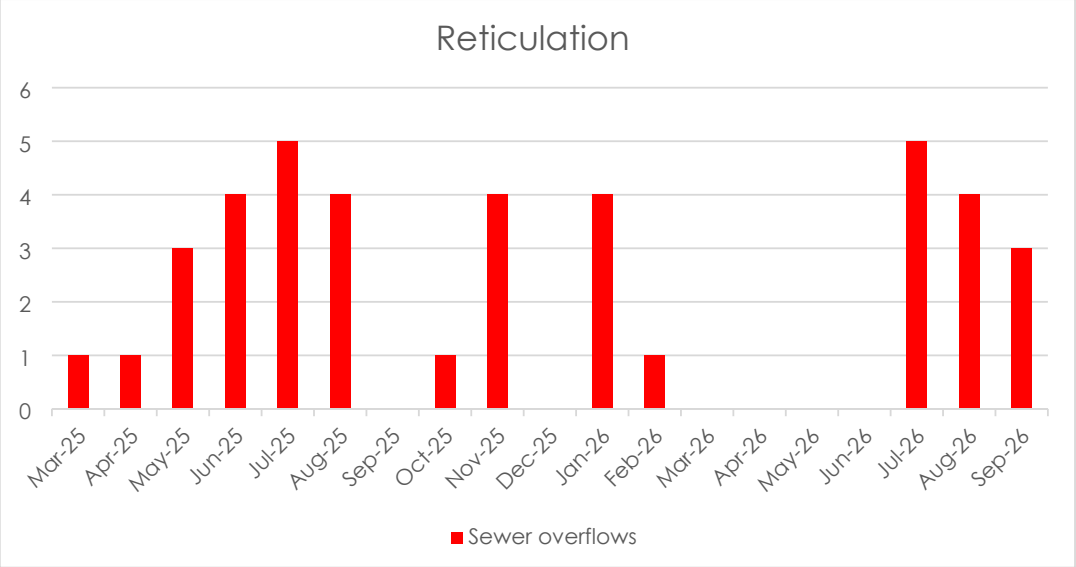
Activity	September 2025	September 2026
Watermain bursts	1	1
Sewer connection blockages	6	5
Sewer main blockages	7	11
Sewer overflows	0	3
Stormwater main blockage	14	16



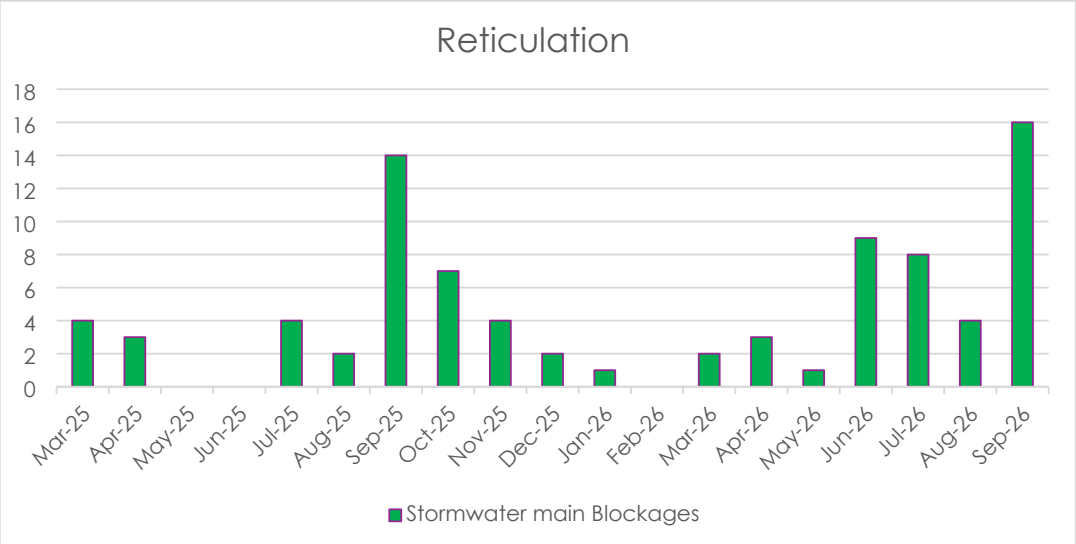


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Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026



Environmental

The following rainfall data is from the Environment Southland rain gauge at the Waihōpai dam Invercargill.

Environmental – Rainfall data		
Month / Year	**September 2025**	**September 2026**
Total rainfall (mm)	152.5	162.5
Maximum daily rainfall (mm)	18.5	22
Number of dry days	9	7
Number of days considered as a dry weather flow event	0	0

Below is the last 5 year monthly rainfall data.

Rainfall data (mm) - Waihōpai Dam													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2022	49.0	57.5	13.0	127.5	121.5	81.0	109.5	57.0	72.0	104.5	150.5	43.5	986.5
2023	27.5	83.5	128.5	75.0	125.5	83.0	157.5	54.0	149.5	52.5	40.5	110.0	1087.0
2024	96.5	113.0	109.5	106.5	112.0	87.0	61.5	84.0	145.1	136.0	84.5	96.5	1232.1
2025	56.5	51.5	100.0	66.0	92.0	100.0	33.5	84.5	152.5	132.5	51.5	69.0	989.5
2026	81.5	79.5	101.5	82.5	60.0	87.0	90.5	133.5	162.5				492.0

Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026

Piped Reticulation and Maintenance

During September, we issued a total of 275 work orders to Downer for maintenance across our Three Waters network. These were made up of 77 water, 75 sewer, 49 stormwater and 76 CCTV work orders under the 2026/27 CCTV programme.

Despite the high workload, including a significant number of urgent and emergency jobs following the high rainfall, Downer has been able to keep the works within our KPI timeframes. Management and staffing numbers remain consistent.

Work Order Breakdown			
Water = 77	Storm Water = 49	Foul Sewer = 75	CCTV = 76
Routine = 50	Routine = 17	Routine = 17	Routine = 22
Planned = 5	Planned = 1	Planned = 31	Planned = 51
Urgent = 19	Urgent = 28	Urgent = 12	Urgent = 3
Emergency = 3	Emergency = 3	Emergency = 15	Emergency = 0

Capital Delivery

Three Waters Capital delivery works, has been another very busy month within September for our Engineering and Delivery Team(s):

- ESG has three active worksites. York, Tweed and Devron Streets.
- We have one project out to tender and another three in the final design stages.
- We have a total value of $13.8 million in awarded contracts for this financial year.

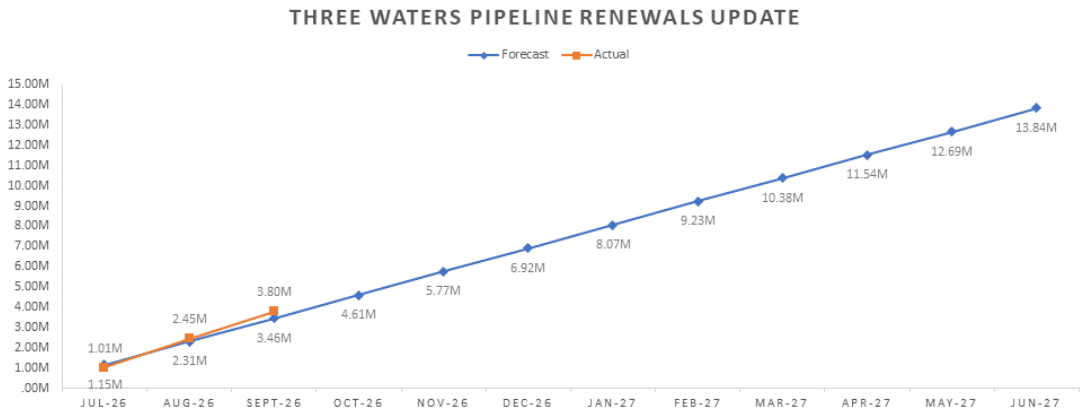
Projects Status 2026/27

Services	Number	Metres of Pipe Programmed	Metres of Pipe Constructed	Progress Percentage
STW	8	4,129	605	15%
SEW	8	5,732	1463	26%
WTR	11	7,850	260	3%
Total	27	1,7711	2,328	13%

Services	Programmed 2026/27	Spend to date 2026/27	LTP Budget	Percentage
STW	2,916,377	535,700	4,970,159	11%
SEW	6,720,068	2,451,255	3,165,510	77%
WTR	6,522,134	810,764	5,706,631	14%
TOTAL	16,158,579	3,797,719	13,842,300	27%

Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026

Forecasting Information





Deveron Street Sewer Project

Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026



Deveron Street Sewer Project





Tweed Street Sewer Project

Document Set ID: 11301885
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Health and Safety Performance

A total of 12 health and safety events were reported across the Three Waters teams during September. The increase from the 12-month rolling average was largely driven by increased near miss reporting, providing greater visibility of hazards and opportunities for early intervention.

Most reported events involved Contractors and were associated with routine operational activities. Common themes included site security, traffic management, weather-related impacts on temporary works, and minor slips, trips and equipment-related events.

The increase in reporting provides greater visibility of hazard management and demonstrates ongoing engagement with event reporting processes. Focus areas continue to be contractor management including traffic management, housekeeping, and ensuring effective controls are maintained to prevent recurrence of common issues.

Attachments

1. 3 Waters Health and Safety Dashboard – September 2026 (11306601)

Document Set ID: 11301885
Version: 11, Version Date: 29/10/2026

This information is provided from Invercargill City Council and is subject to their Privacy Policy.

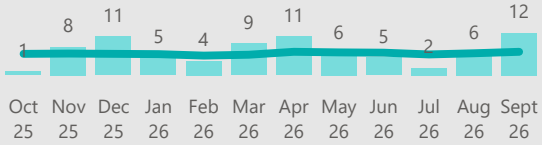
3 Waters - Health & Safety

Event Reporting, Risk, Audit, Cause & Action

Reporting Month: Sept 26

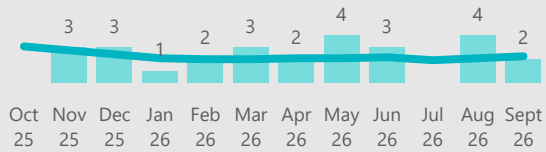
All Reported Events

Month 12 | Average 6.7 | ▲ 80.0%



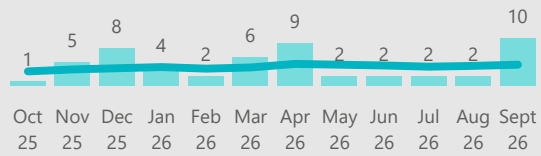
Worker Events

Month 2 | Average 2.3 | ▼ -11.1%



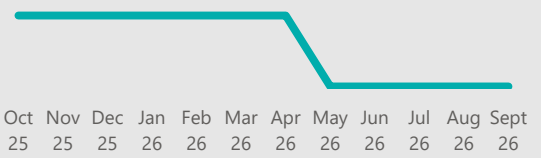
Contractor Events

Month 10 | Average 4.4 | ▲ 126.4%



Lost Time Injury

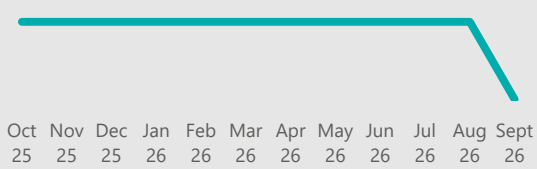
Month 0 | Average 0.0 | 0.0%



▼▲ increase/decrease on 12 month rolling average

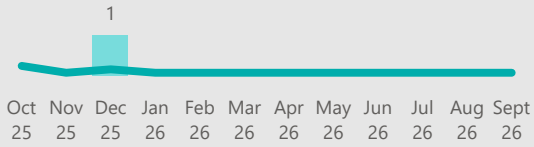
Medically Treated Injury

Month 0 | Average 0.0 | 0.0%



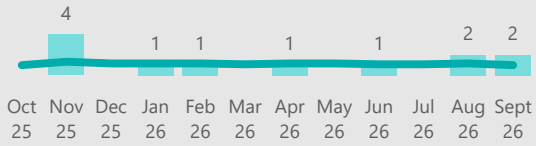
First Aid

Month 0 | Average 0.1 | ▼ -100.0%



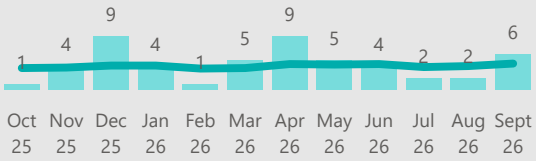
No Treatment

Month 2 | Average 1.0 | ▲ 100.0%

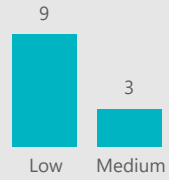


Near Miss

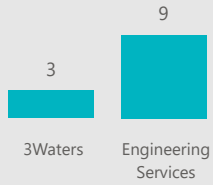
Month 6 | Average 4.3 | ▲ 38.5%



Event Risk Potential

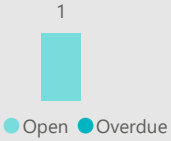


Safety Audits Completed



Cause	
Equipment	4
Person	4
Slip/Trip/Fall	2
Environment	1
Plant/Machinery	1

Actions



DRAFT WATER SERVICES STRATEGY, INFRASTRUCTURE DELIVERY PLAN, STRATEGIC ASSET MANAGEMENT PLAN AND ASSET MANAGEMENT PLANS (2027 – 2037)

To:	Water Committee
Meeting Date:	Tuesday 3 November 2026
From:	Andrew Strahan, Water Services Advisor
Approved:	Matt Keil, General Manager – Water Services
Approved Date:	Friday 23 October 2026
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

This report presents the draft Water Services Strategy (WSS), Infrastructure Delivery Plan (IDP), Strategic Asset Management Plan (SAMP), and drinking water, wastewater and stormwater Asset Management Plans (AMPs) for Water Committee review and feedback.

Together, these documents establish the proposed strategic direction, service outcomes, asset management approach and investment programme for Invercargill City Council's water services. They support preparation of Council's first statutory WSS and the associated 2027–2037 Long-term Plan (LTP).

The documents are being developed through an iterative process. They are presented at this stage to enable Committee feedback in alignment with the water services budgets and investment programme.

Financial forecasts, funding and pricing information, and the scope and timing of investment will be updated following those workshops. Any consequential changes to levels of service, performance targets, risk exposure or delivery commitments will also be reflected across the documents.

This report seeks feedback on the draft documents and outlines the process for completing them, preparing the WSS for consultation and securing final Council adoption. Final approval of the documents, budgets and investment programme is not sought at this meeting.

Document Set ID: 11280923
Version: 24, Version Date: 29/10/2026

Recommendations

That the Water Committee:

1. Receives the report "Draft Water Services Strategy, Infrastructure Delivery Plan, Strategic Asset Management Plan and Asset Management Plans – (2027–2037)".

2. Notes that the draft documents are presented for review and feedback, with financial information and budget-dependent programmes to be updated following the October and November 2026 budgeting workshops.

3. Provides feedback on the proposed strategic direction, levels of service, asset management approach, investment priorities and significant issues identified in the draft documents.

4. Notes that the WSS brings together the strategic, operational, financial and long-term infrastructure information required for Council's water services, supported by the IDP, SAMP and AMPs.

5. Notes the proposed completion, assurance, consultation and adoption process outlined in this report, including the requirement to adopt Council's first WSS no later than 30 June 2027.

Background

Council has retained responsibility for providing drinking water, wastewater and stormwater services through its Water Services Business Unit.

The Local Government (Water Services) Act 2025 establishes a dedicated planning, reporting and accountability framework for council water service providers.

The Local Government (System Improvements) Amendment Act 2026 reinforces the need for Council's planning and investment decisions to align with the purpose of local government under section 10 of the Local Government Act 2002: enabling democratic local decision-making, meeting communities' current and future needs for good-quality, cost-effective local infrastructure, public services and performance of regulatory functions, and supporting local economic growth and development through those purposes. Section 11A also requires Council, in performing its role, to have particular regard to the contribution of core services to its communities, including network infrastructure.

The draft WSS, IDP, SAMP and AMPs support Council's consideration of these requirements by linking community needs and service outcomes with asset management, investment priorities, affordability and long-term financial sustainability.

The WSS is the core planning and accountability document under the Local Government (Water Services) Act 2025. The WSS brings together information previously addressed through water services content in Council's LTP and infrastructure strategy. It provides a public statement of the water services activities Council intends to deliver, to achieve the objectives of the Local Government (Water Services) Act 2025, any other outcomes it seeks to achieve, the investment required and how those services will be funded.

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The suite of draft documents incorporate Water Committee feedback provided through the Interim Capital Programme presented to the 7 July 2026 Water Committee and the Long Term Plan Activity Workshop held on 13 August 2026.

The WSS incorporates several planning horizons:

- Detailed operational, service and pricing information for the first three financial years.
- Financial forecasts covering at least 10 years.
- Expected significant water infrastructure issues, investment options and expenditure forecasts covering at least 30 years.

Council's first WSS must be adopted no later than 30 June 2027 and will take effect on 1 July 2027 and remain in force until 30 June 2030, while retaining its longer-term planning horizons.

The IDP, SAMP and AMPs provide the supporting investment, asset management and technical evidence for the WSS.

Analysis

Purpose and Relationship of the documents

Document	Purpose and Contribution
Water Services Strategy	Sets the strategic direction, outcomes, proposed activities, levels of service, performance measures, funding approach and long-term infrastructure outlook. Provides the principal basis for public consultation and accountability.
Investment and Delivery Plan	Translates identified infrastructure needs into a prioritised and sequenced investment programme, including project timing, costs, dependencies and delivery requirements.
Strategic Asset Management Plan	Establishes the approach to managing water services assets, including asset management objectives, decision-making principles, risk management and capability improvements.
Asset Management Plans	Describe the assets, service requirements, condition and performance, lifecycle needs, risks and proposed expenditure for drinking water, wastewater and stormwater.

The documents should present a clear and consistent relationships between the outcomes Council seeks, the services it proposes to deliver, the assets and investment required, and the funding available.

Content To Be Completed Through Budgeting

The October and November budgeting workshops will test the proposed programmes against affordability, financial sustainability, regulatory obligations and Council's capacity to deliver. The following content will be populated or revised as budgets are defined:

Document / content	Required budget inputs and consequential updates
WSS – Section 5: financial content	Operating and capital budgets; forecast financial statements; funding impact statements; revenue and funding sources; debt and financing assumptions; depreciation and renewal funding; and proposed pricing and charging arrangements.
WSS – activities, service levels and long-term infrastructure outlook	Confirmation of funded activities, significant investments, service targets and the implications of investment timing. Updated long-

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Document / content	Required budget inputs and consequential updates
	term expenditure forecasts, options and significant decision points.
IDP – investment programme and delivery planning	Project costs, priorities, sequencing and annual expenditure profiles; renewal, growth and service improvement allocations; dependencies; delivery capacity; and identification of deferred or unfunded requirements.
SAMP – implementation and improvement programme	Resourcing, timing and funding for asset management improvements, including systems, information, processes and capability development.
AMPs – lifecycle programmes	Operations, maintenance, renewals and capital programmes and implications for asset performance, service levels and risk.

Finance inputs are particularly important to completing WSS Section 5 and the IDP. These inputs must reconcile with Council's wider financial planning while clearly identifying the financial position of water services.

Budget decisions may require changes beyond the financial tables. For example, deferring a renewal or improvement project may affect service performance, compliance, future costs or risk. These consequences will be made explicit in the updated documents.

Water Committee Feedback

Feedback is sought particularly on:

- Whether the proposed strategic priorities reflect the principal challenges and outcomes for Invercargill's water services.
- Whether proposed levels of service and performance measures clearly describe what consumers can expect.
- Whether significant infrastructure issues, options and investment trade-offs are adequately explained.
- The proposed approach to asset management improvement and programme delivery.
- Matters that should be clearly presented to the community through WSS consultation.

Committee feedback will be recorded and addressed through the next revision, alongside outstanding Council review comments and budget decisions.

Significance

The immediate decision is to receive and provide feedback on draft planning documents. It does not approve expenditure, set charges or adopt changes to levels of service. The WSS will, however, address matters of significance to the community, including service outcomes, investment priorities, affordability and long-term financial sustainability.

The significance of individual proposals will be assessed as the budgets and investment programme are developed, applying Council's Significance and Engagement Policy and the relevant statutory requirements, in developing the summary of major matters that will be used for community consultation.

Community Views

The draft documents are presented for Committee feedback before formal consultation on the draft WSS.

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Section 235 of the Local Government (Water Services) Act 2025 and supporting MCERT guidance provide a specific consultation process for council water service providers. Council must prepare a draft WSS and a summary of its major matters, and consult on that summary using the special consultative procedure.

The summary must explain the important issues and choices, facing the Council in relation to providing water services, including their likely consequences of implementing the WSS on:

- Water services charges
- Rates.
- Council debt.
- Levels of service.
- Council's ability to provide for urban development and housing.

While WSS consultation will take place alongside LTP consultation, the WSS summary must remain a discrete part of the consultation material.

The proposed approach is to coordinate these processes so that the community can understand the relationship between water services proposals and Council's wider Long Term Planning. The consultation programme and material will be brought back to the Committee for approval.

Implications and Risks

Strategic Consistency

The documents will be aligned with Council's proposed vision, community outcomes and relevant growth, land use, infrastructure and climate planning assumptions to the extent permissible under the Local Government (Water Services) Act 2025.

They will also reflect Council's Water Services Delivery Plan commitments, applicable regulatory requirements and the findings of relevant community water services assessments.

Financial Implications

The October and November 2026 budgeting workshops will define the water services budget proposals and test the relationship between service requirements, investment needs, affordability and financial sustainability.

The completed WSS will include forecasts for water services as if Council were a separate water service provider, together with the required information for drinking water, wastewater and stormwater individually.

Key matters to resolve include:

- Operating expenditure and capital investment requirements.
- Renewal and depreciation funding assumptions.
- Revenue, pricing and charging arrangements.
- Debt, interest costs and funding sources.
- Allocation of shared Council costs.
- Financial implications of growth, compliance and resilience requirements.
- The consequences of any deferred investment.

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The resulting financial information will be reconciled across the planning documents and Council's wider financial forecasts.

Legal Implications

The statutory framework for the WSS is established by Part 4 and Schedule 3 of the Local Government (Water Services) Act 2025. The effect of a WSS adopted by the Council is to provide a formal and public statement of the Council's intentions in relation to the matters covered by the WSS. A Council resolution to adopt the WSS does not constitute a decision to act on any specific matter included in the WSS.

The MCERT guidance addresses the requirements for the WSS's content, consultation, adoption and publication. It also distinguishes WSS assurance from the LTP audit process.

The draft WSS, IDP, SAMP and AMPs support the purpose of local government under section 10 of the Local Government Act 2002. Drinking water, wastewater and stormwater networks are core services under section 11A. The Council must have particular regard to the contribution that these core services make to its communities. The draft documents inform this consideration through proposed service levels, investment priorities, community outcomes and funding requirements.

A report from the Auditor-General on the WSS is required where directed by the Secretary for Local Government, or may be requested voluntarily, subject to the statutory timing requirements. The applicable position for Council will be confirmed with Finance and Council's auditors.

Regardless of whether a statutory Auditor-General report is required, the supporting information and assumptions will be prepared to a standard suitable for scrutiny (including in accordance with generally accepted accounting practice where relevant), with clear evidence, reconciled forecasts and documented decisions.

The IDP, SAMP and AMPs support the WSS. Relevant statutory information must be incorporated into the WSS rather than relying solely on the existence of these supporting documents.

Climate Change

The plans address the implications of climate change for water availability, flooding, asset performance, service continuity and long-term infrastructure investment.

Budget development will consider the timing and cost of adaptation and resilience measures, together with the consequences of deferring investment.

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Risks

Risk	Mitigation
Inconsistent documents or assumptions	Maintain common planning assumptions and reconcile service commitments, project programmes and financial forecasts across the documents.
Incomplete financial information	Clearly identify outstanding inputs, assign responsibility and complete them through the budgeting process before consultation approval.
Investment requirements exceed affordable funding	Test scenarios and make the service, compliance, asset and risk consequences of each funding option explicit.
Programme exceeds delivery capacity	Review sequencing, dependencies, procurement requirements and internal and external delivery resources.
Outstanding technical or compliance gaps	Complete the Council review action register and check the WSS against statutory content and applicable regulatory requirements.
Consultation does not clearly explain the choices	Prepare a discrete WSS summary explaining options and consequences, coordinated with the LTP consultation programme.
Delays compress review and adoption timeframes	Maintain a programme with defined review, assurance, consultation and approval milestones ahead of 30 June 2027

Next Steps

- Committee review – this meeting: Record feedback on the draft strategic direction, service outcomes, asset management approach and investment priorities.
- Complete review actions – November 2026: Address Committee feedback and outstanding Council technical comments and resolve remaining information gaps.
- Develop budgets – October–November 2026 budgeting workshops: Define operating budgets, capital priorities, funding assumptions and proposed revenue requirements, including the implications for service levels and risk.
- Integrate and assure the documents – following the workshops: Populate financial content, update the IDP and asset lifecycle programmes, reconcile the documents and complete technical, financial and statutory checks.
- Present completed documents to the 1 December Water Committee meeting and secure a decision to adopt for audit.
- Following incorporation of any audit outcomes, present the draft WSS, supporting documents and consultation summary to the March 2027 Water Committee meeting to approve the consultation draft – aligned with the 2027–2037 planning timetable.
- Public consultation – proposed to align with LTP consultation: Consult using the special consultative procedure, with a discrete WSS summary and supporting information available.
- Hearings and deliberations – following consultation: Hear and consider submissions, determine amendments to service, investment and funding proposals, and update the relevant documents.

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- Final approval and publication – no later than 30 June 2027: Council adopts the final WSS and confirms the supporting documents through the appropriate approval pathway. Publish the adopted WSS for commencement on 1 July 2027.

Attachments

1. Draft Water Services Strategy (11308693)
2. Draft Investment and Delivery Plan (11308698)
3. Draft Strategic Asset Management Plan (11308699)
4. Draft Water Supply Asset Management Plan (11308705)
5. Draft Wastewater Asset Management Plan (11308708)
6. Draft Stormwater Asset Management Plan (11308709)
7. MCERT Guidance: Planning, reporting, and accountability for council water service providers, January 2026 (11308710)

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Water Services Strategy

Invercargill City Council In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
Invercargill City Council

Date:
16 October 2026

Prepared by:
Stantec New Zealand

Project/File:
310104779

Document Set ID: 11308693
Version: 2, Version Date: 29/10/2026

Change History and Approvals

Version No.	Reason for Amendment	Date
0	Proposed Table of Contents and Key Content to include	18/06/2026
0.1	Draft sections for Feedback	21/09/2026
0.2	Draft for Water Committee	16/10/2026
1	Draft for Consultation	
1.1	Draft post Consultation Feedback	
2	Adopted version for Submission	

Author/s:	Sarah Robinson | Stantec New Zealand
Reviewer/s:	Teresa Wooding and Alida Van Vugt | Stantec New Zealand
Approved for Issue by:	Kathrin Winkelmann | Stantec New Zealand

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Foreword: Introduction from Michael/Matt/Grant & Water Committee

HOLD



1 Chapter 1: About Our Strategy

This strategy brings together national direction, local challenges, and Council's priorities into a single, clear plan. Most importantly, it sets out how Invercargill will continue to provide safe, reliable water services while responding to change and protecting the environment we depend on.

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1.1 The changing water services landscape in Aotearoa

Across Aotearoa New Zealand, the way water services are managed is changing.

New regulations, higher expectations for drinking water safety, and a stronger focus on protecting our environment are reshaping how we plan, invest, and deliver these essential services. At the same time, communities are asking more of their water systems - not just that they work, but that they are reliable, affordable, and leave rivers, estuaries and coastlines in a better state for future generations.

For Invercargill, these national changes come at a time when our local challenges are becoming more complex.

Our city is shaped by its environment. Invercargill's low-lying land, high groundwater levels, and proximity to the coast all influence how water moves through our networks. These natural characteristics make it harder to manage stormwater and wastewater, particularly during wet weather. Groundwater can enter pipes, reducing network capacity, and heavy rainfall can put pressure on systems that were not originally designed for today's demands.

At the same time, parts of our water infrastructure are ageing and require renewal or upgrade. Climate change is also beginning to play a bigger role, with more intense rainfall, changing groundwater conditions, and the long-term effects of sea level rise all needing to be considered in how we plan for the future.

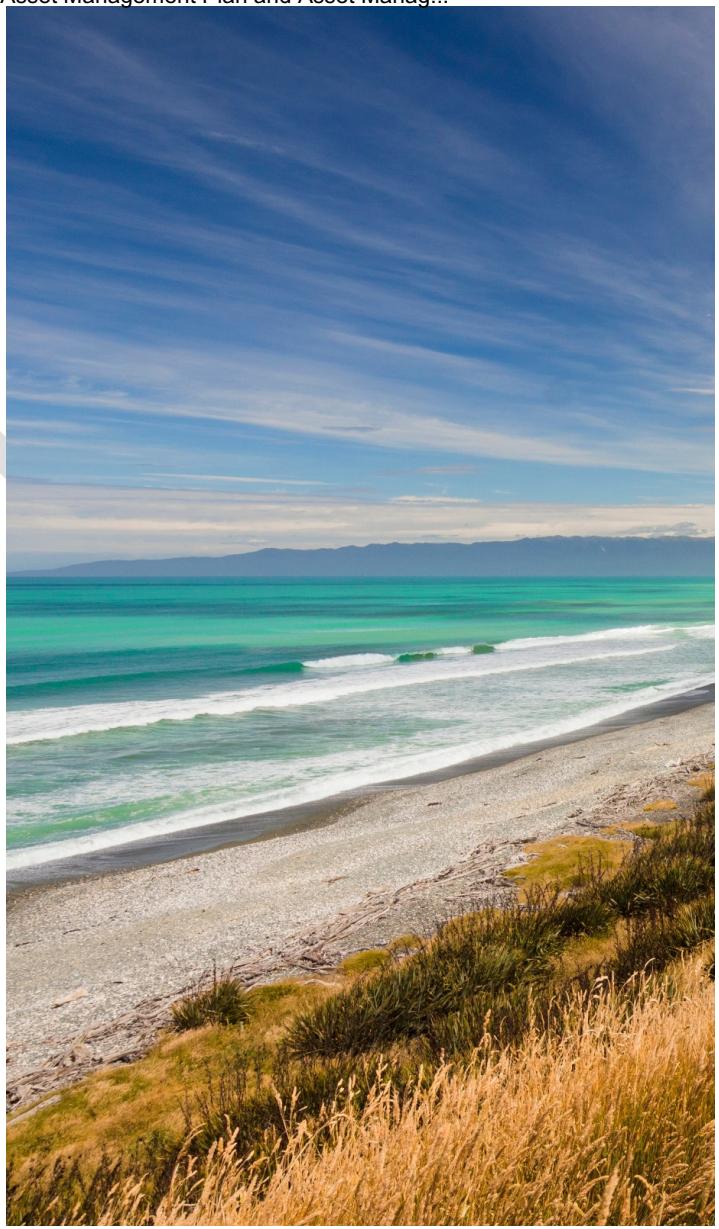
Like councils across the country, Invercargill needs to respond to these changes while keeping services affordable.

Over the next few years, the focus is on making steady, practical improvements that strengthen performance without creating unnecessary cost.

This includes:

- improving our understanding of assets so investment is better targeted
- prioritising areas where flooding or system constraints pose the greatest risk
- aligning infrastructure planning with growth and funding decisions
- reduce impact on the waterways and coastal areas from services provided by the WSBU
- reducing groundwater and stormwater entering the wastewater network
- being open about costs, trade-offs, and what different levels of service mean

This is a shift from reacting to issues as they arise, to planning ahead and managing risks more proactively.



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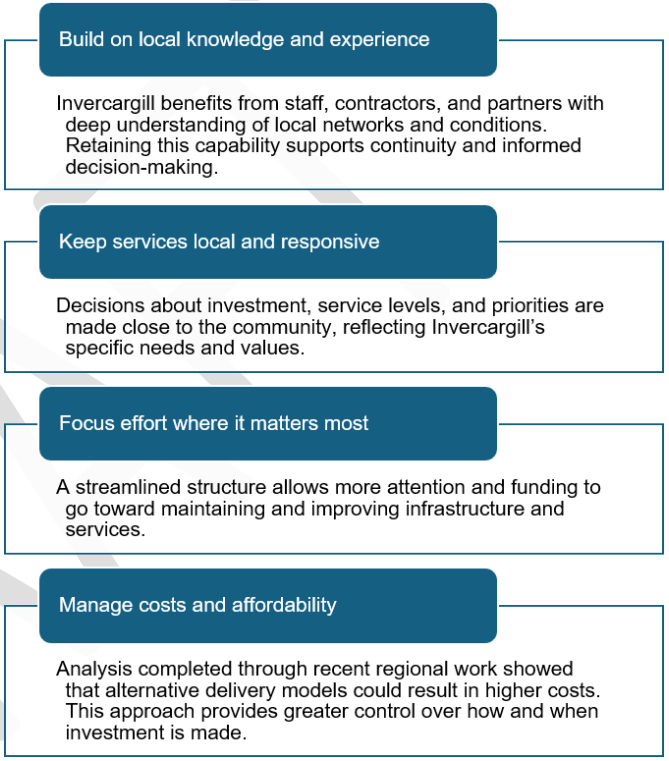
1.2 A locally delivered Water Service Business Unit

Invercargill City Council will continue to deliver water services locally, through a dedicated internal business unit. This approach builds on the systems and capability already in place, while strengthening focus, accountability, and our asset performance over time. It allows us to respond to national reform requirements both now and in the future with minimal disruption to the community.

Keeping water services within Council means decisions remain closely connected to local needs. Elected members continue to set direction and priorities through Council's strategic direction and community expectations, and the community retains a clear line of sight between the service they receive and the decisions being made.

At the same time, establishing and operating as a separate business unit allows a clear organisational focus on Three Waters service delivery, enabling clearer accountability, and a stronger commercial and performance focus.

This is not a fundamental reset - it is an evolution. We're building on existing practice while lifting consistency, transparency, and performance over time.



1.3 The role of this strategy

This Water Services Strategy sets out Invercargill's approach to providing drinking water, wastewater and stormwater services over the next 10 years, while considering the longer-term needs of the city.

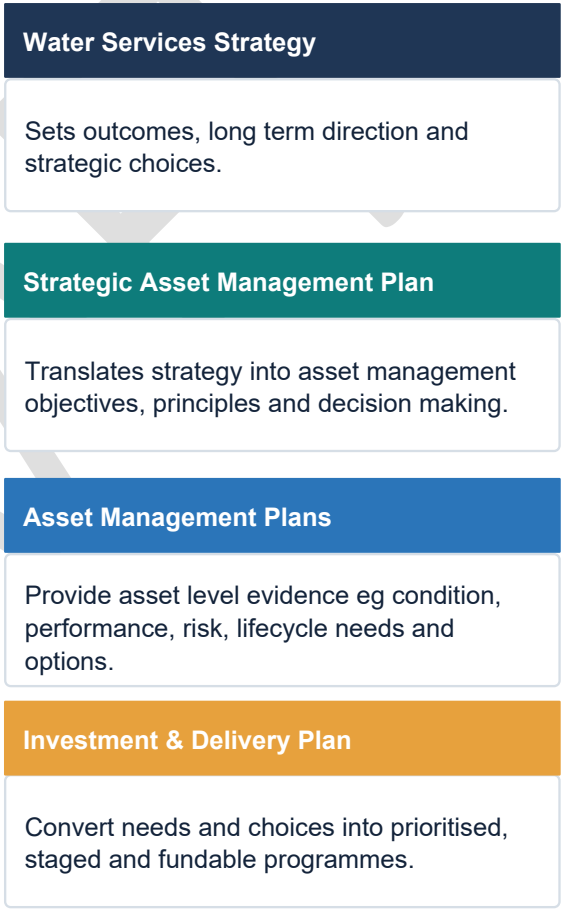
It explains:

- the challenges and pressures we need to manage
- the outcomes we want to achieve for the community
- how we will prioritise investment
- how we will build and sustain the workforce, leadership and delivery capability needed to implement the strategy
- how we will balance cost, risk and levels of service when making decisions

The strategy connects the direction set by Council and elected members with the detailed Asset Management Plans that guide investment and delivery. This creates a clear line of sight from Council's long-term objectives and community priorities through to the projects, programmes and day-to-day activities that support water services.

This connection helps Council plan investment in a coordinated and affordable way, make evidence based decisions, and clearly explain the choices and trade-offs involved. It also gives the community a clearer view of what is planned, why investment is needed, and what this may mean for future services and costs.

See Appendix A for links to the full suite of technical asset management planning documents and further detailed financial information.



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1.4 Regulatory and planning context

Water services operate within a framework of legislation, regulation, and Council planning. This framework helps ensure drinking water, wastewater, and stormwater services are safe, reliable, environmentally responsible, and financially sustainable.

National legislation and regulatory requirements continue to evolve, placing greater emphasis on public health, environmental performance, financial transparency, and long-term planning. Water service providers are regulated by a number of organisations, each with a different role. Taumata Arowai oversees drinking water quality and consumer protection, the Commerce Commission monitors financial performance and information disclosure requirements, and regional councils regulate environmental impacts through resource consents and discharge requirements. Together, these frameworks require water service providers to demonstrate how they will meet regulatory obligations, manage risks, and maintain sustainable services for future generations.

This Water Services Strategy is part of a suite of planning documents that work together to guide decision-making:

- The Water Services Strategy sets the long-term direction and identifies the key challenges, priorities, and outcomes wanted by Council and the community.
- The Strategic Asset Management Plan (SAMP) translates that direction into asset management objectives, policies, and approaches.
- Asset Management Plans (AMPs) provide detailed information about assets, levels of service, risks, lifecycle needs, and investment requirements.
- The Investment and Delivery Plan identifies the programmes and projects required to implement those plans.

Together, these documents provide a clear link between regulatory requirements, Council priorities, asset management planning, investment decisions, and service delivery.

The strategy also recognises the importance of working with mana whenua, supporting environmental outcomes, and aligning water services investment with Invercargill's wider growth, resilience, and community objectives.

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Water Services Strategy
1 Chapter 1: About Our Strategy

The figure below illustrates the line of sight between direction from ICC, water services strategy, asset management planning, investment and delivery, and the external requirements that influence them.

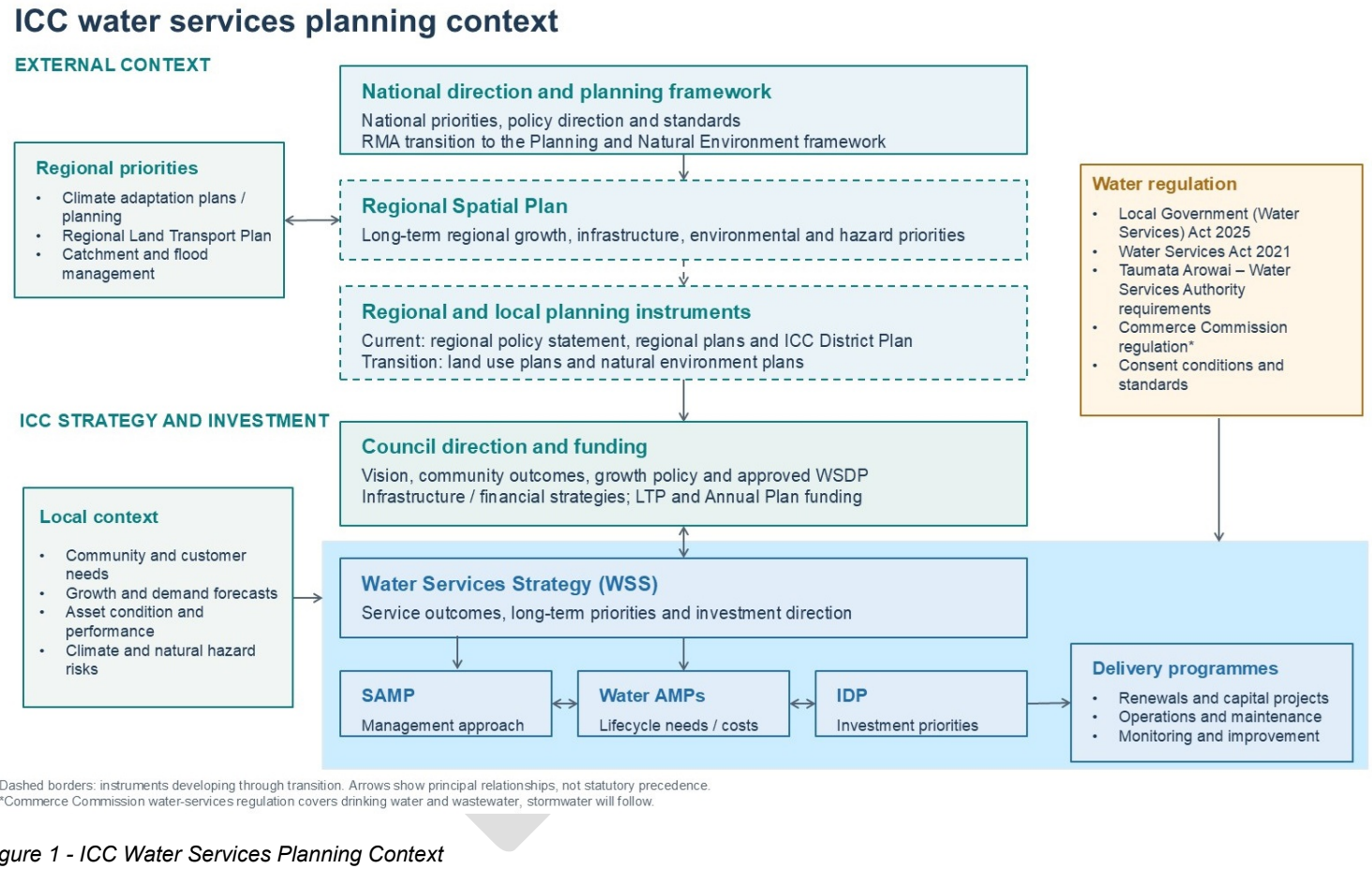


Figure 1 - ICC Water Services Planning Context



2 Chapter 2: Our Place, Our People, Our Services

Invercargill's water services are shaped by the distinctive landscape of Murihiku Southland, the communities who rely on them and the infrastructure that supports daily life

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Water Services Strategy
2 Chapter 2: Our Place, Our People, Our Services

2.1 Where we're operating

A landscape shaped by water

Invercargill is a relatively small and compact city, extending from Makarewa in the north to Bluff in the south, and from Kennington in the east to Ōreti Beach in the west.

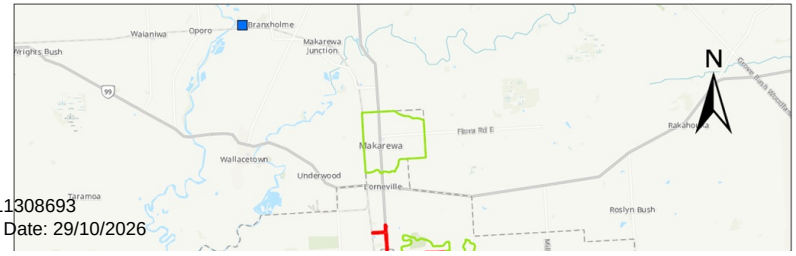
Water is a defining feature of this landscape. Four major waterways, the Waikiwi, Waihōpai, Ōtepuni and Kingswell, thread through the city. Together with the Ōreti River, they connect Invercargill to the New River Estuary. Bluff Hill, Motupōhue, the estuary, coastline and areas such as Sandy Point are important features of the district's natural and cultural setting.

Invercargill's relatively flat terrain provides some advantages for its water infrastructure. Compared with hillier environments, pipes are generally less exposed to the ground movement and pressure variations that can contribute to failures.

However, the city's low-lying landscape, high groundwater levels and coastal location make the district particularly sensitive to natural hazards and the effects of climate change. More intense rainfall, changing groundwater conditions and sea level rise may increase surface flooding, place additional pressure on stormwater and wastewater networks, and affect critical infrastructure. These risks will need to be progressively incorporated into asset planning, renewal decisions and future investment.

Place snapshot

- District area: 49,142 hectares
- Average annual rainfall: ~1035 mm



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2.2 Who we operate for

Every day approximately 58,000 residents as well as local businesses, industries and visitors, rely on Invercargill's water services. These services protect public health, support the economy and help our communities remain resilient.

Our networks generally have capacity for expected residential and commercial growth. Greater uncertainty comes from future industrial development, which could require more water or additional wastewater and stormwater services, particularly outside existing serviced areas.

Visitors and tourism-related businesses also depend on reliable water services. Understanding how and where demand changes will help us plan future investment carefully.

Community snapshot

- Resident population: **58,000**
- Projected population in 2037: **61,300**
- Properties receiving drinking water services: **22,875**
- Properties receiving wastewater services: **24,211**
- Properties receiving stormwater services: **23,164**
- Major industries and water users: **XX**

2.3 What we operate

2.3.1 Water Supply

The WSBU provides treated drinking water to the urban areas of Invercargill and Bluff. Water is treated at Branxholme, north of the city, then conveyed to reservoirs serving the wider network.

We rely on a single water source, making the development of an alternative supply an important part of strengthening long-term resilience. Reticulated drinking water is not currently provided to Kennington or Otatara.

What we operate	Branxholme water treatment plant, 422 km of pipes, 10 reservoirs and 6 pump stations
Key Asset Focus 2027-37	• Maintain existing network • Boost resiliency through emergency and alternate water supply projects. • Increase understanding of asset performance through metering • Monitor demand for growth

2.3.2 Wastewater

Invercargill has 3 wastewater treatment plants. The Clifton Wastewater Treatment Plant serves the Invercargill urban area, parts of Otatara, Kennington and the Moore Road area.

The Bluff plant services the Bluff Township and the Ōmāui oxidation pond services the Ōmāui township.

What we operate	378 km of pipes, 31 pump stations and treatment plants at Clifton and Bluff, and Ōmāui oxidation pond
Key Asset Focus 2027-37	• Maintain existing network • Clifton and Bluff wastewater discharge projects • Reduce groundwater and stormwater entering the network (Inflow and Infiltration)

2.3.3 Stormwater

Invercargill's stormwater network collects and conveys rainfall runoff to help reduce surface flooding and protect homes, businesses and public spaces. The system includes pipes, pump stations, outfalls and associated drainage assets that discharge to the district's waterways and coastal receiving environments.

What we operate	416 km of pipes, 8 pump stations, stormwater ponds and treatment, and flood banks
Key Asset Focus 2027-37	• Improve understanding of network capacity • Connect risk and condition information to improve renewals planning and investment decisions



3 Chapter 3: What Matters Most For Water Services

As expectations, regulatory requirements, and investment needs continue to evolve, it is important that decisions are guided by a clear and consistent set of priorities.

This chapter outlines the role water services play in supporting Invercargill City Council's vision and mission, the objectives of the Water Services Business Unit, and how success will be measured over time.

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3 Chapter 3: What Matters Most For Water Services

Water services play a critical role in supporting the health, wellbeing, prosperity, and resilience of Invercargill. Every day, the community relies on drinking water, wastewater, and stormwater services to protect public health, support economic activity, enable growth, and safeguard the environment.

3.1 Our purpose and vision for water services

The Water Services Business Unit contributes to Invercargill City Council's vision of "Our City with Heart – Hē Ngākau Aroha" by providing safe, reliable, and sustainable drinking water, wastewater, and stormwater services that support thriving communities today and into the future.

Our approach is guided by Council's mission, Waihōpai – To leave in good order. For water services, this means acting as responsible stewards of essential infrastructure, protecting the environment, and making investment decisions that balance the needs of current and future generations.

Water services are fundamental to the outcomes Council seeks to achieve for the community. They support public health, environmental wellbeing, economic development, resilience, and quality of life. Delivering these services effectively requires more than maintaining existing infrastructure. It requires thoughtful planning, sound investment decisions, and a long-term focus that responds to changing community needs, regulatory requirements, and environmental challenges.

The Water Services Business Unit will continue to use Council's vision, mission, and strategic direction as the foundation for how water services are planned, managed, and delivered.

Vision: Our City with Heart – Hē Ngākau Aroha

Mission – Waihōpai – To leave in good order – through supporting appropriate management of this infrastructure to ensure it meets the needs of the community now and into the future in a cost effective manner and meeting the future expectations of good guardianship.

3.2 Our WSBU objectives

The Water Services Business Unit has established a set of objectives that support Council's vision and provide direction for how water services will be delivered and improved over the life of this strategy.

These objectives reflect the evolving water services environment and the need to balance service reliability, regulatory compliance, affordability, environmental responsibility, organisational capability, and long-term sustainability. Together, they provide a framework for decision-making and help ensure that investment, business unit structure and operational activities remain aligned with Council's priorities and community expectations.

While each objective focuses on a specific area, they are interconnected and often influence one another. For example, strong governance and asset management practices support financial sustainability, while workforce capability and resilience investment help deliver reliable services and improved outcomes for the community.

WSBU Objective	Description
Operate as an Independent, Ringfenced, Commercially focused Utility	ICC will operate its water services as a financially ringfenced, professionally governed business unit with the flexibility to outsource where appropriate. This includes establishing formal agreements for internal support services, strengthening governance, and ensuring organisational structures support capability and performance.
Develop Workforce and Industry Capability	ICC will invest in building workforce capability and industry leadership by developing a technical training programme aligned with industry standards, creating a leadership pipeline, implementing a workforce development plan, and improving staff retention in the water services sector.
Comply with Public Health and Environmental Regulations	ICC will maintain full compliance with drinking water, wastewater, and stormwater standards, including all relevant resource consent conditions and national environmental regulations.
Ensure Financial Sustainability, Drive Efficiency	ICC will ensure water services are financially sustainable and responsive to customers with costs recovered from users in a fair and transparent manner. This includes meeting Commerce Commission requirements, leveraging procurement and shared service efficiencies.
Support Council's Growth and Development Objectives	ICC will align water service delivery with the city's growth aspirations. Financial contribution will be used where possible to effectively to fund growth-related investments. Development contributions could also be used in the future should the risk of city population and industry decline no longer be a risk.
Deliver Reliable and Resilient Water Services	ICC will build resilience into its water network by improving risk understanding, addressing vulnerabilities from sea level rise, flood event, and ensuring redundancy of critical assets where possible.
Partner with Mana Whenua and Engage Effectively with the Community	ICC will work in partnership with Mana Whenua and maintain transparent and responsive relationships with the community by actively seeking customer feedback, monitoring satisfaction, and demonstrating a commitment to being a responsible and accountable service provider. Council has existing Mana Whenua representation as part of its Governance structure.

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3.3 What success looks like for our community

Success means providing water services that protect public health and the environment, remain reliable and responsive, support the city's growth and resilience, and are affordable for current and future communities.

Levels of service translate these expectations, together with regulatory obligations and the objectives of the Water Services Business Unit, into measurable outcomes that can be monitored and reported over time.

Together, these measures provide a consistent basis for tracking service performance, identifying emerging issues and explaining whether the services being provided are achieving the outcomes expected by Council and the community.

No changes to existing levels of service are currently planned. Our priority is to maintain these levels while investing in the infrastructure, information and capability needed to manage ageing assets, regulatory requirements and future resilience pressures.

Performance information will be regularly reviewed alongside customer feedback, faults and failures, asset condition, capacity, criticality and risk to identify where maintenance, renewal, operational improvements or capital investment may be required.

The table below summarises the performance measures and targets that will be used to monitor water supply, wastewater and stormwater services.

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported
Water Supply					
1.1a-1.1j	The extent to which the local authority's drinking water supply complies with the following parts of the drinking water quality assurance rules: (a) 4.4 T1 Treatment Rules; (b) 4.5 D1.1 Distribution System Rule; (c) 4.7.1 T2 Treatment Monitoring Rules; (d) 4.7.2 T2 Filtration Rules; (e) 4.7.3 T2 UV Rules; (f) 4.7.4 T2 Chlorine Rules; (g) 4.8 D2.1 Distribution System Rule; (h) 4.10.1 T3 Bacterial Rules; (i) 4.10.2 T3 Protozoal Rules; and (j) 4.11.5 D3.29 Microbiological Monitoring Rule	100% compliance	Drinking Water Quality Assurance Rules / regulatory compliance	Safe drinking water	Safe drinking water / public health

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3 Chapter 3: What Matters Most For Water Services

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported
2.1	The percentage of real water loss from the Council's networked reticulation system. (Calculated according to the methodology outlined in Water NZ Water Loss Guidelines publication)	<30%	Water NZ Water Loss Guidelines / existing ICC target	Efficient and sustainable use of water	Sustainable and efficient water services
2.2	The average consumption of drinking water per day per resident within the Invercargill City Council territorial district	<300 L/person/day	Existing ICC target / demand management	Responsible water use and affordability	Efficient use of resources
3.1	The median response time for **urgent** callouts, (from the time the Council receives notification to the time that service personnel reach the site)	4 hours	Existing service response target	Responsive service during faults	Reliable and responsive service
3.2	The median time to resolve **urgent** callouts (from the time the Council receives notification to the time that service personnel confirm resolution of the fault or interruption)	24 hours	Existing service response target	Timely restoration of service	Reliable water supply
3.3	Attendance for **non-urgent** call-outs: from the time that council receives notification to the time that service personnel reach the site	5 working days	Existing service response target	Timely response to non-urgent issues	Responsive customer service
3.4	Resolution of **non-urgent** call-outs: from the time that the council receives notification to the time that service personnel confirm resolution of the fault or interruption	10 working days	Existing service response target	Timely resolution of non-urgent issues	Responsive customer service
3.5	The total number of complaints received by Council per 1,000 connections about any of the following: -(a) Drinking water clarity -(b) Drinking water taste -(c) Drinking water odour -(d) Drinking water pressure or flow -(e) Continuity of supply -(f) Council's response to any of these issues	<10 total	Existing ICC target / mandatory customer satisfaction measure	Acceptable water quality, pressure, continuity and responsiveness	Customer confidence and service reliability

Water Services Strategy
3 Chapter 3: What Matters Most For Water Services

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported
Wastewater					
6.1	DIA Performance Measure 1 (system and adequacy) Number of dry weather wastewater overflows per 1,000 properties	Max 4	Existing service response target	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health.	To safeguard public health and the environment
6.2	DIA Performance measure 2 (discharge compliance) Compliance with ICC's resource consents for discharge from its sewerage system measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions received by ICC in relation to those resource consents.	Max 0	Existing service response target	Council monitors and effectively manages the stormwater network to support environmental health and efficient use of resources.	To safeguard public health and the environment
7.1	a) The median response time from notification to arrival on-site to attend wastewater overflows resulting from a blockage or other fault in the sewerage system	<1 hour	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community
7.2	b) The median response time from notification to resolution of wastewater overflows resulting from a blockage or other fault in the sewerage system	<6 hours	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community

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3 Chapter 3: What Matters Most For Water Services

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported
7.3	DIA Performance Measure 4 (customer satisfaction) The number of complaints received about: • sewage odour • system faults • system blockages • ICC's responsiveness (expressed per 1,000 properties connected to the Council's sewerage system)	Max 4	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community
Stormwater					
4.1	The number of flooding events that occur in the Invercargill City district	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability
4.2	For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to the WSBU's stormwater system)	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability
4.3	Compliance with the WSBU's resource consents for discharge from its stormwater system, measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions Received by WSBU in relation to those resource consents.	0 non-compliance notices	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Environmental Wellbeing

Water Services Strategy
3 Chapter 3: What Matters Most For Water Services

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported
5.1	The median response time to attend a flooding event, measured from the time that The WSBU receives notification to the time that service personnel reach the site	<1 hour	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Responsive customer service
5.2	The number of complaints received about the performance of the stormwater system (expressed per 1,000 properties connected to the WSBU's stormwater system)	<4 complaints	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability

Table 1 - Levels of Service for ICC WSBU



4 Chapter 4: The Pressures We Need To Manage And How We Will Respond

This chapter explains the pressures most likely to influence our services and investment decisions, and how we intend to respond.

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Providing safe, reliable and affordable water services requires us to plan for a range of pressures. Some relate to the age and condition of our assets, while others arise from regulatory change, environmental expectations, growth, climate risks and the increasing cost of infrastructure.

The Strategic Asset Management Plan further explains how these pressures are incorporated into asset management processes and investment planning.

4.1 Asset condition and renewals

Looking After Existing Infrastructure

Much of Invercargill's water services networks are ageing, with many pipes and assets now reaching the stage where renewal or replacement needs to be carefully planned. While the networks are generally performing well, some assets are nearing the end of their expected life, and better information is needed in some areas to confirm condition and prioritise investment. This means the WSBU needs to keep improving asset data, inspections and modelling so renewals are based on risk, condition and service importance - not just asset age.

Our response is to focus renewal investment where it matters most: on critical assets, areas with known performance issues, and projects that support reliable and resilient services. Some lower-risk assets may continue to be managed and monitored for longer where this is appropriate, helping to smooth costs and reduce affordability pressures.

Until priority upgrades and renewals can be funded and delivered, performance expectations will need to remain realistic and reflect the condition, capability and constraints of the existing assets.

Over time, the WSBU will continue to strengthen its renewal programme so investment is targeted, deliverable, and supports safe and reliable water, wastewater and stormwater services for the community.

4.2 Compliance and environment

Protecting People and The Environment

Water services are subject to increasing environmental and regulatory expectations, including higher standards for drinking water safety, wastewater treatment and discharges, stormwater management, and the protection of groundwater and waterways. Meeting these requirements is essential to protect public health, support environmental outcomes, and maintain community confidence in the services we provide. For Invercargill, this means continuing to invest in the systems, processes and infrastructure needed to meet current obligations and prepare for future changes.

Our response is to take a planned and proactive approach to compliance and environmental improvement. This includes prioritising investment where it reduces risk, improves environmental performance where practical, and supports long-term consent requirements. We will continue to work with regulators, mana whenua and the community to understand expectations, make evidence based decisions, and ensure our water, wastewater and stormwater services are managed in a way that protects both people and the environment.

4.3 Growth and demand

Supporting Change in The Right Places

Invercargill is expected to experience relatively low and steady growth, rather than the high growth pressures seen in some other parts of New Zealand. Our existing water services networks were originally built to support a larger population, which means there is generally capacity to accommodate projected residential and commercial growth. However, we still need to plan carefully so that future growth is supported in the right places, at the right time, and without placing unnecessary cost on the wider community.

The main area of uncertainty is future industrial growth. New or expanded industry could create higher demand for water supply and wastewater services, particularly if development occurs in areas not currently serviced or where significant volumes are required. We are continuing to monitor this demand and forecast it where possible, including considering whether there is sufficient demand for the networks to be extended. Any decision to expand them will need to be supported by clear evidence of expected demand over time, affordability of upgrades that may be required, capacity to deliver any solution and the economic or safety benefits to the community if the extension was to proceed.

4.4 Climate change and resilience

Preparing For Disruption And Uncertainty

Climate change is expected to place increasing pressure on Invercargill's water services. More frequent and intense rainfall events can increase stormwater flows, contribute to surface flooding, and place pressure on wastewater networks through inflow and infiltration. At the same time, a changing climate can affect the security and reliability of water supply, particularly during dry periods or extreme weather events. These pressures mean our water services need to be planned and managed to remain reliable in a wider range of future conditions.

Our response is to strengthen the resilience of critical infrastructure and make sure climate risks are built into long-term planning and investment decisions. This includes improving our understanding of network capacity, prioritising upgrades and additional redundancy in vulnerable areas, protecting critical assets, and considering climate impacts when renewing or replacing infrastructure. By planning ahead, we can reduce the risk of service disruption, support community wellbeing, and make sure investment decisions are affordable, practical and resilient over the long term.

4.5 Financial and affordability

Balancing Risk, Benefits And Cost

Providing safe, reliable water services requires significant ongoing investment, particularly as Invercargill's water, wastewater and stormwater networks continue to age and as regulatory expectations increase. Major renewal, resilience and compliance projects are planned over the coming years, including investment in critical pipelines, wastewater treatment and discharge improvements, and an emergency water supply.

These investments are necessary to maintain services for current and future communities, but they will also increase costs and debt over time.

Affordability is therefore a key pressure for Council and the community. Water services charges are expected to increase as investment requirements grow, and this needs to be balanced carefully against household affordability and the need to keep services financially sustainable. Council's response is to plan investment over time, prioritise critical assets, use debt appropriately so costs are shared across the generations who benefit, and look for fair ways to recover costs from those who create additional demand.

These pressures are interconnected. For example, an ageing asset may also present a compliance or resilience risk, while the preferred response may be constrained by affordability or delivery capacity. We will therefore consider the pressures together, rather than in isolation, when setting priorities and making investment decisions.

Meeting these expectations also depends on our people. We will progressively strengthen the WSBU's technical, operational and delivery capability through targeted recruitment, training, knowledge transfer and succession planning. Access to specialist expertise and sufficient contractor capacity will support our internal team as requirements and workloads change.



5 Chapter 5: Funding Waters (Funding, Pricing And Financial Sustainability

Summary of chapter here – post finance content input

Project: 310

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5.1 Overview of financial strategy

To be included once Financial Strategy 2026 is finalised.

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5.2 Approach to funding, revenue and pricing

To be included once Financial Strategy 2026 is finalised.

5.2.1 Pricing and charging approach, methodology + schedule of prices and charges

To be included once Financial Strategy 2026 is finalised.

5.2.2 Funding and revenue approach

To be included once Financial Strategy 2026 is finalised.

5.3 Financial forecast tables

To be included once financial forecasts are finalised - Forecast financial statements prepared for 2026/27

5.4 Funding impact statements 2027-2057

To be included once financial forecasts are finalised - potentially move to appendices if summary version covered above, or include in full instead of summary above)

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5.5 Financial sustainability and debt headroom

To be included once Financial Startegy is finalised.

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6 Chapter 6: Looking Ahead

This chapter explains our priorities for the next ten years, where investment will be directed, and the important decisions that may be needed to provide safe, reliable and sustainable water services over the next 30 years.

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This chapter describes the most likely scenario of how we will manage our assets. However, we know that over the next 30 years, Invercargill's water services will need to respond to ageing infrastructure, changing regulatory and environmental requirements, climate and natural hazard risks, and uncertainty about the timing and scale of future growth. At the same time, investment must remain affordable, financially sustainable and achievable within the capacity of our WSBU and the wider supply market. Together, these factors will influence when assets are maintained or replaced, where additional resilience or capacity is required, and therefore how our projects are prioritised and sequenced.

6.1 Our priorities for the next ten years

Priority	What this means over the next ten years
Maintain Existing Infrastructure	Maintain the performance of existing water supply, wastewater and stormwater assets through planned maintenance and a deliverable renewal programme. Renewal decisions will increasingly reflect asset condition, performance, criticality and risk.
Prioritise Critical Assets, Compliance And Resilience	Direct investment towards the assets and projects that present the greatest risks to public health, the environment, regulatory compliance and service continuity. Key investments include the Clifton and Bluff wastewater discharge projects, the emergency or alternative water supply, rising main duplications and the core renewals programme.
Boost Asset Intelligence	Strengthen asset data, condition information, monitoring, metering and network modelling so that emerging issues are identified earlier and investment decisions are supported by stronger evidence.
Build and sustain workforce and delivery capability	Strategically resource operational, technical, asset management and investment delivery functions. Develop and retain staff, strengthen leadership and succession in critical roles, and maintain access to specialist expertise and a capable supply chain. Align workforce and supplier capacity with the timing and scale of the investment programme.
Monitor And Respond To Growth And Demand	Monitor residential, commercial and industrial demand, particularly around Awarua and Bluff. Where the timing or scale of growth is uncertain, use staged or demand-triggered responses and ensure that any network expansion is supported by evidence of need, affordability, deliverability and fair cost recovery.
Strengthen The Connection Between Asset And Financial Planning	Connect information about asset condition, performance and risk with project costs and available budget. This will help us prioritise the right work, at the right time, and develop an investment programme that is affordable and achievable.
Plan For Climate Change And Natural Hazards	Incorporate more intense rainfall, changing groundwater conditions, flooding, drought, sea level rise and other natural hazards into long-term planning, renewal decisions and infrastructure design. Focus on protecting critical assets, understanding network capacity and strengthening service resilience in vulnerable areas.
Sequence Investment Realistically	Stage projects to reflect affordability, debt capacity, organisational capability, contractor and specialist availability, procurement requirements and the practical ability to deliver alongside other infrastructure programmes.

Use Adaptive Approaches Where Uncertainty Is High	Keep the timing, scale and preferred response for major investments under review as asset information, technical investigations, regulatory requirements, costs and demand forecasts become clearer. Monitor strategic signals and investigate options before committing to significant or irreversible investment.

6.2 Investing in our water services

Continued investment is needed to keep Invercargill's water services safe, reliable and sustainable. The following breakdown shows how forecast expenditure is divided between maintaining or improving levels of service, responding to growth and renewing existing assets. Our Investment and Delivery Plan holds more detail on the programme in full.

Note: The expenditure forecasts that follow show the anticipated capital and operating expenditure for the first ten years and the subsequent five-year periods. These forecasts represent the current most likely scenario and will be reviewed through future planning cycles as project scope, costs, risks, regulatory requirements and delivery constraints become better understood.

$ FORECAST: LGA category spend breakdown required by WSS legislation. Available once capex and opex programme finalised.

TOTEX by levels of service/growth/renewals cat years 1,2,3,4,5,6,7,8,9,10,11-15, 16-20, 21-25, 26-30

6.3 Key decisions on our radar

The following decisions are expected to have material implications for service performance, risk, affordability, resilience and long-term investment. Timing, costs and preferred options will be refined as investigations, engagement, consenting and business cases progress.

Emergency / Alternative Water Supply - Estimate $$-$$

A decision is required on the role and scale of an alternative water supply at Awarua. This decision will depend on confirmation of available water volumes and quality, and determine the treatment, storage and network connections required.

The primary supply risk is reliance on the Ōreti River as the sole raw water source and the Branxholme WTP as the only treatment facility serving Invercargill and Bluff. A prolonged interruption affecting the source or treatment plant could disrupt potable water supply and results in impacts on public health, essential services and/or economic activity.

The Emergency / Alternative Water Supply Project is intended to reduce this dependency by developing a supplementary groundwater source within the Awarua Plains. Investigations undertaken to date indicate that the aquifer may support an emergency supply and potentially a larger alternative supply. This is still subject to further investigation, monitoring, consenting and Council decisions.

The WSBU is planning to take a multi staged approach to this project/programme:

- Phase 1 - Emergency Supply: approximately 6 ML/day of treated water, intended to provide about 80 litres per person per day during a prolonged outage. Planned for delivery by 2030.
- Phase 2 - Alternative Supply: potential expansion to 15 ML/day, including treatment and connections to the existing network at Tramway Road and Rockdale Road.
- Phase 3 - Expanded Alternative Supply: potential expansion to 20 ML/day, including a secondary WTP, storage reservoir and pump station at Skye Street and further network reticulations and service connections.

Decisions on whether Phases 2 or 3 go ahead will be made following aquifer performance outcomes of Phase 1 and Business Case recommendations.

Wastewater Treatment and Discharge Pathways - Estimate $$-$$

Long-term discharge solutions are required for the Bluff and Clifton WWTPs. Potential options include existing or extended marine discharges, land discharge and beneficial or industrial reuse of Clifton WWTP effluent.

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Updated estimates indicate that the Clifton wastewater treatment and discharge options may cost significantly more than previously anticipated. Further assessment is required before a preferred option is selected, and the capital programme currently includes an average allowance across the options being considered.

Water Metering and Demand Management - Estimate $$-$$

Additional water meters are proposed across the network to improve understanding of water use, leakage and asset performance. The first phase will focus predominantly on trunk mains, helping identify areas of water loss and assets that may require rehabilitation or replacement.

A future decision will be required on the scope and phasing of a potential second phase involving meters at individual connections. This decision will consider the information gained from the first phase, customer impacts, costs, demand-management benefits and the potential use of metering as a basis for charging.

Growth Related Infrastructure - Estimate $$-$$

Residential growth is expected to remain modest, but future industrial development, particularly around Awarua and Bluff, could create significant and uncertain demand for water supply and wastewater services.

The Morrison Low report on the viability of development contributions (August 2026) identifies the following water supply projects as including a growth component:

- Supply development and treatment at Awarua
- Pipe network connection to and from Awarua
- Skye Street water supply reservoir and pump station
- Additional water supply capacity to Bluff
- Additional water supply capacity from Waikiwi to Doon Street

Decisions on whether, when and how to proceed with these projects will be informed by confirmed demand, the emerging spatial plan, network capacity and modelling, affordability, deliverability and an appropriate approach to cost recovery. Staged or demand-triggered responses will be preferred where the location, timing or scale of growth remains uncertain.

Stormwater and Wastewater Laterals - Estimate $$-$$

Council will formalise ownership of wastewater and stormwater laterals between the property boundary and the public main under section 462 of the Local Government Act 1974, in accordance with the Water Committee's resolution, with the transfer to take effect on 1 July 2027, subject to the required public notice and final asset identification. Implementation will include confirming and mapping the affected assets, completing the statutory process, and

incorporating associated costs into the Investment and Delivery Plan (IDP). Asset records and operational arrangements will be updated, and ownership boundaries and maintenance responsibilities communicated to property owners and service providers.

Other Emerging Decisions

Other significant decisions may emerge as asset information improves and regulatory, climate, growth and service requirements develop. These may include:

- the scale and timing of investment required to address ageing water, wastewater and stormwater networks;
- resilience and adaptation responses for assets exposed to flooding, sea-level rise, drought and seismic hazards;
- intervention strategies for critical assets where condition information or redundancy is limited; and
- changes to service performance measures or targets arising through future planning and regulatory processes.

As these matters develop, significant decisions will be supported by evidence proportionate to their scale and risk, including assessment of options, service impacts, risk and resilience, whole-of-life cost, affordability, deliverability, stakeholder interests and implementation dependencies.

Drinking Water and Sewerage Reticulation Extension – Estimate $$

A decision will be required on whether to extend drinking water or wastewater services to communities that are not currently fully serviced. The scope of the decision includes whether services should remain as they are or be extended, which communities and services should be prioritised, when any extension should occur, and how the costs should be recovered.

The decision could create significant capital and operating costs and would need to consider community demand, affordability, legal obligations, deliverability and how the work could be funded fairly.

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6.4 Strategic signals for the next 20–30 years

Beyond the first ten years, the exact timing and form of some investments remain uncertain. Council will therefore continue to monitor a set of strategic signals that indicate when further investigation, a change in approach or additional investment may be required.

Asset performance and condition

Increases in faults, failures, leakage, blockages, overflows or maintenance costs that indicate an asset or network is no longer performing reliably or economically.

Critical asset risk

New information showing that a critical asset, single point of failure or vulnerable location presents an unacceptable risk to public health, compliance, service continuity or the environment.

Climate and natural hazard exposure

Changes in rainfall intensity, groundwater conditions, flooding, drought, sea level rise or seismic risk that materially affect asset performance, access, network capacity or the reliability of essential services.

Water supply security

Monitoring or investigation results that change the understanding of source reliability, aquifer capacity, emergency storage or the scale and timing of an alternative water supply.

Wastewater and stormwater performance

Increasing inflow and infiltration, wet-weather flows, flooding or discharge pressures that indicate additional monitoring, operational changes, network upgrades or treatment improvements are needed.

Regulatory requirements

New or amended drinking water, wastewater, stormwater, environmental or economic regulation that changes required performance, monitoring, reporting or investment.

Growth and demand

Confirmed residential, commercial or industrial development that creates additional demand, particularly where development occurs outside currently serviced areas or requires unusually large volumes.

Affordability and financial capacity

Changes in project costs, funding availability, revenue, debt capacity or household affordability that require programmes to be staged, rephased or reconsidered.

Delivery capacity

Changes in internal capability, specialist skills, contractor availability or market capacity that affect the timing and achievability of the investment programme.

These signals do not automatically mean that additional new work or investment will be required. Instead, they will help us identify when an issue needs to be investigated and when plans may need to change.

6.5 Closing statement

Water services are essential to Invercargill's health, wellbeing, economy and environment. This strategy provides a clear direction for maintaining these services while responding to ageing infrastructure, regulatory change, climate and natural hazard risks, and future investment pressures.

The path ahead will require significant investment and careful choices. Not every need can be addressed at once, and some decisions will depend on information that is still developing. Council will therefore focus first on the areas of greatest service, public health, environmental, compliance and resilience risk, while considering affordability and the practical ability to deliver. Decisions will be supported by improved asset information, transparent assessment of options and a clear connection between community outcomes, levels of service, risk and investment.

Through the dedicated Water Services Business Unit, Invercargill will retain local knowledge and accountability while strengthening the systems, capability and planning needed to manage its water assets over the long term. The Strategy will work alongside the Strategic Asset Management Plan, Asset Management Plans and Investment and Delivery Plan to convert this direction into prioritised, funded and achievable programmes.

By planning ahead, monitoring change and adapting as better information becomes available, Council will continue to provide safe, reliable, resilient and financially sustainable water services for current and future communities



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Appendices

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Appendix A Related Documents, Legislation and Policy

Name	Description	Location
Strategic Asset Management Plan 2026		
Investment and Delivery Plan 2026		
Water Supply Asset Management Plan 2026		
Wastewater Asset Management Plan 2026		
Stormwater Asset Management Plan 2026		
Risk Management Framework and Policy 2026		
Invercargill City Council Water Services Delivery Plan 2024		
Risk and Criticality Framework 2017		
Asset Management Policy 2017		

Appendix B Schedule of Prices and Charges

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Investment and Delivery Plan

Invercargill City Council In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
Invercargill City Council

Date:
16 October 2026

Prepared by:
Stantec New Zealand

Project/File:
310104779

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0	Proposed Table of Contents and Key Content to include	18/06/2026
0.1	Draft sections for Feedback	21/09/2026
0.2	Draft for Water Committee	16/10/2026
1	Draft for Consultation	
1.1	Draft post Consultation Feedback	
2	Adopted version for Submission	

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Appendix C Funded Investment Programme
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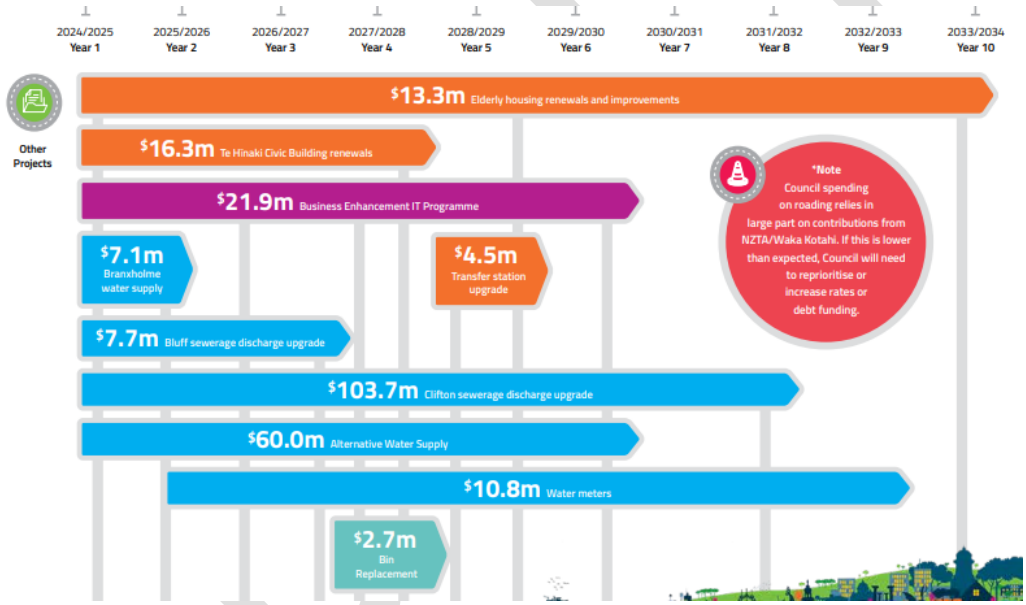
1 Executive Summary

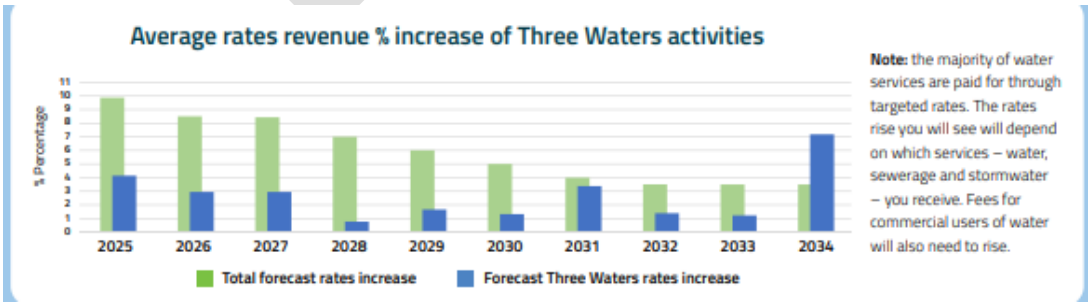
To be completed once programme finalised and input (financial strategy etc) received from ICC finance team.

It will cover:

- Purpose and scope of the Investment and Delivery Plan
- Ten-year investment overview
- Key investment priorities and delivery constraints
- Summary of forecast sufficiency and material residual risks
- Splits by:
    - $ for each water
    - $ for asset types
    - $ by growth/LoS/renewals
    - Key projects eg Clifton

    Either as graphs or like this timeline from LTP:





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2 Purpose, Scope and Alignment

This Investment and Delivery Plan (IDP) sets out how the investment needs identified through water services planning processes have been converted into a prioritised, funded and deliverable programme. It brings together the operating and capital expenditure required to provide water supply, wastewater and stormwater services over the planning period.

The IDP forms part of an integrated suite of water services planning documents. It does not repeat the detailed strategic direction, asset evidence or financial strategy contained elsewhere in the suite. Instead, it provides the link between identified needs and a fundable, deliverable programme by showing why proposed investment is required, when it is planned for, and how it will be funded and delivered.

2.1 Purpose and Scope

The purpose of this IDP is to provide a transparent and substantiated basis for the Water Services Business Unit's forecast investment. It explains how investment has been identified, assessed, prioritised and staged within the available funding and delivery constraints.

The IDP covers the ten-year period from 2027/28 to 2036/37 for operating expenditure and the thirty-year period from 2027/28 to 2056/57 for capital expenditure. It includes investment relating to the three water services delivered by Invercargill City Council's In House Water Services Business Unit (WSBU):

- **Water supply**, including the abstraction, treatment, storage and distribution of drinking water to Invercargill and Bluff.
- **Wastewater**, including the collection, conveyance, treatment and disposal of wastewater from the serviced areas of Invercargill, Bluff, parts of Otatara, Ōmāui, Kennington and the Moore Road area.
- **Stormwater**, including piped networks, open drainage, pump stations, overland flow paths, treatment assets and associated flood-protection infrastructure serving Invercargill, Otatara and Bluff.

In this plan you'll find:

- the process and criteria used to identify and prioritise investment;
- the operating and capital expenditure forecasts for the planning period;
- the basis on which those forecasts have been developed;
- the relationship between planned investment and asset management evidence;
- an assessment of whether forecast investment is sufficient to address identified requirements;
- information about material projects and programmes;
- the approach to procurement and programme delivery;
- an assessment of delivery capacity, capability, risks and constraints; and
- the performance indicators and targets that will be used to monitor delivery.

The IDP includes both operating expenditure and capital expenditure because the two are closely connected. Decisions to construct, renew or upgrade assets may change future staffing, energy, chemical, monitoring and maintenance requirements. Similarly, operating and maintenance decisions can influence asset performance, failure risk and the timing of future capital investment. The IDP therefore considers investment across the asset lifecycle rather than treating capital projects and operational activities as separate programmes.

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Investment and Delivery Plan
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The programme presented in this IDP represents the investment currently planned within the approved funding envelope. It is not an unconstrained list of every potential activity identified through asset management planning. Where identified needs cannot be fully funded or delivered within the period, the IDP records the resulting requirements, risks and proposed management response.

Detailed information about individual assets, asset condition, system performance, levels of service, criticality, risk and lifecycle needs remains in the Water Supply, Wastewater and Stormwater Asset Management Plans. The IDP draws on that information but does not reproduce it. Similarly, the wider strategic direction, community outcomes and long-term financial approach are established through the Water Services Strategy and Council's broader planning framework.

The forecasts in this plan should be read as the best current view of the investment required and deliverable over the planning period. They will be reviewed as asset information improves, project options are developed, costs and delivery assumptions are refined, regulatory requirements change, and Council confirms future budgets.

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2.2 Significant Assumptions

The investment programme and financial forecasts in this IDP have been prepared using the best information available at the time of drafting. Some assumptions are necessary because the scope, cost, timing or delivery pathway for parts of the programme is still being developed.

An assumption is considered significant where a change could materially affect the scale, timing, affordability, prioritisation or deliverability of the programme. The significant assumptions applying to this IDP are summarised below. These assumptions should be read alongside the more detailed forecast risks, uncertainties and limitations described in Chapter 4.

2.2.1 Activity Assumptions

Service	Assumption	Qualification	Reason for Significance
Wastewater	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Wastewater	Asset condition information is sufficient to support current planning decisions.	Current asset condition data is incomplete and of variable confidence, and actual condition may be worse than assumed.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Wastewater	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Wastewater	Current discharge consents will be renewed or transitioned gradually the meet the WEPS.	Discharge consents may be renewed with different conditions.	Compliance is a primary driver of investment. Changes may change capital and operational costs and affect affordability.
Wastewater	Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.

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Investment and Delivery Plan
2 Purpose, Scope and Alignment

Service	Assumption	Qualification	Reason for Significance
		and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	
Wastewater	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery.	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Wastewater	Asset data quality and asset management system capability will improve over the planning period.	Improvements are dependent on continued investment in systems, data collection and organisational capability.	Asset information underpins decision-making, forecasting confidence and compliance with information disclosure requirements.
Wastewater	Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.
Stormwater	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Stormwater	Asset condition and remaining life information is adequate for AMP level planning.	Condition data is incomplete and actual asset life may differ from assumptions.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Stormwater	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational and installation practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.

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Service	Assumption	Qualification	Reason for Significance
Stormwater	Environmental quality standards and regulatory requirements will remain achievable within planned investment levels.	Future regulatory requirements may introduce additional compliance obligations or more stringent service standards.	Regulatory compliance is a primary driver of operational and capital investment. Changes may affect expenditure requirements and affordability.
Stormwater	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery. (x3AMPs).	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Stormwater	Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.
Stormwater	Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate variability and extreme events may exceed historical patterns and planning assumptions.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.
Stormwater	Asset information quality and asset management system capability will improve over the planning period.	Asset information quality and asset management system capability will improve over the planning period.	Asset information underpins decision-making, forecasting confidence and compliance with Information Disclosure requirements.
Stormwater	Critical stormwater assets will continue to perform broadly in line with current expectations.	Failure of critical assets, including the key pump stations, floodbanks and floodgates, culverts under railways and SCADA, could materially affect service delivery and investment priorities.	The stormwater system contains a number of critical assets with limited operational redundancy and/or limited overland flowpath path alternatives.

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Investment and Delivery Plan
2 Purpose, Scope and Alignment

Service	Assumption	Qualification	Reason for Significance
Stormwater	The current allocation of assets remains with ICC.	While this AMP covers stormwater assets owned by ICC and managed by the WSBU, Environment Southland also owns stormwater, drainage and flood protection assets across Southland.	Transfer of assets between Environment Southland and ICC will materially affect the AMP and the WSBU.
Water Supply	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Water Supply	Asset condition and remaining life information is adequate for AMP level planning.	Condition data is incomplete and actual asset life may differ from assumptions. (x3AMPs)	Influences renewal timing, expenditure forecasts and asset failure risk.
Water Supply	Existing water take and treatment residuals discharge consents remain available for the duration of their current consent terms, and replacement consents can be obtained when required.	Future consent applications may result in amended consent requirements	Material changes could affect source availability, treatment operations, resilience investment, operating costs and affordability.
Water Supply	Alternative Water Supply Project proceeds broadly as planned.	Scope, timing, cost, consent pathway and aquifer performance remain subject to further investigation and decisions.	Influences security of supply, resilience outcomes and long-term capital investment.
Water Supply	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational and installation practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Water Supply	Drinking water compliance requirements remain broadly	Future standards and regulatory requirements may change.	Influences treatment requirements, operating costs and capital investment needs.

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Investment and Delivery Plan
2 Purpose, Scope and Alignment

Service	Assumption	Qualification	Reason for Significance
	consistent with current planning assumptions.		
Water Supply	Capital and renewal programmes will be delivered substantially as planned.	Delivery depends on funding, contractor availability and organisational capacity.	Influences the timing of risk reduction, renewals and service improvements.
Water Supply	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Resource and contractor constraints may occur.	Influences service delivery, asset management maturity and programme delivery.
Water Supply	Asset information quality will continue to improve	Future condition, performance and criticality information may alter current assumptions.	Influences confidence in forecasting, risk assessments and investment decisions.
Water Supply	Legislative and regulatory reform remains broadly consistent with current planning assumptions.	Climate change may affect source reliability and asset performance.	Influences resilience requirements, levels of service and future investment needs.
Water Supply	Water metering and network intelligence initiatives proceed as planned and results in reduced water consumption	Timing, scope and future universal metering decisions remain uncertain.	Influences demand management, water loss reduction and future network investment.
Water Supply	Critical water supply assets will continue to perform broadly in line with current expectations.	Failure of key assets may occur and some assets have limited redundancy.	Influences service reliability, resilience planning and emergency response requirements.
Water Supply	Legislative and regulatory reform remains broadly consistent with current planning assumptions.	Future changes to economic, environmental and drinking water regulation remain uncertain.	Influences investment priorities, compliance costs and future levels of service.

Table 1 - Significant Activity Assumptions

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2 Purpose, Scope and Alignment

2.2.2 Long Term Planning Assumptions

Table from Infometrics expected October.

These assumptions will be monitored through the IDP review process. Where an assumption changes materially, the Water Services Business Unit will assess the effect on investment sufficiency, affordability, delivery timing and residual risk. Material changes will be reflected in the next relevant annual budget, Water Services Strategy or IDP update.

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2.3 Planning Framework Context

This IDP has not been prepared in isolation. Investment priorities are shaped by Council's strategic direction and community outcomes, the objectives of the Water Services Business Unit, regulatory obligations, customer and mana whenua expectations, asset performance and risk, growth and demand, climate and resilience considerations, and the funding available to water services.

The IDP is part of a suite of planning documents that work together to guide decision-making:

- The Water Services Strategy sets the long-term direction and identifies the key challenges, priorities, and outcomes wanted by Council and the community.
- The Strategic Asset Management Plan (SAMP) translates that direction into asset management objectives, policies, and approaches.
- Asset Management Plans (AMPs) provide detailed information about assets, levels of service, risks, lifecycle needs, and investment requirements.
- The Investment and Delivery Plan identifies the programmes and projects required to implement those plans.

Together, these documents provide a clear link between regulatory requirements, Council priorities, asset management planning, investment decisions, and service delivery.

These documents operate as an integrated planning cycle rather than a one-way sequence. Strategic direction informs asset management planning, and asset evidence informs investment choices. Funding and delivery constraints may require needs to be reprioritised or staged. Delivery performance, actual costs, emerging risks and improved asset information are then fed back into future updates of the AMPs, SAMP, Water Services Strategy and IDP.

The full document suite can be found in Appendix A: Relevant Documents, Legislation and Policy.

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Investment and Delivery Plan
2 Purpose, Scope and Alignment

The figure below illustrates the line of sight between direction from ICC, water services strategy, asset management planning, investment and delivery, and the external requirements that influence them.

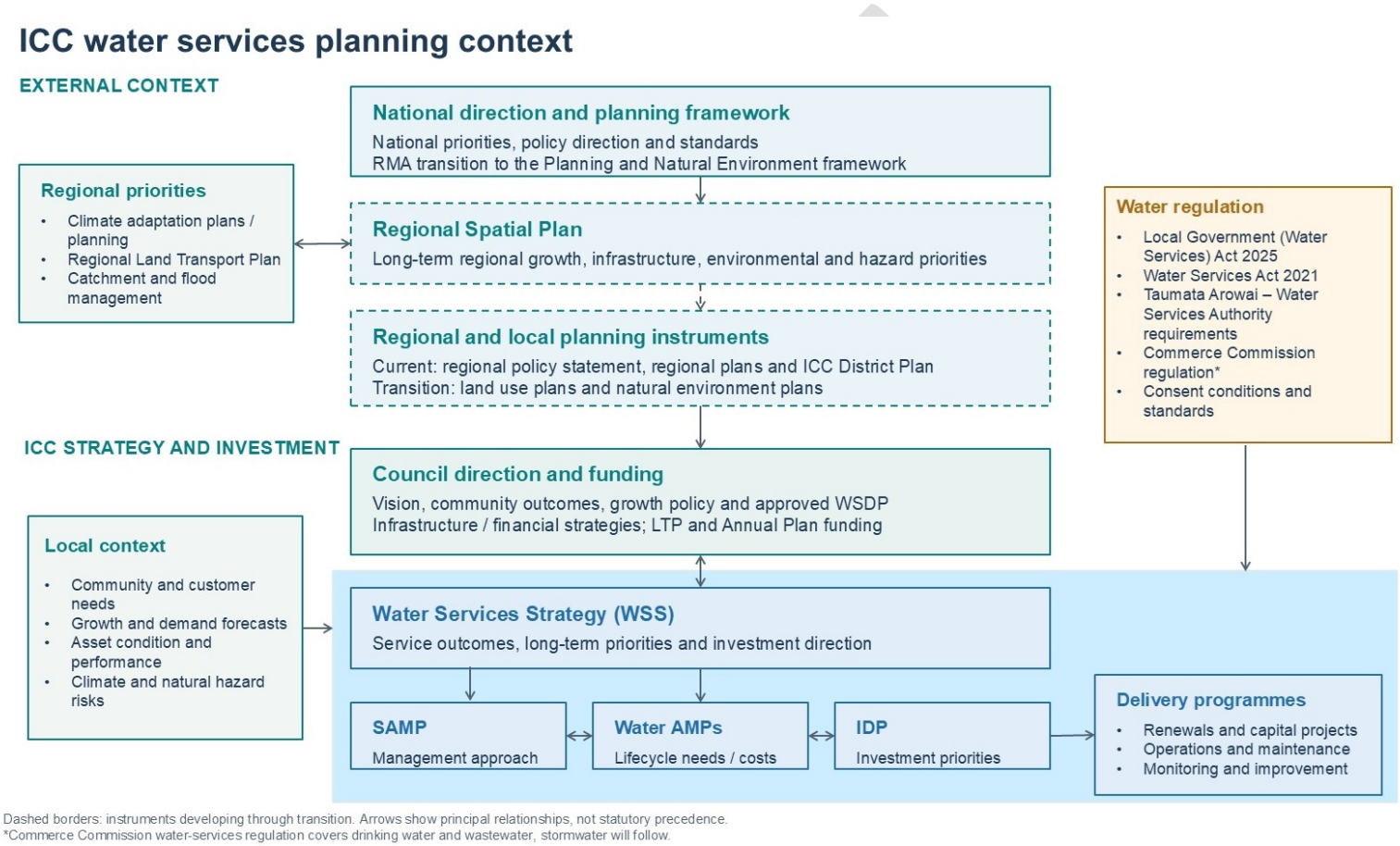


Figure 1 - ICC Water Services Planning Context

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2.4 Document Structure

This IDP is structured to follow the progression from investment need through to prioritisation, funding, delivery and performance monitoring:

Section	Function
Section 1: Executive Summary	Provides an overview of the investment programme, principal priorities, delivery constraints, forecast sufficiency and material residual risks.
Section 2: Purpose, Scope and Alignment	Explains the purpose and boundaries of the IDP, its significant assumptions and its relationship with the wider planning framework.
Section 3: Investment Prioritisation	Describes how investment needs are identified and how consumer engagement, asset evidence, risk, growth, regulatory obligations, affordability and deliverability influence programme priorities.
Section 4: Financial Forecasts	Sets out the operating and capital forecasts, how they were developed, how lifecycle costs and trade-offs have been considered, the justification for forecast investment, material projects and programmes, historical delivery performance, and key forecast risks and uncertainties.
Section 5: Procurement, Delivery and Performance	Describes the intended procurement and delivery approaches, organisational and market capability, material delivery risks, and the measures and targets used to monitor delivery performance.

The appendices provide supporting information, including the funded programme, related documents and the detailed compliance mapping.

A compliance matrix is included in Appendix B to show where each applicable Investment and Delivery Plan disclosure requirement is addressed.

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2.5 Our WSBU Objectives

The Water Services Business Unit has established a set of objectives that support Council's vision and provide direction for how water services will be delivered and improved over the life of this strategy. These objectives reflect the evolving water services environment and the need to balance service reliability, regulatory compliance, affordability, environmental responsibility, organisational capability, and long-term sustainability. Together, they provide a framework for decision-making and help ensure that investment, operational activities, and organisational development remain aligned with Council's priorities and community expectations.

While each objective focuses on a specific area, they are interconnected and often influence one another. For example, strong governance and asset management practices support financial sustainability, while workforce capability and resilience investment help deliver reliable services and improved outcomes for the community. A project may also support several objectives at the same time. For example, renewal of a critical asset may maintain service reliability, reduce regulatory or public-health risk and improve lifecycle value. However, the timing of that investment may still need to be balanced against affordability, project readiness and delivery capacity.

WSBU Objective	Description
Operate as an Independent, Ringfenced, Commercially focused Utility	ICC will operate its water services as a financially ringfenced, professionally governed business unit with the flexibility to outsource where appropriate. This includes establishing formal agreements for internal support services, strengthening governance, and ensuring organisational structures support capability and performance.
Develop Workforce and Industry Capability	ICC will invest in building workforce capability and industry leadership by developing a technical training programme aligned with industry standards, creating a leadership pipeline, implementing a workforce development plan, and improving staff retention in the water services sector.
Comply with Public Health and Environmental Regulations	ICC will maintain full compliance with drinking water, wastewater, and stormwater standards, including all relevant resource consent conditions and national environmental regulations.
Ensure Financial Sustainability, Drive Efficiency	ICC will ensure water services are financially sustainable and responsive to customers with costs recovered from users in a fair and transparent manner. This includes meeting Commerce Commission requirements, leveraging procurement and shared service efficiencies.
Support Council's Growth and Development Objectives	ICC will align water service delivery with the city's growth aspirations. Financial contribution will be used where possible to effectively to fund growth-related investments. Development contributions could also be used in the future should the risk of city population and industry decline no longer be a risk.
Deliver Reliable and Resilient Water Services	ICC will build resilience into its water network by improving risk understanding, addressing vulnerabilities from sea level rise, flood event, and ensuring redundancy of critical assets where possible.
Partner with Mana Whenua and Engage Effectively with the Community	ICC will work in partnership with Mana Whenua and maintain transparent and responsive relationships with the community by actively seeking customer feedback, monitoring satisfaction, and demonstrating a commitment to being a responsible and accountable service provider. Council has existing Mana Whenua representation as part of its Governance structure.

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3 Investment Prioritisation

The Water Services Business Unit must balance a broad range of investment needs across water supply, wastewater and stormwater. These include maintaining existing services, renewing ageing assets, meeting public health and environmental obligations, responding to growth, improving resilience, and strengthening the capability required to operate the services and deliver the investment programme.

Not all identified needs can be funded or delivered at the same time. Prioritisation is therefore required to direct available funding and delivery capacity towards investments that make the greatest contribution to service outcomes and address the most significant risks.

Prioritisation is iterative. Identified investment needs are scoped, assessed and phased with regard to strategic importance, evidence, risk, affordability, readiness and deliverability. Experienced staff apply professional judgement based on their knowledge of the assets, networks and operating environment. The resulting programme is reviewed and refined through Council's planning and budget processes before funding is approved.

More formal comparative assessment is undertaken where required to resolve competing priorities, respond to funding constraints or reconsider the programme following material changes.

3.1 Identification of Investment

Investment needs are identified through the Water Supply, Wastewater and Stormwater Asset Management Plans and supporting operational, technical, financial and regulatory processes. These potential needs require capital investment, operating expense or a combination of both. They may be identified through:

- performance monitoring of levels of service and contractor KPIs;
- drinking water, environmental, resource-consent or other regulatory requirements;
- asset condition assessments or inspections;
- operational monitoring, alarms and control-system information;
- asset failures, faults, or maintenance history;
- risk assessments;
- hydraulic modelling, capacity assessments and network planning;
- population, development and industrial growth and demand forecasts;
- climate change, natural hazard or resilience assessments;
- customer complaints and consultation;
- engagement with mana whenua, regulators and other strategic stakeholders;
- opportunities to coordinate work with other projects or Council activities;
- identified gaps in organisational capability, systems or information; and
- option assessments, business cases and project-development activities.

3.2 Prioritisation Criteria

The criteria in the following table are considered when defining a project or investment need. They help staff assess the outcomes sought, supporting evidence, risk, strategic alignment, affordability and deliverability. However, these considerations are not yet formally documented for all investments. Formal business cases and detailed options assessments are generally used for major projects, while other needs rely on available asset information, operational knowledge and professional judgement. As a result, the depth and consistency of supporting information varies across the programme.

The improvement actions outlined in Section 3.4 are intended to strengthen and formalise this approach over time.

Criteria	Matters considered
Public health and safety	The potential for illness, injury, loss of life or harm to workers or the community, and the effectiveness of existing controls.
Legal, regulatory and consent compliance	Statutory obligations, drinking water requirements, resource-consent conditions, enforcement exposure, regulatory timeframes and the consequences of non-compliance.
Service performance and community outcomes	Current or forecast performance against levels of service, reliability, continuity, quality, responsiveness and the number or type of consumers affected.
Risk and residual risk	The likelihood and consequence of the event or failure, the current residual-risk rating, the effectiveness of existing controls and the expected risk reduction from investment.
Asset criticality and resilience	The importance of the asset or system to service delivery, single points of failure, redundancy, time to restore service and exposure to climate and natural hazards.
Asset condition and performance	Available condition information, deterioration, faults, failures, maintenance history, operational performance and confidence in the supporting evidence.
Strategic alignment	Contribution to Council direction, community outcomes, the Water Services Strategy, WSBU objectives, asset management objectives and other approved strategies or plans.
Consumer and stakeholder evidence	Customer complaints, requests, surveys, consultation, elected-member direction, mana whenua input and engagement with regulators or affected communities.
Treaty and mana whenua considerations	Relevant Treaty obligations, cultural values, effects on water and receiving environments, and matters identified through engagement with mana whenua.
Growth and demand	Evidence of committed or credible demand, network capacity, the timing and location of growth, development dependencies and the proposed basis for cost recovery.
Whole-of-life value	Capital, operating, maintenance, renewal and disposal costs; expected asset life; benefits; risk reduction; and the potential for non-asset solutions.
Affordability and financial sustainability	Funding availability, debt and revenue impact, affordability, intergenerational equity and the opportunity cost of selecting the investment.
Deliverability	Project readiness, consenting, property and access requirements, internal capability, supplier capacity, procurement lead times and the realistic rate of programme delivery.
Evidence confidence and optionality	Confidence in the need, scope, cost and timing; consequences of acting too early or too late; and the ability to stage, adapt or defer the response.

The prioritisation process and criteria align with the objectives, principles and decision-making approach in the Strategic Asset Management Plan and supporting evidence available in the Asset Management Plans and Asset Register.

3.3 Prioritisation Influences

Community Engagement
Engagement with our community helps identify service concerns, customer expectations and the acceptability of investment and funding choices. Evidence could include customer requests and complaints, resident surveys, consultation through Council planning processes, feedback from affected communities and engagement associated with significant projects.

Asset Performance, Condition and Criticality
Asset performance, condition and criticality information helps determine whether intervention is required, how urgent it is and what form it should take. Direct condition information is used where available. Where information is incomplete, decisions may also draw on age, material, maintenance history, faults, service performance, operational knowledge, modelling and the consequences of failure. Asset age alone does not determine renewal priority. Critical assets, known performance issues and assets with significant service or resilience consequences generally receive greater attention. Non-critical assets may remain in service for longer where their performance can be monitored and the risk remains acceptable.

Risk Evaluations
Risk information helps the WSBU determine where investment is most needed. Risk registers record causes, consequences, existing mitigations or controls, and residual risk ratings. These ratings, together with asset criticality, condition and performance, then inform the priority and timing of maintenance, renewals and other capital projects. Investments that address higher residual risks, inadequate controls, critical assets or significant service, public health, compliance or environmental consequences generally receive greater priority.

Growth And Future Development
Residential growth is expected to remain relatively modest and may generally be accommodated within existing capacity. The greater uncertainty relates to the location, timing and scale of industrial development, which could create significant localised water supply or wastewater demand. Where growth remains uncertain, the preferred response is to retain flexibility through staged design, monitoring, protection of future options or demand-based triggers.

Regulatory Obligations
Regulatory requirements influence both mandatory investment and the timing and design of projects. They are driven from drinking water regulation, resource consents, environmental standards, economic regulation, information disclosure and other statutory obligations.

Financial Constraints
Available funding and affordability influence which investments can proceed and when. Projects may be staged, rephased, rescoped or deferred to maintain financial sustainability.

3.4 Improvement Plan

The WSBU recognises that further work is needed to consistently capture and document how investment needs are assessed and prioritised. The following improvement actions are being considered or implemented to strengthen the transparency, consistency and traceability of the prioritisation and investment planning process.

Improvement action	Intended outcome
Establish a consolidated investment register	A single view of identified needs, their evidence, priority, status, funding position and residual risk. Record unfunded and deferred needs so that funding constraints and unmet requirements remain visible and are actively monitored rather than disappearing from the programme.
Document and approve a prioritisation methodology	A consistent, repeatable and auditable process, including defined criteria, evaluation guidance and governance roles. Common scoring will provide a comparable assessment across services.
Define mandatory minimum information for investment proposals and specifically link them to LoS, risks and asset management objectives	Proposals consistently identify the problem, outcomes, options, lifecycle cost, consequential OPEX, risk, evidence confidence and delivery constraints. Clear traceability from strategy and asset evidence to investment and expected benefits.
Strengthen lifecycle and consequential OPEX assessment	Capital decisions reflect staffing, energy, chemicals, maintenance, monitoring, renewal and other ongoing costs.
Identify and track dependencies and opportunities	Coordinate related activities, manage dependencies early and make better use of opportunities to combine or align work.

4 Financial Forecasts

4.1 Development of the Operating Expenditure Forecast

The operating expenditure forecast is developed primarily from the existing operating budget, adjusted for inflation and known changes in service requirements. This reflects the relatively stable nature of many operating activities and ICC's current budget-setting practice. Both operating and capital changes are considered through the annual budget-bid process.

4.1.1 Base Operating Expenditure

The base operating forecast covers the resources required to operate and maintain the existing asset base, including:

- staffing and contractor resources;
- electricity and other energy costs;
- treatment chemicals and other consumables;
- monitoring, testing and compliance activities;
- planned servicing, inspections and routine maintenance; and
- reactive maintenance and response to asset faults or failures.

4.1.2 Adjustments to the Baseline

Additional operating expenditure is identified through specific budget bids where the existing baseline is not sufficient. This includes consequential operating costs arising from:

- commissioning new plant or infrastructure;
- upgrading or extending existing assets;
- impact of inflation, both for cost of materials and labour;
- changing treatment processes or operational practices;
- introducing new monitoring, compliance or reporting requirements;
- increasing planned or condition-based maintenance; and
- providing additional people, energy, chemicals, contractor support, systems or specialist capability.

4.1.3 Consequential OPEX from Capital Investment

Consequential operating costs are intended to be considered alongside the associated capital proposal so that the decision reflects the cost of operating and maintaining the asset throughout its life, rather than only its initial construction cost. The current SAMP identifies this as an area for improvement because consequential operating costs have not always been incorporated consistently, and the existing operating forecast remains largely based on previous expenditure and inflation

4.1.4 Forecast Assumptions, Confidence and Limitations

Summary from Finance team required.

Include:

- forecast period;
- price basis;
- services included;
- forecast version or disclosure referenced;
- treatment of inflation
- treatment of uncertainty; and
- relationship between the OPEX and CAPEX forecasts.

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4.2 Operating Expenditure Forecast Table

10 years

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4.3 Development of the capital expenditure forecast

Capital expenditure needs are identified through the Asset Management Plans using available evidence on:

- levels of service and identified performance gaps;
- statutory, regulatory and consent requirements;
- asset condition, performance and failure history;
- asset criticality and the consequences of failure;
- renewal and replacement requirements;
- capacity, growth and future demand;
- resilience and exposure to natural hazards or climate change; and
- opportunities to improve efficiency or reduce lifecycle cost.

Renewal timing is not determined solely by an asset reaching its theoretical end of life. Renewal decisions focus on critical assets, known performance issues and service or resilience risks. Lower-risk assets may be monitored and retained in service for longer where this remains safe and economical, helping to smooth expenditure and reduce affordability pressures.

Potential projects and programmes are developed into capital proposals and assessed through the budget process. The resulting programme is prioritised and staged within available funding and delivery capacity. This may require projects to be brought forward, deferred, rephased or packaged differently, with priority given to the most significant service, compliance and resilience needs.

4.3.1 Forecast assumptions, confidence and limitations

Finance summary required

Include:

- forecast period;
- price basis;
- services included;
- forecast version or disclosure referenced;
- treatment of inflation;
- treatment of uncertainty; and
- relationship between the OPEX and CAPEX forecasts.

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4.4 Capital expenditure forecast table

30 years

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4.5 Lifecycle optimisation and assessment of trade-offs

The WSBU seeks to consider operating and capital plans together where practical, recognising that decisions made at one stage of the asset lifecycle can affect future costs, performance and risk. Depending on the nature and scale of the decision, the team considers the balance between:

- Planned, preventative and reactive maintenance;
- Ongoing maintenance versus rehabilitation and renewal;
- Early replacement and retaining an asset for longer;
- Capital (asset) and operational (non-asset) solutions;
- Higher initial capital costs and lower future operating costs;
- Deferred expenditure and increased maintenance or failure risk;
- Benefits such as Levels of Service or resilience versus affordability; and
- technical need and practical deliverability.

For operations and maintenance, the WSBU aims to balance planned maintenance with reactive work. Increased planned maintenance may reduce failures, service disruption and reactive costs, but can increase near-term operating expenditure. Greater monitoring and proactive intervention are generally directed towards critical assets.

For renewals, the WSBU considers available information on asset condition, performance, criticality, failure history, repair costs and the consequences of failure. Where appropriate, options may include continued maintenance, rehabilitation, coordination with other works, renewal, or allowing a suitable non-critical asset to remain in service for longer.

For material upgrades and new assets, the WSBU aims to consider capital costs together with future operating, maintenance, renewal and disposal costs. The level of assessment is proportionate to the scale, risk and maturity of the investment.

The forecast reflects the WSBU's current view of the appropriate balance between cost, risk and service outcomes within funding and delivery constraints. The WSBU will continue to improve how lifecycle costs, consequential operating expenditure, trade-offs, assumptions and residual risks are identified and documented as asset information and project development improve.

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4.6 Justification of Forecast Investment

The level of forecast investment is based on the needs and supporting evidence identified in the Water Supply, Wastewater and Stormwater Asset Management Plans. This evidence includes forecast demand, levels of service, regulatory obligations, asset condition and performance, criticality, risk, maintenance and failure history, lifecycle requirements, network modelling and identified improvement needs. The process in Section 3 is then used to prioritise and stage these requirements within funding and delivery constraints. The following subsections explain the evidence used to plan and justify expenditure in each investment area.

4.6.1 Growth investment

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Water Supply CapEX											
Wastewater CapEx											
Stormwater CapEx											
Capex Subtotal											
Opex Subtotal											
TOTEX											

Growth investment is planned using population and connection forecasts, development information, industrial demand, network capacity, hydraulic modelling and spatial planning.

Forecast residential growth is modest and is generally expected to be accommodated within existing water supply and wastewater capacity. Stormwater needs depend more on the location and form of development. The main uncertainty is potential industrial growth around Awarua and Bluff.

The forecast therefore limits committed growth expenditure and favours staged or demand-triggered investment. Additional expenditure may be required if significant development occurs outside existing serviced areas or creates demand beyond current network capacity.

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4.6.2 Maintenance and renewals

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Water Supply CapEX											
Wastewater CapEx											
Stormwater CapEx											
Capex Subtotal											
Opex Subtotal											
TOTEX											

Maintenance and renewal investment is informed by asset condition, performance, age, criticality, failure and maintenance history, repair costs and the consequences of failure. Renewal timing is based on this combined evidence rather than asset age alone.

Information is stronger for above-ground facilities than for buried networks. Current expenditure therefore reflects the best available evidence, with priority given to critical assets, recurring failures and known performance risks.

The full renewal requirement remains uncertain because condition and criticality information is incomplete for parts of the portfolio. Continued inspections, CCTV surveys, asset-data improvements and risk-based renewal planning may identify additional or earlier investment needs.

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4.6.3 Regulatory compliance

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Water Supply CapEX											
Wastewater CapEx											
Stormwater CapEx											
Capex Subtotal											
Opex Subtotal											
TOTEX											

Our compliance investment is informed by drinking-water requirements, consent renewal timelines, environmental monitoring, compliance performance and emerging regulatory standards.

The forecast provides for current obligations and known projects. However, additional expenditure may be required where future consent conditions, standards or preferred technical solutions have not yet been confirmed.

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4.6.4 Maintaining or enhancing levels of service

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Water Supply CapEX											
Wastewater CapEx											
Stormwater CapEx											
Capex Subtotal											
Opex Subtotal											
TOTEX											

Investment to maintain or enhance levels of service is informed by performance against targets, customer complaints and requests, faults, failures, response times, service interruptions, compliance results and network performance.

Current investment is primarily intended to maintain existing service performance. It also addresses identified resilience programmes where these could affect service outcomes.

The forecast is considered appropriate for maintaining current targets based on available evidence. Emerging performance issues or changes to service expectations may require additional investment through future programme reviews.

4.6.5 Asset management objectives and performance indicators

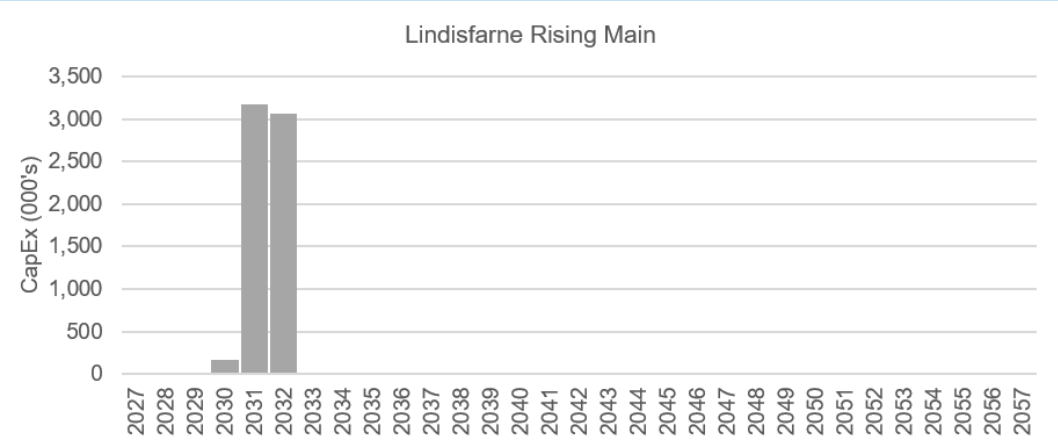
No investment is currently classified specifically under the asset management objectives and performance indicators category. Instead, the table below provides examples of projects and programmes that also contribute to achieving each asset management objective. No costs are included as presenting expenditure under this heading would duplicate costs already reported under the investment categories in the preceding sections.

Asset Management Objective	Description	Example Supporting Works
Maintain safe, compliant and efficient water services	Ensure water, wastewater, and stormwater assets constantly meet public health, environmental, and regulatory requirements.	
Manage affordability while investing for the future	Balance renewal, resilience investment, and debt to manage affordability for current and future ratepayers.	
Sustain core infrastructure over the long term	Maintain and renew the existing asset base so that assets remain fit for purpose.	Capital renewal programmes Operations and maintenance programme
Reduce risk from ageing and critical assets	Systematically reduce service and compliance risk arising from ageing infrastructure and single points of failure.	Duplication of rising mains to boost resilience in the case of asset failure Alternative / Emergency Water Supply
Improve resilience to climate and natural hazards	Increase the resilience of water assets to flooding, drought, seismic events, and sea level rise.	Relocation of some assets to ensure resilience
Lift asset management maturity	Progress asset management practices across all three waters	Universal Water Metering Transition from IPS to TechOne Asset Management System to improve the management and integration of asset information
Enable planned succession of assets	Ensure clear asset succession pathways by aligning investment prioritisation, renewal timing, and funding decisions to manage risk, optimise value, and promote efficient spending.	Calibration of all three network models

The examples are illustrative rather than exhaustive, and individual projects may contribute to more than one asset management objective. Together, they demonstrate how the wider investment programme supports improved asset performance, risk management, resilience, lifecycle planning and asset management maturity.

4.7 Material Projects and Programmes

For the ICC WSBU, material projects and programmes have been identified as those involving significant, larger one-off investment, those expected to result in a material change to the nature or level of service provided, or those otherwise considered material based on the professional judgement of the WSBU team. In applying this judgement, the team has considered expenditure value, strategic importance, risk and any other relevant project specific factors.

Lindisfarne Rising Main	
	
Project Description	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.
What happens if we defer?	Deferral maintains reliance on single infrastructure with known reliability issues. Service disruption risk remains elevated without redundant capacity.
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Network Extension Otatara and Makarewa	
Project Description	Extension of wastewater reticulation network to support planned residential and commercial development. This investment enables growth and ensures adequate service capacity for new connections.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Growth**
Category3 | Subcategory	**Network Expansions**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Otatara Rising Main	
Project Description	Duplication of wastewater infrastructure to enhance network resilience and increase conveyance capacity, supporting long-term service reliability.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Mersey Street Waste Water Main Duplication	
Project Description	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Pump Station Replacement - Health & Safety	
Project Description	Relocation of wastewater pumping station to address health and safety requirements, including improved operational access and safety considerations.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Pump Station Replacement – Seismic Resilience	
Project Description	Relocation of wastewater pumping station to enhance seismic resilience and ensure continued service delivery following seismic events.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Clifton Discharge Upgrades	
Project Description	Investment to upgrade the discharge process at the Clifton Wastewater Treatment Plant, supporting compliant and effective management of treated wastewater discharges.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Consents | Levels of Service**
Category3 | Subcategory	**Meeting current levels of service**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Preston Street Rising Main	
Project Description	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Consents | Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Bluff Consent Upgrades	
Project Description	Resource consent renewal for Wastewater Treatment Plant at Bluff. This investment ensures continued regulatory compliance for wastewater operations.
What happens if we defer?	
Category1 | Regulated service	**Wastewater**
Category2 | Category	**Consents | Levels of Service**
Category3 | Subcategory	**Regulatory requirements and Treaty settlement obligations**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Emergency / Alternative Water Supply	
Project Description	UPDATE POST FINAL CAPITAL PROGRAMME to ensure reflects what's funded
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Consents | Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Universal Water Metering	
Project Description	Implementation of universal water supply metering programme to improve demand management, support equitable charging, and enable water conservation initiatives.
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Enhancements to levels of service | Resilience and risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Airport Watermain	
Project Description	Investment in seismic resilience improvements for water supply network. This programme enhances network robustness and ensures continued service delivery following seismic events.
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Network Capacity to Bluff	
Project Description	Demand-driven investment in water supply network to address capacity constraints and ensure adequate service delivery.
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Meeting current levels of service**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Reticulation Extension to Surrounding Communities	
Project Description	Extension of water supply reticulation to surrounding communities including Otatara and Makarewa. This investment enables residential growth and requires community consultation.
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Growth**
Category3 | Subcategory	**Network Expansions**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

Doon St pressure tank	
Project Description	Relocation of water supply infrastructure to enable heritage building preservation, supporting community heritage outcomes while maintaining service delivery.
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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Skye St Reservoir	
Project Description	Development of reservoir and pump station infrastructure as part of the alternative water supply programme to enhance supply security..
What happens if we defer?	
Category1 | Regulated service	**Water Supply**
Category2 | Category	**Levels of Service**
Category3 | Subcategory	**Resilience and Risk**
AM objective	
Level of Service / Outcome	
Why Material? **(a) expenditure value:** **(b) strategic importance:** **(c) risk:** **(d) any other relevant considerations.**	
Level of Confidence in $ forecast	
Key Assumptions and limitations to forecast	

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4.8 Historical Delivery Performance

4.8.1 Planned versus actual OPEX

4.8.2 Planned versus actual CAPEX

4.8.3 Causes of variance

4.8.4 Implications for forecast deliverability

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Historical delivery against planned investment

	Renewals investment for water services				Total investment in water services			
Delivery against planned investment	FY24/25	FY21/22 FY23/24	FY18/19 FY20/21	Total	FY24/25	FY21/22 FY23/24	FY18/19 FY20/21	Total
Total planned investment (set in the relevant LTP)	14,795	54,086	42,085	110,966	23,000	55,743	43,943	122,686
Total actual investment	10,510	41,279	23,293	75,082	16,773	57,202	24,019	97,994
Delivery against planned investment (%)	71%	76%	55%	68%	73%	103%	55%	80%

ICC has been focusing on improving the delivery of capital over the past four years. ICC has commenced Business Casing for strategic projects to ensure thorough consideration of options and impacts so the governing committee / Council can make informed decisions. A Project Management Office was also established in 2020/2021 to manage the delivery of Strategic capital projects and this has allowed the current water services team to focus on renewal programmes. Water Services project delivery continues to improved significantly against time, budget and quality under this model. ICC will look to ensure it retains skills for various scaled projects either through its internal project teams, its Project Management Office and or through the use of experienced outside businesses.

ICC also operates an in-house Engineering Services Team that is responsible for design and delivery of the annual reticulation renewal program. This team is continuing to develop in maturity and increase delivery capacity. Whilst the team has not yet delivered 100% of programme there has been approximately 40% uplift in project delivery from the 2023/24 financial year to the 2024/25 financial year. The team are also well progressed in getting a year ahead of design. This sets the team in good stead to move closer to 100% delivery targets in the coming years.

This increase may be impacted by a large volume of renewal work coming to the market at the same time from other Council's in the lower South Island. An under supply of contract capacity will have impacts on timing or on cost.

All significant work has been added to the National Infrastructure Pipeline. ICC will be very keen to work with other WSE's and the broader industry on the approach to delivering pipeline works.

It will be crucial to establish suitable governance and approval processes to ensure that barriers are not created which would slow projects. The use of advanced procurement techniques can be developed to ensure that larger projects are successful and timely. It is noted that we would assume that in the early years of the Plan, the deliverability assumption for the financing of renewals is 80% for the first year, and increasing to 90% by the third year and remain at this level each year after. This will provide a stronger signal to the industry that is able to gear up and then potentially recover any under-development. It is expected that the increased delivery can be financed within the Council's debt headroom.

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4.9 Forecast risks and uncertainty

- Cost and inflation risk
- Scope and information uncertainty
- Demand uncertainty
- Funding and affordability risk
- Consequential OPEX risk
- Forecast review and update triggers

5 Procurement, delivery and performance

5.1 Delivery approach, capacity and capability

Internal capacity and capability

The WSBU benefits from experienced staff and significant operational and institutional knowledge. However, capability requirements are increasing across asset management, planning, asset information, engineering, operations, compliance and programme delivery. Current limitations include reliance on key individuals, incomplete asset and condition information, developing integration between systems and the need to strengthen links between asset evidence and investment decisions.

The WSBU intends to progressively strengthen internal capability by:

- clarifying responsibilities and accountabilities;
- building asset management, planning and asset-information capability;
- investing in technical training and professional development;
- strengthening workforce and succession planning;
- improving systems, documented processes and knowledge management; and
- reducing reliance on individual staff knowledge

Council support functions will remain important to delivery, particularly for finance, procurement, digital systems, risk, workforce, legal, customer and communications services. The capacity of these functions will need to be considered when sequencing major projects and organisational improvements.

External capacity and capability

The WSBU will continue to use external providers to obtain specialist skills and additional delivery capacity that may not be practical or economical to maintain internally. Long-term supplier relationships are expected to support access to expertise, scalability and a more reliable delivery pipeline. They will seek to balance internal capability development with strategic outsourcing to provide flexibility, resilience and value for money.

Downer Contract

The WSBU has procured a new long-term services contract with Downer to support the ongoing delivery of water supply, wastewater and stormwater services. The longer contract term provides greater certainty for both parties and supports more reliable access to people, plant, specialist capability and supply-chain resources. It also provides a stronger basis for workforce and programme planning, continuity of service, retention of local knowledge and investment in systems and capability. The arrangement is intended to support a collaborative relationship focused on safe, consistent and efficient service delivery, while providing sufficient flexibility to respond to changing operational needs and the future investment programme.

5.2 Deliverability Assessment

What has been done by finance in preparation of programme - link to section 4.6 Historical Delivery Performance

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5.3 Material delivery risks and issues

- Funding and affordability
- Internal resourcing and capability
- Supply-chain and market capacity
- Procurement and consenting lead times
- Project readiness and dependencies
- Cost, scope and schedule uncertainty
- Risk owners, controls and monitoring

5.4 Delivery performance framework

The WSBU will monitor delivery performance through a combination of contractor KPIs, contract-management information, levels of service and internal programme reporting. The framework recognises that delivery is shared between the WSBU and its contractors, and that each requires appropriate oversight.

Contractor performance

Performance under the three-waters piped-network maintenance contract will be assessed monthly using a weighted balanced scorecard. The scorecard covers five areas:

Scorecard area	Assessment detail
Collaboration and Communication	Collaboration and communication is jointly assessed by the WSBU and contractor. It considers meeting attendance, proactive identification of issues, cooperative resolution, openness and transparency, timely communication, and timely and complete reporting and data.
Financial Management	Financial management assesses whether claims and quotations are accurate, complete and submitted within the required timeframes.
Health and Safety, Environmental Compliance and Quality	Health and safety, environmental compliance and quality is assessed through joint audits and considers whether required audits are completed, whether work meets the relevant requirements, and whether corrective actions are completed within agreed timeframes.
Critical Response and Data-Reporting Compliance	Critical compliance uses a pass-or-fail measure. It requires all emergency and critical attendance timeframes to be met and full compliance with the applicable data and reporting requirements.
Reactive Response and Task Completion.	Reactive response and task completion measures the proportion of urgent, routine and planned work completed within the applicable end-to-end timeframes. The annual target is Pass, requiring at least 95% compliance, while performance of at least 98% is rated High.

The overall score is calculated by applying the relevant weighting and performance multiplier to each KPI. Overall performance is rated High at 90% or above, Pass at 70% or above, Low at 50% or above, and Fail below 50%.

The contractor scorecard will provide the primary formal measure of network-maintenance contract performance. Results are reviewed through regular contract-management processes, with corrective actions and recurring issues recorded and followed up where necessary. The scorecard allows moderation where performance is affected by factors outside the contractor’s control.

Work delivered by the WSBU

The WSBU also delivers and coordinates work in-house, including operation of treatment facilities, operational monitoring, asset management, investment planning, engineering activities, compliance functions and elements of programme delivery. This work contributes directly to Levels of Service performance and the successful delivery of the investment programme.

Formal internal delivery targets have not yet been established beyond the levels of service. Internal delivery performance will therefore initially be monitored through:

- achievement of the applicable levels of service;
- progress against approved programmes and budgets;
- regulatory and consent compliance;
- management of material delivery risks and issues; and
- completion of agreed improvement actions.

Full Levels of Service and Contractor KPI tables including targets can be found in Appendix D.

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Appendices

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Appendix A Related Documents, Legislation and Policy

Name	Description	Location
Strategic Asset Management Plan 2026		
Water Services Strategy 2026		
Water Supply Asset Management Plan 2026		
Wastewater Asset Management Plan 2026		
Stormwater Asset Management Plan 2026		
Risk Management Framework and Policy 2026		
Invercargill City Council Water Services Delivery Plan 2024		
Risk and Criticality Framework 2017		
Asset Management Policy 2017		

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Appendix B Compliance Matrix

Requirement summary	Detail requirement	IDP Section
C16: Investment and delivery plan – general requirements	(1) The investment and delivery plan must specify— (a) the date on which it was approved and who approved it for the regulated supplier; and (b) any significant assumptions used in the preparation of the plan and, for each significant assumption: (i) any qualifications that apply to the assumption; and (ii) the reason why the assumption is significant; and (c) how the plan aligns with other planning documents, including the following: (i) asset management plan: (ii) strategic asset management plan: (iii) water services strategy: (iv) water services annual budget. (2) The plan must include the information specified in clauses C17 to C19.	Section 2
C17: Investment and delivery plan – prioritisation	The investment and delivery plan must specify— (a) the process and criteria used to prioritise investments; and (b) how the process and criteria align with the strategic asset management plan and asset management plan; and (c) how the following have directly influenced investment priorities: (i) consumer engagement: (ii) asset performance, condition and criticality assessments: (iii) risk evaluations: (iv) growth demands and any relevant future development strategy: (v) compliance with regulatory requirements and consistency with Treaty settlement obligations: (vi) any financial resources or other constraints considered by the regulated supplier.	Section 3
C18: Investment and delivery plan – forecast investment	(1) The investment and delivery plan must— (a) include qualitative information, in narrative form, to support— (i) the operating expenditure forecast most recently disclosed under clause 3.1(2)(a); and (ii) the capital expenditure forecast most recently disclosed under clause 3.3(2); and (b) specify— (i) how the operating expenditure forecasts have been developed; and (ii) how they take account of the lifecycle costs of current and new assets; and (iii) the approach taken to identify and optimise lifecycle costs (including any analysis of trade-offs between options); and (c) provide a clear, substantiated justification for the level of capital and operational investment in accordance with subclause (2). (2) The justification under subclause (1)(c) must— (a) explain how the forecasts are informed by— (i) the asset management plan (in particular, the matters specified under clauses C10 to C15); and (ii) the investment and delivery plan (in particular, the matters specified under clause C17); and (b) justify the forecast investment related to each of the following areas: (i) growth, including alignment with demand forecasts and any relevant future development strategy: (ii) maintenance and renewals, including asset condition, performance, and lifecycle considerations: (iii) compliance with regulatory requirements and consistency with Treaty settlement obligations:	Section 4

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Investment and Delivery Plan
Appendix B Compliance Matrix

	(iv) maintaining or enhancing levels of service, including alignment with performance indicators and any identified gaps between current and targeted level of service: (v) asset management objectives and targeted performance indicators: (c) for each area listed in paragraph (b), give an assessment of the extent to which the forecast investment is sufficient to give effect to the activities specified in the asset management plan; and (d) for any area listed in paragraph (b) for which the forecast investment is not sufficient,— (i) identify the requirements and obligations have not been or will not be met; and (ii) describe the associated risks; and (iii) explain how the regulated supplier plans to manage those risks. (3) The plan must specify, for each material project or programme that is proposed for the period, the following: (a) the expenditure category that represents the primary reason for the investment and any expenditure categories (if any) that represent secondary reasons for the investment: (b) the regulated supplier's level of confidence in the expenditure forecasts, any key assumptions used in the preparation of the forecasts, and any limitations of the forecasts: (c) the performance indicators specified in the asset management plan under clause C10 on which the project or programme is expected to have an effect: (d) the asset management objectives from the strategic asset management plan through which the benefits of the investment will be realised: (e) if the project or programme relates to a renewal, the forecast expenditure by asset class (as specified in clause B4(6)) and the extent to which those investments correspond with the programmes specified in the asset management plan under clause C12: (f) the factors that led to the regulated supplier determining that the project or programme is material in accordance with subclause (4). (4) In this clause, material project or programme means a project or programme that the regulated supplier has determined is material, after having regard to the following considerations in relation to the project or programme: (a) expenditure value: (b) strategic importance: (c) risk: (d) any other relevant considerations.	
C19: Investment and delivery plan – procurement, delivery, and performance	The investment and delivery plan must specify— (a) the procurement and delivery approach (or approaches) that the regulated supplier intends to take to implement the plan including how the regulated supplier intends to use in-house and external resources and procurement methods to deliver the plan; and (b) the regulated supplier's assessment of the capacity and capability of the regulated supplier, and of the supply chain, to deliver the investments proposed in the plan; and (c) any material risks and issues that the regulated supplier is actively managing to ensure that delivery; and (d) any performance indicators that the regulated supplier will use to monitor and report on delivery performance; and (e) for each performance indicator, annual performance targets (if any) for each year of the period of 10 financial years that begins with the next financial year to commence after the plan is disclosed; and (f) for each performance indicator, whether the specified target or targets are consistent with the regulated supplier's water services strategy and the asset management objectives, and if not, the reason or reasons for any inconsistency.	Section 5

Appendix C Funded Investment Programme

Table at parent project level, detail for 10 years then grouped.

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Appendix D Performance Targets

D.1 Levels of Service

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported	2024/25 Result	2025/26 Result
Water Supply							
1.1a-1.1j	The extent to which the local authority's drinking water supply complies with the following parts of the drinking water quality assurance rules: (a) 4.4 T1 Treatment Rules; (b) 4.5 D1.1 Distribution System Rule; (c) 4.7.1 T2 Treatment Monitoring Rules; (d) 4.7.2 T2 Filtration Rules; (e) 4.7.3 T2 UV Rules; (f) 4.7.4 T2 Chlorine Rules; (g) 4.8 D2.1 Distribution System Rule; (h) 4.10.1 T3 Bacterial Rules; (i) 4.10.2 T3 Protozoal Rules; and (j) 4.11.5 D3.29 Microbiological Monitoring Rule	100% compliance	Drinking Water Quality Assurance Rules / regulatory compliance	Safe drinking water	Safe drinking water / public health	100%	100%
2.1	The percentage of real water loss from the Council's networked reticulation system. (Calculated according to the methodology outlined in Water NZ Water Loss Guidelines publication)	<30%	Water NZ Water Loss Guidelines / existing ICC target	Efficient and sustainable use of water	Sustainable and efficient water services	21.30%	17.30%
2.2	The average consumption of drinking water per day per resident within the Invercargill City Council territorial district	<300 L/person/day	Existing ICC target / demand management	Responsible water use and affordability	Efficient use of resources	239 L/person/day	285 L/person/day
3.1	The median response time for **urgent** callouts, (from the time the Council receives notification to the time that service personnel reach the site)	4 hours	Existing service response target	Responsive service during faults	Reliable and responsive service	21 minutes	21 minutes

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Investment and Delivery Plan
Appendix D Performance Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported	2024/25 Result	2025/26 Result
3.2	The median time to resolve **urgent** callouts (from the time the Council receives notification to the time that service personnel confirm resolution of the fault or interruption)	24 hours	Existing service response target	Timely restoration of service	Reliable water supply	1 hour 36 minutes	1 hour 44 minutes
3.3	Attendance for **non-urgent** call-outs: from the time that council receives notification to the time that service personnel reach the site	5 working days	Existing service response target	Timely response to non-urgent issues	Responsive customer service	2 days, 2 hours and 18 minutes	2 days, 3 hours and 20 minutes
3.4	Resolution of **non-urgent** call-outs: from the time that the council receives notification to the time that service personnel confirm resolution of the fault or interruption	10 working days	Existing service response target	Timely resolution of non-urgent issues	Responsive customer service	3 days, 2 hours and 13 minutes	2 days, 18 hours and 3 minutes
3.5	The total number of complaints received by Council per 1,000 connections about any of the following: -(a) Drinking water clarity -(b) Drinking water taste -(c) Drinking water odour -(d) Drinking water pressure or flow -(e) Continuity of supply -(f) Council's response to any of these issues	<10 total	Existing ICC target / mandatory customer satisfaction measure	Acceptable water quality, pressure, continuity and responsiveness	Customer confidence and service reliability	1.78	1.58
Wastewater							
6.1	DIA Performance Measure 1 (system and adequacy) Number of dry weather wastewater overflows per 1,000 properties	Max 4	Existing service response target	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health.	To safeguard public health and the environment	1.00	1.08
6.2	DIA Performance measure 2 (discharge compliance) Compliance with ICC's resource consents for discharge from its sewerage system measured by the number of: • Abatement notices • Infringement notices	Max 0	Existing service response target	Council monitors and effectively manages the stormwater network to support environmental	To safeguard public health and the environment	0	0

Investment and Delivery Plan
Appendix D Performance Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported	2024/25 Result	2025/26 Result
	• Enforcement orders • Convictions received by ICC in relation to those resource consents.			health and efficient use of resources.			
7.1	a) The median response time from notification to arrival on-site to attend wastewater overflows resulting from a blockage or other fault in the sewerage system	<1 hour	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community	31 minutes	15 minutes
7.2	b) The median response time from notification to resolution of wastewater overflows resulting from a blockage or other fault in the sewerage system	<6 hours	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community	1 hour and 44 minutes	1 hour 31 minutes
7.3	DIA Performance Measure 1 (system and adequacy) • Number of dry weather wastewater overflows per 1,000 properties	Max 4	Existing service response target	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health.	To support economic growth of the community	3.54	2.73
Stormwater							
4.1	The number of flooding events that occur in the Invercargill City district	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability	0	0

Investment and Delivery Plan
Appendix D Performance Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	Community outcome supported	2024/25 Result	2025/26 Result
4.2	For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to the WSBU's stormwater system)	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability	0	0
4.3	Compliance with the WSBU's resource consents for discharge from its stormwater system, measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions Received by WSBU in relation to those resource consents.	0 non-compliance notices	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Environmental Wellbeing	0	0
5.1	The median response time to attend a flooding event, measured from the time that The WSBU receives notification to the time that service personnel reach the site	<1 hour	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Responsive customer service	0	0
5.2	The number of complaints received about the performance of the stormwater system (expressed per 1,000 properties connected to the WSBU's stormwater system)	<4 complaints	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability	4.25	1.80

D.2 Contractor KPI's

PART B APPENDIX B – KPI MANAGEMENT TOOL

KPI 1. Collaboration and Communication		
Description	Name	Collaboration and Communication
	Purpose	Promote collaborative working and joint accountability between Council and Contractor.
	Reporting Frequency	Monthly
	% Weighting	15%
	Included	All formal and informal communications, meeting attendance, reporting and data.
Owner	Owner	Council and Contractor.
	Scored by	Council and Contractor.
	Data supplied by	Council and Contractor.
Data Source	Location	Council.
	Type	N/A
	Notes	This KPI is to be scored jointly between Council and the Contractor, as it is intended to reflect the strength of the working relationship. Scoring occurs in 2 stages: 1. Individual scoring. Council and Contractor to complete scoring separately. 2. Joint scoring. Council and Contractor to meet and agree on scoring for the month to reflect the overall collaboration and communication between both parties.
Process / Calculation	Formula	Each area to be scored from 1-10, with 1 being 'area consistently not met' and 10 being 'area consistently met'. Scoring areas based on to what extent the contract parties consistently: 1. Attend meetings. 2. Proactively raise issues. 3. Work together cooperatively to resolve issues. 4. Communicate and work together in an open and transparent manner. 5. Are timely in communications (formal and informal) to facilitate contract outcomes. 6. Provide timely and complete reporting and data. Score for the month to be calculated based on average joint score across all scoring areas.
	Annual Target	Pass
	Score	Formula for overall score for the month is based on average joint score: (sum of joint scores for each area)/10*100 High Pass (90%): Average joint score ≥ 90%. Pass (70%): 90% > Average joint score ≥ 70%. Low Pass (60%): 70% > Average joint score ≥ 60%. Fail (<60%): 60% > Average joint score.
	Reference	Contract Volume 3 for expectations on relationship management, collaboration, and reporting. Contract Volume 4 for data requirements.
	Modifier	Scoring may be moderated if Council fails to meet with Contractor to agree on joint scoring for this KPI (as this is outside the Contractor's control).
	Notes	N/A

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Appendix D Performance Targets

KPI 2. Financial Management		
Description	Name	Financial Management
	Purpose	Ensure accurate and timely provision of Contractor claims and quotes (including Capital Works claims).
	Reporting Frequency	Monthly
	% Weighting	10%
	Included	Contractor (including their subcontractor/s, where relevant) claims and quotes submitted to Council.
Owner	Owner	Contractor.
	Scored by	Council.
	Data supplied by	Contractor and Council.
Data Source	Location	Council system.
	Type	Claims and quotes received by Council.
	Notes	Council may request further evidence from the Contractor to support scoring of this KPI.
Process / Calculation	Formula	Two scoring areas: 1. Accuracy and completeness. Contractor claims and quotes are accurate (use of applicable schedule items, correct quantities, correct application of margin where applicable, etc.) with all required fields completed in the required format. 2. Timeliness. Contractor claims sent to Council no later than 30 days after practical completion of work. Contractor quotes sent to Council no later than 14 days after requested or required by Council.
	Annual Target	Pass
	Score	High Pass (100%): - No inaccuracies or missing fields for Contractor claims and/or quotes, and - All timeframes met for Contractor claims and quotes sent to Council. Pass (90%): - Up to 2 inaccuracies or missing fields for Contractor claims and/or quotes, or - 1-2 Contractor claims and/or quotes sent up to 1 week late. Low Pass (80%): - 3-4 inaccuracies or missing fields for Contractor claims and/or quotes, or - 3-4 Contractor claims and/or quote sent up to 1 week late. Fail (≤70%): - 5+ inaccuracies or missing fields for Contractor claims and/or quotes, or - 5+ Contractor claims and/or quotes sent up to 1 week late, or - 1+ Contractor claims and/or quotes sent >1 week late.
	Reference	See required invoicing fields from Council.
	Modifier	Council may moderate scoring if the KPI score is affected by any factors outside of the Contractor's control.
	Notes	N/A

Investment and Delivery Plan
Appendix D Performance Targets

KPI 3. H&S, Environmental and Quality		
Description	Name	Health and Safety, Environmental and Quality
	Purpose	Ensure Contractor compliance with health and safety, environmental and contract specifications for quality.
	Reporting Frequency	Monthly
	% Weighting	20%
	Included	Audit inspection results.
Owner	Owner	Contractor verified with Council.
	Scored by	Contractor and Council.
	Data supplied by	Contractor and Council.
Data Source	Location	Council audit form, Council and Contractor audit records.
	Type	Joint audit inspections.
	Notes	Council-provided audit form to be used. Audits to cover an agreed mix of site audits, desktop (non-site audits), and different work types. Joint audits to be agreed a minimum of 30 days in advance with Council for scheduling purposes.
Process / Calculation	Formula	2 joint audits to be carried out per week (with a Council representative and Contractor representative). These joint audits are to be agreed and cover a mix of health and safety, traffic management, environmental, and quality aspects (as per Council's audit form). Scoring based on audit results and implementation of any corrective actions required, across the following aspects: 1. H&S and traffic management. 2. Environmental compliance. 3. Quality (compliance with contact specifications).
	Annual Target	Pass
	Score	High Pass (100%): Passed all audits AND carried out all required audits. Pass (98%): Failed 1 audit but implemented corrective action/s within agreed timeframe AND carried out all required audits. Low Pass (95%): Failed 2 audits but implemented corrective action/s within agreed timeframe AND carried out all required audits. Fail (<95%): Failed 3+ audits OR failed to carry out all required audits.
	Reference	Council audit form.
	Modifier	Council may moderate scoring if: - Scoring is affected by any factors outside of the Contractor's control (may include likes of Council not being able to attend audits, resulting in the required number of audits not being completed, etc). - Repeated failures result from Contractor's failure to implement corrective action/s. - Any high-risk failure is found which would result in a legislative or compliance breach for Council.
	Notes	Repeated failures without any corrective actions taken should be recorded on the issues register.

Investment and Delivery Plan
Appendix D Performance Targets

KPI 4 DIA Critical Compliance		
Description	Name	DIA Critical Compliance
	Purpose	Support Council's compliance with the Department of Internal Affair's (DIA) requirements.
	Reporting Frequency	Monthly
	% Weighting	30%
	Included	Contractor's response timeframes for Emergency and Critical Work, Contractor's data and reporting to Council during the reporting month.
Owner	Owner	Contractor.
	Scored by	Contractor validated by Council.
	Data supplied by	Contractor.
Data Source	Location	Contractor and Council system.
	Type	Contractor's response timeframes, Contractor data and reporting provided to Council.
	Notes	N/A.
Process / Calculation	Formula	**Pass / Fail based on:** - All jobs within the reporting period meeting the timeframes for attending to Emergency Work and Critical Work (includes, but is not limited to foulsewer, water mains, flood event response). *Work - Priority* / *Initial Response Time* / *Temporary Repair* / *Permanent Repair* / *Task Completion* Emergency / ¾ hour / 6 hours / 5 working days / 10 working days Critical / ¾ hour / 12 hours / 5 working days / 10 working days - Full compliance with data provision requirements (as per Volume 4) and reporting requirements (as per Volume 3).
	Annual Target	Pass
	Score	This KPI is scored on a pass/fail basis to reflect the criticality of these requirements. Only a Pass or Fail score can be achieved for the month. **Pass (100%):** - 100% timeframes met for attending to Emergency and Critical Work during the reporting month,and - 100% compliance with all data provision requirements (timeliness and completeness) as per Volume 4 and reporting requirements as per Volume 3 during the reporting month. **Fail (<100%):** - <100% timeframes met for attending to Emergency and Critical Work during the reporting month, and - <100% compliance with all data provision requirements (timeliness and completeness) during the reporting month, as per Volume 4 and reporting requirements as per Volume 3.
	Reference	Contract Volume 4 for data provision requirements and response timeframes. Contract Volume 3 for reporting requirements.
	Modifier	Council may moderate scoring if scoring is affected by any factors outside of the Contractor's control.
	Notes	Excludes customer complaints, as managed separately via RFS system.

KPI 5 Reactive Response and Task Completion (Urgent, Routine, Planned)		
Description	Name	Reactive Response and Task Completion (Urgent, Routine, Planned)
	Purpose	Ensure timeframes for responding to reactive works (urgent, routine, and planned) are met.
	Reporting Frequency	Monthly
	% Weighting	25%
	Included	Contractor's reactive response through to task completion timeframes for Urgent, Routine and Planned Work during the reporting month.
Owner	Owner	Contractor.
	Scored by	Contractor validated by Council.
	Data supplied by	Contractor.
Data Source	Location	Contractor and Council system.
	Type	Contractor's reactive response through to task completion timeframes.
	Notes	N/A.
Process / Calculation	Formula	**High / Pass / Low / Fail based on:** - Reactive response through to task completion timeframes met for attending to Urgent, Routine and Planned Work. *Work - Priority* / *Initial Response Time* / *Temporary Repair* / *Permanent Repair* / *Task Completion* Urgent / 4 hours / 24 hours / 6 working days / 11 working days Routine / 5 working days / N/A / 10 working days / 15 working days Planned / As Agreed / N/A / As Agreed / As Agreed
	Annual Target	Pass
	Score	**High** ≥98% timeframes for Urgent, Routine and Planned Work met during the reporting month. **Pass** ≥95% timeframes for Urgent, Routine and Planned Work met during the reporting month. **Low** ≥90% timeframes for Urgent, Routine and Planned Work met during the reporting month. **Fail** <90% timeframes for Urgent, Routine and Planned Work met during the reporting month.
	Reference	Contract Volume 4 for reactive response and task completion timeframes.
	Modifier	Council may moderate scoring if scoring is affected by any factors outside of the Contractor's control.
	Notes	Excludes customer complaints, as managed separately via RFS system.

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Strategic Asset Management Plan

Invercargill City Council

In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
Invercargill City Council

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1 Introduction

Every day, our communities rely on water services that are safe, reliable, and affordable. Behind the scenes, this depends on thousands of assets – pipes, treatment plants, pump stations, reservoirs, and supporting systems – that all need to be carefully planned, maintained, and renewed over time.

From July 2027, Invercargill City Council (ICC) will continue to deliver these services locally through a dedicated In-House Water Services Business Unit (WSBU). The WSBU remains part of Council and contributes to the wider outcomes sought for the city and community, while operating with a distinct focus on water service delivery. The model is intended to strengthen organisational focus, accountability and performance, while retaining local knowledge, established systems and close connections between service decisions, elected members and the community.

This Three Waters Strategic Asset Management Plan (SAMP) explains how we look after these specific assets so they continue to serve our community now and in the future.

1.1 Purpose

The purpose of this document is to:

- Explain how asset management supports the WSBU's long-term goals, connecting ICC's strategic and community outcomes with our specific asset management objectives and decision-making criteria.
- Show how decisions about three waters infrastructure are made in a planned, transparent, and responsible way by providing line of sight between organisational strategy, levels of service, risk management, and investment planning.
- Illustrate the asset management direction, level of maturity and key priorities that guide what goes into our Asset Management Plans (AMPs) which contain the technical asset detail
- Support consistent, transparent, and defensible investment decisions, including trade-offs between risk, performance, affordability and resilience.

These purposes reflect the document's intended role in connecting organisational strategy, levels of service, risk management and investment planning, while guiding the more detailed technical content held in the Asset Management Plans.



Figure 1 - Strategic Document Suite

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1.2 Who is Using this SAMP and How?

The SAMP is intended to be used at governance, management, planning and delivery levels. Different users will use it for different purposes, as summarised below.

User group	When the SAMP is used	How it is used	Intended outcome
Elected Members	When considering strategic direction, major investment choices, funding requirements, risk exposure and performance	To understand how proposed asset investment supports Council and Water Services Business Unit objectives, and how service, risk, affordability and resilience have been considered	Strategic and investment decisions are transparent, evidence-based and aligned with agreed outcomes
Water Services Business Unit leadership	During business planning, prioritisation, budgeting, performance review and assurance	To set expectations for asset management, assign accountability and confirm that plans and programmes are aligned with strategic priorities	Asset management is embedded in management decisions and organisational performance
Asset managers, strategic asset planners and asset information team	When preparing or updating Asset Management Plans, forecasts, renewal programmes, improvement plans and investment advice	To apply a consistent set of asset management objectives, principles and decision criteria across the three waters infrastructure	The activity Asset Management Plans are consistent with one another and maintain a clear line of sight to strategy
Operational and maintenance teams	When developing operational plans, maintenance approaches and asset interventions, and when providing asset performance information	To connect operational activity and asset knowledge with levels of service, risk, criticality and lifecycle planning	Operational experience informs asset planning and priority setting
Capital planning and delivery teams	When developing business cases, prioritising projects, sequencing programmes and selecting delivery approaches	To test whether proposals align with strategic objectives and appropriately address service, risk, lifecycle cost, affordability and deliverability	Capital programmes are justified, prioritised and achievable
Finance, risk, compliance, digital, customer and other supporting functions	During financial planning, risk and compliance reporting, system development, customer engagement and organisational planning	To understand the information, controls and support required for effective asset management	Supporting functions contribute consistently to asset management outcomes
Regulators, mana whenua, customers and other external stakeholders	During engagement, consultation, disclosure and assurance processes, where relevant.	To understand the strategic basis on which water services assets and associated investments are managed	Greater transparency and confidence in long-term stewardship and decision-making

Table 1 - Strategic Asset Management Plan Users

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1.3 Scope

1.3.1 Services and Assets

This SAMP covers the asset management activities required to provide the WSBU's three services:

- **Water supply**, including the abstraction, treatment, storage and distribution of drinking water to Invercargill and Bluff.
- **Wastewater**, including the collection, treatment and disposal of wastewater from the serviced areas of Invercargill, Bluff, Otatara, Ōmāui and Kennington.
- **Stormwater**, including piped networks, open drainage and associated infrastructure serving Invercargill, Otatara and Bluff.

The asset base includes network, treatment, storage, pumping, monitoring and supporting assets used to provide these services.

1.3.2 Asset Management Activities

The scope includes the strategic asset management activities that apply across the asset lifecycle, including:

- establishing asset management objectives and decision-making principles;
- defining and monitoring levels of service;
- forecasting demand and considering growth;
- assessing asset condition, performance and criticality;
- managing asset, service, compliance and resilience risks;
- planning operations and maintenance;
- planning renewals, upgrades and new assets;
- supporting capital and financial planning;
- developing and maintaining Asset Management Plans;
- managing asset information, systems, capability and sourcing arrangements; and
- identifying and managing asset management improvements.

1.3.3 Level of Detail

The SAMP defines the strategic direction and common asset management approach for the three waters portfolio. Detailed asset inventories, condition assessments, service-specific risks, lifecycle forecasts, operational requirements, projects, budgets and improvement actions sit primarily in the Water Supply, Wastewater and Stormwater Asset Management Plans, Water Services Strategy, Investment and Delivery Plan and their supporting documents.

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1.4 Relationship with Other Plans and Frameworks

The SAMP should remain aligned with ICC's planning cycle, Water Services Strategy, Asset Management Plans, Investment and Delivery Plan, and relevant regulatory requirements. It should be formally reviewed when any of those source documents undergo a material change, when significant new service, risk, affordability or investment information becomes available, or when organisational or regulatory change materially affects the asset management system.

The table below outlines the purpose of each key document or framework in relation to the SAMP and clarifies how strategic direction, asset-level evidence and delivery planning are connected.

Document Or Framework	Relationship to the SAMP
Long Term Plan (LTP)	Establishes Council's service priorities, funding approach and investment envelope; the SAMP provides the asset management rationale supporting water services investment and trade-offs
ICC Strategic Direction and Community Outcomes	Set within the LTP, these establish the broader outcomes and priorities that the Water Services Business Unit contributes to.
Asset Management Policy	Establishes ICC's commitments and expectations for asset management; the SAMP describes how those commitments are to be given effect for water services
Asset Criticality and Risk Management Frameworks	Provide the methods for assessing criticality and risk and inform intervention priorities, monitoring, escalation and investment decisions
Infrastructure Strategy (IS)	Provides the wider long-term infrastructure context and identifies significant infrastructure issues and decisions relevant to water services
Financial Strategy (FS)	Sets the overall financial direction for Council and establishes the specific financial, debt and affordability parameters that apply to water services
Water Services Strategy (WSS)	Sets the intended water service outcomes, long-term direction and strategic choices that the SAMP translates into asset management objectives, principles and priorities
Water Supply, Wastewater and Stormwater Asset Management Plans (AMPs)	Provide service- and asset- specific evidence, forecasts, risks, lifecycle requirements, programmes and improvement actions within the direction established by the SAMP
Investment And Delivery Plan (IDP)	Converts identified needs and investment choices into a prioritised, staged and fundable delivery programme, while delivery constraints and cost information inform future SAMP updates

Table 2 - Strategic Asset Management Plan relationship to other documents and frameworks

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Strategic Asset Management Plan

Figure 2 illustrates the line of sight between direction from ICC, water services strategy, asset management planning, investment and delivery, and the external requirements that influence them.

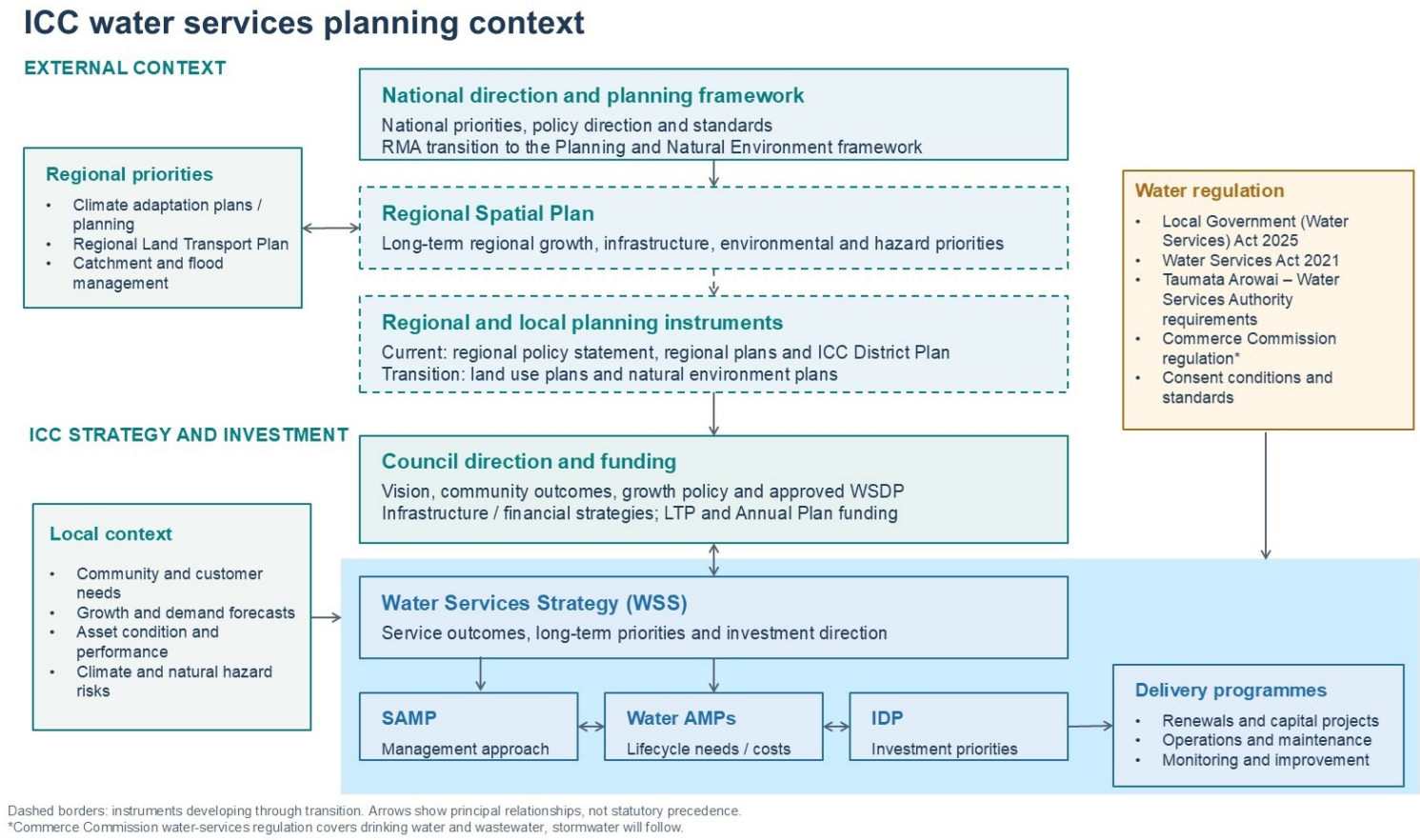


Figure 2 – ICC Water Services Planning Context

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1.5 Assumptions

1.5.1 Activity Assumptions

Service	Assumption	Qualification	Reason for Significance
Wastewater	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Wastewater	Asset condition information is sufficient to support current planning decisions.	Current asset condition data is incomplete and of variable confidence, and actual condition may be worse than assumed.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Wastewater	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Wastewater	Current discharge consents will be renewed or transitioned gradually the meet the WEPS.	Discharge consents may be renewed with different conditions.	Compliance is a primary driver of investment. Changes may change capital and operational costs and affect affordability.
Wastewater	Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.

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Strategic Asset Management Plan

Service	Assumption	Qualification	Reason for Significance
Wastewater	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery.	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Wastewater	Asset data quality and asset management system capability will improve over the planning period.	Improvements are dependent on continued investment in systems, data collection and organisational capability.	Asset information underpins decision-making, forecasting confidence and compliance with information disclosure requirements.
Wastewater	Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.
Stormwater	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Stormwater	Asset condition and remaining life information is adequate for AMP level planning.	Condition data is incomplete and actual asset life may differ from assumptions.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Stormwater	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational and installation practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Stormwater	Environmental quality standards and regulatory requirements will remain	Future regulatory requirements may introduce additional compliance	Regulatory compliance is a primary driver of operational and capital investment. Changes may affect expenditure requirements and affordability.

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Strategic Asset Management Plan

Service	Assumption	Qualification	Reason for Significance
	achievable within planned investment levels.	obligations or more stringent service standards.	
Stormwater	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery. (x3AMPs).	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Stormwater	Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.
Stormwater	Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate variability and extreme events may exceed historical patterns and planning assumptions.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.
Stormwater	Asset information quality and asset management system capability will improve over the planning period.	Asset information quality and asset management system capability will improve over the planning period.	Asset information underpins decision-making, forecasting confidence and compliance with Information Disclosure requirements.
Stormwater	Critical stormwater assets will continue to perform broadly in line with current expectations.	Failure of critical assets, including the key pump stations, floodbanks and floodgates, culverts under railways and SCADA, could materially affect service delivery and investment priorities.	The stormwater system contains a number of critical assets with limited operational redundancy and/or limited overland flowpath path alternatives.
Stormwater	The current allocation of assets remains with ICC.	While this AMP covers stormwater assets owned by ICC and managed by the	Transfer of assets between Environment Southland and ICC will materially affect the AMP and the WSBU.

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Strategic Asset Management Plan

Service	Assumption	Qualification	Reason for Significance
		WSBU, Environment Southland also owns stormwater, drainage and flood protection assets across Southland.	
Water Supply	Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Water Supply	Asset condition and remaining life information is adequate for AMP level planning.	Condition data is incomplete and actual asset life may differ from assumptions. (x3AMPs)	Influences renewal timing, expenditure forecasts and asset failure risk.
Water Supply	Existing water take and treatment residuals discharge consents remain available for the duration of their current consent terms, and replacement consents can be obtained when required.	Future consent applications may result in amended consent requirements	Material changes could affect source availability, treatment operations, resilience investment, operating costs and affordability.
Water Supply	Alternative Water Supply Project proceeds broadly as planned.	Scope, timing, cost, consent pathway and aquifer performance remain subject to further investigation and decisions.	Influences security of supply, resilience outcomes and long-term capital investment.
Water Supply	Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational and installation practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Water Supply	Drinking water compliance requirements remain broadly consistent with current planning assumptions.	Future standards and regulatory requirements may change.	Influences treatment requirements, operating costs and capital investment needs.

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Strategic Asset Management Plan

Service	Assumption	Qualification	Reason for Significance
Water Supply	Capital and renewal programmes will be delivered substantially as planned.	Delivery depends on funding, contractor availability and organisational capacity.	Influences the timing of risk reduction, renewals and service improvements.
Water Supply	Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Resource and contractor constraints may occur.	Influences service delivery, asset management maturity and programme delivery.
Water Supply	Asset information quality will continue to improve	Future condition, performance and criticality information may alter current assumptions.	Influences confidence in forecasting, risk assessments and investment decisions.
Water Supply	Legislative and regulatory reform remains broadly consistent with current planning assumptions.	Climate change may affect source reliability and asset performance.	Influences resilience requirements, levels of service and future investment needs.
Water Supply	Water metering and network intelligence initiatives proceed as planned and results in reduced water consumption	Timing, scope and future universal metering decisions remain uncertain.	Influences demand management, water loss reduction and future network investment.
Water Supply	Critical water supply assets will continue to perform broadly in line with current expectations.	Failure of key assets may occur and some assets have limited redundancy.	Influences service reliability, resilience planning and emergency response requirements.
Water Supply	Legislative and regulatory reform remains broadly consistent with current planning assumptions.	Future changes to economic, environmental and drinking water regulation remain uncertain.	Influences investment priorities, compliance costs and future levels of service.

Table 3 - Significant Activity Assumptions

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1.5.2 Long Term Planning Assumptions

Table from Infometrics expected October.

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2 Strategic Context

2.1 Changing Regulatory Environment

The delivery of water services in New Zealand is in a period of significant and sustained transformation. The regulatory environment is evolving rapidly, reshaping expectations for how water services are planned, managed, funded, and delivered. This shift reflects a move toward a more mature sector, where performance, transparency, and long-term stewardship are central to maintaining community trust and confidence.

At the core of this change is a strengthened regulatory framework that places increased emphasis on public health, environmental outcomes, financial sustainability, and customer accountability. The Local Government (Water Services) Act 2025 establishes the legislative foundation for this framework, introducing clearer expectations for long-term planning, service delivery, and financial management. Complementing this, the introduction of economic regulation signals a step change in the level of scrutiny applied to investment decisions, requiring the organisation to demonstrate that expenditure is efficient, well-justified, and aligned with customer outcomes.

In parallel, Taumata Arowai continues to advance a more risk-based and outcomes-focused approach to regulating drinking water, wastewater, and stormwater services. This includes progressively strengthening requirements related to drinking water quality, wastewater discharges, environmental performance, and source water risk management. Together, these regulatory developments place greater emphasis on understanding system risks, proactively managing them, and providing assurance that services are being delivered safely and responsibly.

For Invercargill City Council, the transition represents a significant shift in how water services are organised and governed, with an In-house Water Service Business Unit able to operate with greater independence, clearer accountability, and a stronger commercial and performance focus.

This changing environment has important implications for asset management. There is an increased requirement to demonstrate clear alignment between strategic objectives, levels of service, risk management, and investment decisions, supported by robust evidence and transparent processes. Greater emphasis is placed on risk-based planning, particularly in relation to public health, environmental compliance, and resilience to natural hazards and climate change. At the same time, there is an expectation that organisations will actively manage financial sustainability and affordability, ensuring that investment decisions are both practical and efficient over the long term.

In this context, the Strategic Asset Management Plan plays a critical role in guiding how ICC's WSBU responds to these expectations. It provides a structured framework for linking organisational strategy with asset management practices and investment planning, enabling the organisation to make informed, transparent, and defensible decisions. As the regulatory environment continues to evolve, the SAMP will remain a key tool in demonstrating stewardship, supporting compliance, and delivering safe, reliable, and affordable water services for Invercargill.

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2.2 Strategic Direction

ICC's strategic challenges, opportunities and community outcomes provide important context for water service delivery. These are set by Council as a part of the Long Term Plan and updated on a regular basis.

While the WSBU operates as a dedicated and ringfenced business unit, it remains an integral part of ICC and contributes to the broader outcomes sought for the city and community.

2.2.1 ICC Strategic Challenges and Opportunities

- Meeting the changing needs of our rangatahi as part of our wider community.
- Meeting and preparing for the changing needs of our wider community that is growing older and more diverse.
- Delivering financially sustainable and affordable investment in the core infrastructure the city needs to thrive, innovate and grow.
- Building resilience and preparedness as we navigate through increasingly complex environmental challenges including climate change, land contamination and earthquake risks and other natural hazards.
- Investing in partnerships and new ways of working to achieve more together.
- Ensuring Council leadership and delivery is credible and effective, building community trust and engagement and effectively navigating regulatory change.

2.2.2 ICC Community Outcomes

- Nobody is Left Behind – Our youth, older people, different neighbourhoods and communities basic needs are met through cost effective investment, and they feel valued and proud to live here.
- A vibrant, safe city which meets our people's diverse cultural needs.
- A future focused economy delivered through innovation and partnership and supported by appropriate infrastructure.
- A healthy, resilient environment supporting a healthy, resilient community.

The WSBU exists to enable and support the outcomes that ICC and the Invercargill community are seeking to achieve. While the WSBU operates within its own regulatory, operational and financial environment, its priorities are not determined in isolation. Rather, they are shaped by the strategic challenges facing Invercargill, the aspirations of the community, and the outcomes ICC has committed to delivering.

These higher-level priorities establish the community outcomes and strategic priorities to which water services contribute. The SAMP translates that direction into asset management priorities and delivery requirements, including the internal capability and mobilised, capable supply chain needed to maintain services and deliver investment.

2.2.3 In-house Water Service Business Unit Objectives

The WSBU has established a set of objectives that support ICC's vision and provide direction for how water services will be delivered and improved over the life of this strategy.

These objectives reflect the evolving water services environment and the need to balance service reliability, regulatory compliance, affordability, environmental responsibility, organisational capability, and long-term sustainability. Together, they provide a framework for decision-making and help ensure that investment, operational activities, and organisational development remain aligned with Council's priorities and community expectations.

WSBU Objective	Description
Operate as an Independent, Ringfenced, Commercially focused Utility	ICC will operate its water services as a financially ringfenced, professionally governed business unit with the flexibility to outsource where appropriate. This includes establishing formal agreements for internal support services, strengthening governance, and ensuring organisational structures support capability and performance.
Develop Workforce and Industry Capability	ICC will invest in building workforce capability and industry leadership by developing a technical training programme aligned with industry standards, creating a leadership pipeline, implementing a workforce development plan, and improving staff retention in the water services sector.
Comply with Public Health and Environmental Regulations	ICC will maintain full compliance with drinking water, wastewater, and stormwater standards, including all relevant resource consent conditions and national environmental regulations.
Ensure Financial Sustainability, Drive Efficiency	ICC will ensure water services are financially sustainable and responsive to customers with costs recovered from users in a fair and transparent manner. This includes meeting Commerce Commission requirements, leveraging procurement and shared service efficiencies.
Support Council's Growth and Development Objectives	ICC will align water service delivery with the city's growth aspirations. Financial contribution will be used where possible to effectively to fund growth-related investments. Development contributions could also be used in the future should the risk of city population and industry decline no longer be a risk.
Deliver Reliable and Resilient Water Services	ICC will build resilience into its water network by improving risk understanding, addressing vulnerabilities from sea level rise, flood event, and ensuring redundancy of critical assets where possible.
Partner with Mana Whenua and Engage Effectively with the Community	ICC will work in partnership with Mana Whenua and maintain transparent and responsive relationships with the community by actively seeking customer feedback, monitoring satisfaction, and demonstrating a commitment to being a responsible and accountable service provider. Council has existing Mana Whenua representation as part of its Governance structure.

Table 4 - Water Service Business Unit Objectives

2.3 Strategic Drivers

Providing safe, reliable and affordable water services requires us to plan for a range of pressures. Some relate to the age and condition of our assets, while others arise from regulatory change, environmental expectations, growth, climate risks and the increasing cost of infrastructure.

This section explains the pressures most likely to influence our services and investment decisions, how we intend to respond, and how these pressures are incorporated into asset management processes and investment planning.

Pressure	Strategic Response	How it influences decisions
Asset Condition and Renewals Looking after existing infrastructure	Improve evidence and prioritise critical assets	Renewal timing and maintenance approach
Compliance and Environment Protecting people and the environment	Plan proactively and reduce regulatory risk	Consent, monitoring and infrastructure priorities
Growth and Demand Supporting change in the right places	Monitor demand and use staged responses	Capacity upgrades and network extensions
Climate Change and Resilience Preparing for disruption and uncertainty	Incorporate hazards and uncertainty into planning	Redundancy, design and adaptation investment
Financial Sustainability and Affordability Balancing risk, benefits and cost	Prioritise, stage and fund investment responsibly	Programme sequencing and funding choices

Table 5 - Strategic Drivers and Responses

2.3.1 Asset Condition and Renewals

Looking after existing infrastructure

Much of Invercargill's water services networks are ageing, with many pipes and assets now reaching the stage where renewal or replacement needs to be carefully planned. While the networks are generally performing well, some assets are nearing the end of their expected life, and better information is needed in some areas to confirm condition and prioritise investment. This means the WSBU needs to keep improving asset data, inspections and modelling so renewals are based on risk, condition and service importance - not just asset age.

Our response is to focus renewal investment where it matters most: on critical assets, areas with known performance issues, and projects that support reliable and resilient services. Some lower-risk assets may continue to be managed and monitored for longer where this is appropriate, helping to smooth costs and reduce affordability pressures.

Until priority upgrades and renewals can be funded and delivered, performance expectations will need to remain realistic and reflect the condition, capability and constraints of the existing assets.

Over time, the WSBU will continue to strengthen its renewal programme so investment is targeted, deliverable, and supports safe and reliable water, wastewater and stormwater services for the community.

2.3.2 Compliance and Environment

Protecting people and the environment

Water services are subject to increasing environmental and regulatory expectations, including higher standards for drinking water safety, wastewater treatment and discharges, stormwater management, and the protection of groundwater and waterways. Meeting these requirements is essential to protect public health, support environmental outcomes, and maintain community confidence in the services we provide. For Invercargill, this means continuing to invest in the systems, processes and infrastructure needed to meet current obligations and prepare for future changes.

Our response is to take a planned and proactive approach to compliance and environmental improvement. This includes prioritising investment where it reduces risk, improves environmental performance where practical, and supports long-term consent requirements. We will continue to work with regulators, mana whenua and the community to understand expectations, make evidence based decisions, and ensure our water, wastewater and stormwater services are managed in a way that protects both people and the environment.

2.3.3 Growth and Demand

Supporting change in the right places

Invercargill is expected to experience relatively low and steady growth, rather than the high growth pressures seen in some other parts of New Zealand. Our existing water services networks were originally built to support a larger population, which means there is generally capacity to accommodate projected residential and commercial growth. However, we still need to plan carefully so that future growth is supported in the right places, at the right time, and without placing unnecessary cost on the wider community.

The main area of uncertainty is future industrial growth. New or expanded industry could create higher demand for water supply and wastewater services, particularly if development occurs in areas not currently serviced or where significant volumes are required. We are continuing to monitor this demand and forecast it where possible, including considering whether there is sufficient demand for the networks to be extended. Any decision to expand them will need to be supported by clear evidence of expected demand over time, affordability of upgrades that may be required, capacity to deliver any solution and the economic or safety benefits to the community if the extension was to proceed.

2.3.4 Climate Change and Resilience

Preparing for disruption and uncertainty

Climate change is expected to place increasing pressure on Invercargill's water services. More frequent and intense rainfall events can increase stormwater flows, contribute to surface flooding, and place pressure on wastewater networks through inflow and infiltration. At the same time, a changing climate can affect the security and reliability of water supply, particularly during dry periods or extreme weather events. These pressures mean our water services need to be planned and managed to remain reliable in a wider range of future conditions.

Our response is to strengthen the resilience of critical infrastructure and make sure climate risks are built into long-term planning and investment decisions. This includes improving our understanding of network capacity, prioritising upgrades and additional redundancy in vulnerable areas, protecting critical assets, and considering climate impacts when renewing or replacing infrastructure. By planning ahead, we can reduce the risk of service disruption, support community wellbeing, and make sure investment decisions are affordable, practical and resilient over the long term.

2.3.5 Financial Sustainability and Affordability

Balancing risk, benefits and cost

Providing safe, reliable water services requires significant ongoing investment, particularly as Invercargill's water, wastewater and stormwater networks continue to age and as regulatory expectations increase. Major renewal, resilience and compliance projects are planned over the coming years, including investment in critical pipelines, wastewater treatment and discharge improvements, and an emergency water supply. These investments are necessary to maintain services for current and future communities, but they will also increase costs and debt over time.

Affordability is therefore a key pressure for Council and the community. Water services charges are expected to increase as investment requirements grow, and this needs to be balanced carefully against household affordability and the need to keep services financially sustainable. Council's response is to plan investment over time, prioritise critical assets, use debt appropriately so costs are shared across the generations who benefit, and look for fair ways to recover costs from those who create additional demand.

2.4 Additional Strategic Drivers

While not identified as standalone strategic drivers in the Water Services Strategy, the SAMP also recognises several additional drivers that influence asset management decisions and programme delivery: capability and capacity, deliverability, and uncertainty of industrial and residential growth.

Pressure	Strategic Response	How it influences decisions
Capability and Capacity Building the people, knowledge and systems we need	Build internal capability and supplement it strategically	Workforce investment, sourcing choices and improvement priorities
Deliverability Turning plans into achievable programmes	Prioritise, sequence and resource programmes realistically	Programme timing, packaging, procurement and delivery approach
Uncertainty of Growth Preparing for growth without overinvesting	Monitor demand and use staged, evidence-based responses to proposed residential and industrial growth	Capacity planning, network extensions, investment timing and cost recovery

Table 6 - Summary of Additional Strategic Drivers

2.4.1 Capability and Capacity

Building the people, knowledge and systems we need

Delivering safe, reliable and affordable water services depends on having enough people with the right skills, knowledge and support. As the Water Services Business Unit transitions to a dedicated, ring-fenced operating model, capability requirements are increasing across asset management, planning, asset information, engineering, operations, compliance and programme delivery. At the same time, the organisation relies on the experience and institutional knowledge of key individuals and operates within a sector where suitably skilled resources are limited.

Our response is to progressively build internal capability, clarify asset management responsibilities and strengthen workforce development, succession planning, training and knowledge management. Targeted external expertise and long-term supplier relationships will continue to supplement internal resources where specialist skills or additional capacity are required. Improvements to data, systems and standardised processes will also reduce reliance on individual knowledge and enable staff to make consistent, evidence-based decisions.

2.4.2 Deliverability

Turning plans into achievable programmes

The scale and complexity of future renewal, resilience and compliance investment will place increasing pressure on the organisation and the wider supplier market. Delivery may be constrained by internal capacity, access to specialist skills, contractor availability, procurement lead times and the ability of the local market to respond to competing infrastructure programmes. If these constraints are not recognised when programmes are developed, planned investment may be delayed, cost more than expected or create additional maintenance and service risks.

Our response is to develop realistic, prioritised and appropriately sequenced programmes that reflect available funding, organisational capacity and market capability. This includes strengthening forward planning, applying realistic delivery assumptions, maintaining collaborative supplier relationships, coordinating programmes where practical, and using procurement and external delivery support strategically. Investment will be staged so that the most critical service, compliance and resilience needs are addressed first while maintaining a sustainable and achievable pipeline of work.

2.4.3 Uncertainty of Growth

Preparing for growth without overinvesting

Residential growth in Invercargill is expected to remain relatively modest, and the existing networks generally have capacity to accommodate anticipated change. The greater uncertainty relates to the location, timing and scale of future industrial development. This could create significant demand for services, particularly where development occurs outside currently serviced areas, has an impact on treatment requirements or requires unusually large volumes. Infrastructure must therefore be capable of supporting the city's growth aspirations without committing the wider community to unnecessary or premature investment.

Our response is to monitor residential and industrial demand signals, maintain and use existing network capacity where practical, and align infrastructure planning with future spatial and growth strategies. Potential network extensions or capacity upgrades will be assessed using evidence of demand, network modelling, affordability, deliverability and fair cost recovery. Where the timing or scale of growth remains uncertain, staged, adaptable or trigger-based responses will be preferred so that investment can be brought forward when the need is sufficiently clear.

These pressures are interconnected. For example, an ageing asset may also present a compliance or resilience risk, while the preferred response may be constrained by affordability or delivery capacity. We will therefore consider the pressures together, rather than in isolation, when setting priorities and making investment decisions.

2.5 Strategic Stakeholders

Strategic stakeholders are organisations, groups and individuals that receive, influence or have a significant interest in the Water Services Business Unit's services. The table below identifies these stakeholders, their areas of interest, their role in water services, and the approach used to engage with them.

Interested Party	Area of Interest	Role	Engagement Approach
Mana Whenua / Te Ao Marama Inc.	Cultural values, kaitiakitanga, water and land stewardship	Treaty partner and representative of Murihiku rūnanga	Ongoing engagement through Te Ao Marama Inc. and Te Ropū Taiao; input into planning, projects and decision-making processes
Invercargill Community	Water quality, reliability and service delivery	End users of water services	Ongoing liaison; customer service channels; engagement through complaints, requests and public communications
Invercargill Ratepayers	Rates, affordability and levels of service	Funders of water services	Formal consultation through Long Term Plan (LTP), Annual Plan, AMP and WSS processes
Developers / commercial users	Network capacity and connections	Demand drivers and contributors to growth. Funders of water services.	Engagement through development approvals, connection processes and infrastructure planning
Taumata Arowai	Drinking water quality and compliance	Regulator for drinking water quality and safety	Formal regulatory engagement, compliance reporting and Drinking Water Online system reporting
Commerce Commission	Efficiency, pricing, transparency	Economic Regulator	Formal Information Disclosure and compliance
Environment Southland	Environmental management of the Ōreti River and water takes and consents	Regional regulator and consenting authority	Resource consent processes, compliance reporting and regional planning engagement
Central Government / regulators (e.g. MCERT, MfE)	Legislative and policy settings	Policy and regulatory oversight	Compliance reporting and participation in national policy and regulatory processes
Fire Emergency NZ	Network performance (flow and pressure for firefighting)	Emergency response and service level requirements	Operational liaison and input into hydraulic performance and planning requirements
Visitors / non-resident users	Water quality and availability	Temporary users of water services	Indirect engagement through service provision and public information
Southland Regional Development Agency / Strategy	Regional development and growth	Strategic alignment of infrastructure with regional growth objectives	Engagement through executive-level coordination and regional planning processes
Audit New Zealand	Governance and operations	Independent assurance and audit of financial and asset management information	Formal audit and reporting processes in accordance with statutory requirements
Contractors and Consultants	Construction, maintenance and capital delivery	Delivery of capital works and operational services	Procurement processes and contract management; regular project coordination and performance review

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Interested Party	Area of Interest	Role	Engagement Approach
Academic providers (e.g. Connexis, Otago Polytechnic, SIT and Otago/Canterbury Universities)	Workforce development, technical training, research, innovation and industry capability	Education and training partners supporting workforce capability and future talent pipelines	Engagement on training needs, cadet and professional-development pathways
Industry Working Groups (e.g. Water NZ Chief Executive Forum, Regional Water Working Group, National IBU Working Forum)	Sector coordination, regulatory developments, good practice and shared challenges	Forums for knowledge sharing, collaboration and alignment across the water-services sector	Active participation in working groups and forums; sharing lessons, monitoring sector developments and collaborating on common issues

Table 7 - Strategic Stakeholders

2.6 Risk Appetite

Risk appetite is the amount and type of risk that ICC is willing to accept in pursuing its objectives, strategic priorities and community outcomes. Risk tolerance defines the acceptable limits of variation around that appetite and provides practical boundaries for decision-making and escalation. Together, the appetite and tolerance settings are intended to provide “freedom within boundaries”, enabling well-managed risk-taking where it supports strategic outcomes while protecting critical services, compliance obligations, health and safety, and long-term financial sustainability.

ICC establishes its risk appetite through their Risk Management Policy and Risk Management Framework (current version 2026). The Framework contains the detailed category-specific appetite statements, tolerance boundaries and guidance on acceptable and unacceptable risk-taking. All staff and decision-makers are required to apply these settings when identifying, assessing, evaluating and treating risks. Risk appetite supports strategic discussion and decision-making, but does not replace the assessment of individual risks, residual-risk escalation requirements, delegated authority or governance judgement.

The current Framework identifies a Balanced appetite for service delivery and critical services, financial sustainability, legal and regulatory compliance, environment and climate resilience, and achievement of strategic objectives. A Conservative appetite applies to health, safety and wellbeing, and reputation and community trust.

Risk appetite influences asset management priorities and trade-offs by informing:

- the prioritisation of critical assets and single points of failure;
- inspection, monitoring and condition-assessment priorities;
- maintenance, renewal and replacement timing;
- operational controls, contingency and response arrangements;
- capital investment and resilience improvements; and
- the acceptance, treatment, monitoring or escalation of residual risk.

ICC’s detailed risk appetite settings by category are set out in Appendix D.

3 Asset Management Overview

3.1 Asset Management Approach

The Invercargill City Council In-House Water Services Business Unit is committed to managing its water, wastewater, and stormwater assets in a strategic, transparent, and sustainable manner. Asset management provides the framework through which the organisation balances service delivery, regulatory compliance, risk, resilience, affordability, and long-term stewardship to deliver safe, reliable, and efficient water services for the community.

This Strategic Asset Management Plan establishes the principles, objectives, and decision-making approach that guide how assets are planned, operated, maintained, renewed, and replaced over time. It provides the link between the Business Unit's strategic objectives, customer and community expectations, levels of service, risk management practices, and investment decisions, ensuring that resources are directed towards the areas of greatest value and need.

The WSBU aligns its asset management approach with recognised industry good practice, including the principles and framework contained within the International Infrastructure Management Manual (IIMM). This supports a consistent and evidence-based approach to decision-making and helps ensure that asset management activities remain aligned with evolving regulatory requirements and stakeholder expectations.

As the organisation transitions to a dedicated, professionally governed and financially ring-fenced water services business unit, there is an opportunity to further strengthen asset management capability, governance, systems, data, and decision-making processes. While the organisation benefits from significant operational experience and institutional knowledge, a key focus over the life of this SAMP is to reduce reliance on individual knowledge, improve the quality of asset information, and build the capability required to support increasingly complex investment, compliance, and service delivery decisions. These improvements will help ensure the organisation is well positioned to meet future challenges while continuing to deliver value for customers and the wider community.

3.2 Asset Management Policy

ICC’s Asset Management Policy, adopted in 2017, establishes the organisational expectations for managing assets and defines asset management responsibilities across governance, executive leadership, management and operational levels.

The Policy provides the foundation for consistent and accountable asset management by clarifying how each level of the organisation contributes to setting direction, allocating resources, managing asset-related risks, implementing asset management practices and monitoring performance.

This SAMP applies those policy expectations to the WSBU and provides the strategic framework through which its responsibilities for water supply, wastewater and stormwater assets are put into practice.

3.3 Asset Management Themes, Principles and Objectives

The Asset Management themes, principles and objectives provide the link between the In-house Water Service Business Unit Objectives and the day-to-day management of our water assets.

The themes are the overarching drivers for Asset Management decision making, providing the common foundation for how our water assets should be managed. The principles define how assets will be managed, while the objectives define the outcomes asset management is intended to achieve. Together they guide decision making and investment prioritisation, ensuring that asset management activities remain aligned with community needs, regulatory obligations, and affordability requirements. They also provide a framework for accountability by providing a consistent basis for evaluating investment choices, and enabling progress to be monitored and reported over time.

Asset Management Theme	Description
Value for Money	We make investment decisions that deliver the best long-term value for our communities, using evidence and whole-of-life thinking to balance service outcomes, risk, and affordability.
Trusted Essential Water Services Provider	We manage our water assets with a highly experienced and qualified local team, to provide safe, reliable, and compliant services that communities can depend on every day, now and into the future.
Planning Ahead With Confidence	We take a long-term, forward-looking approach that anticipates change, supports planned asset succession, and strengthens our ability to respond to future risks, challenges, and expectations.

Table 8 - Asset Management Themes

Asset Management Principle	Description
Service and community outcomes first	Water assets are managed to protect public health, the environment, and community wellbeing, while supporting Invercargill's long-term social and economic aspirations.
Kaitiakitanga	ICC manages water assets as a long-term steward, balancing present needs with the responsibility to leave assets in good order for future generations.
Lifecycle value and affordability	Assets are planned, operated, renewed, and replaced to optimise whole-of-life value while managing affordability and intergenerational equity.
Decision making based on risk and criticality	Investment is prioritised based on asset criticality, condition, and consequence of failure, rather than age alone.
Financial sustainability and transparency	Asset management supports a financially sustainable, ring-fenced water services activity with transparent cost recovery and prudent use of debt.
Resilience to future change	Assets are planned and managed to be resilient to future changes including climate change, flooding, sea level rise, seismic risk, regulatory change, and evolving community expectations.
Continuous improvement and deliverability	Asset management maturity, data quality, systems, and resource delivery capability are progressively improved and maintained to support reliable and achievable investment programmes.

Table 9 - Asset Management Principles

Asset Management Objective	Description
Maintain safe, compliant and efficient water services	Ensure water, wastewater, and stormwater assets constantly meet public health, environmental, and regulatory requirements.
Manage affordability while investing for the future	Balance renewal, resilience investment, and debt to manage affordability for current and future ratepayers.
Sustain core infrastructure over the long term	Maintain and renew the existing asset base so that assets remain fit for purpose.
Reduce risk from ageing and critical assets	Systematically reduce service and compliance risk arising from ageing infrastructure and single points of failure.

Improve resilience to climate and natural hazards	Increase the resilience of water assets to flooding, drought, seismic events, and sea level rise.
Lift asset management maturity	Progress asset management practices across all three waters
Enable planned succession of assets	Ensure clear asset succession pathways by aligning investment prioritisation, renewal timing, and funding decisions to manage risk, optimise value, and promote efficient spending.

Table 10 - Asset Management Objectives

3.4 Overview of Asset Management System

An Asset Management System (AM System) is defined as “the encompassing set of people, processes, tools, plans and other resources involved in the delivery of Asset Management.”

We have adopted the Asset Management framework contained within the International Infrastructure Management Manual (IIMM) 2020 to define the scope of our AM System. It provides a recognised, infrastructure-specific framework that brings the full asset management system together - strategic direction, levels of service, demand, asset performance, risk and resilience, lifecycle planning, information, people, systems, and continuous improvement. This helps create a clear, consistent line of sight from the WSBU’s objectives through to operational and investment decisions.

The figure below shows the integration between the different elements of the AM System. Each are expanded on below, including a decsription of our current practices and processes, and lists of improvement areas we are focussed on in each of these spaces.

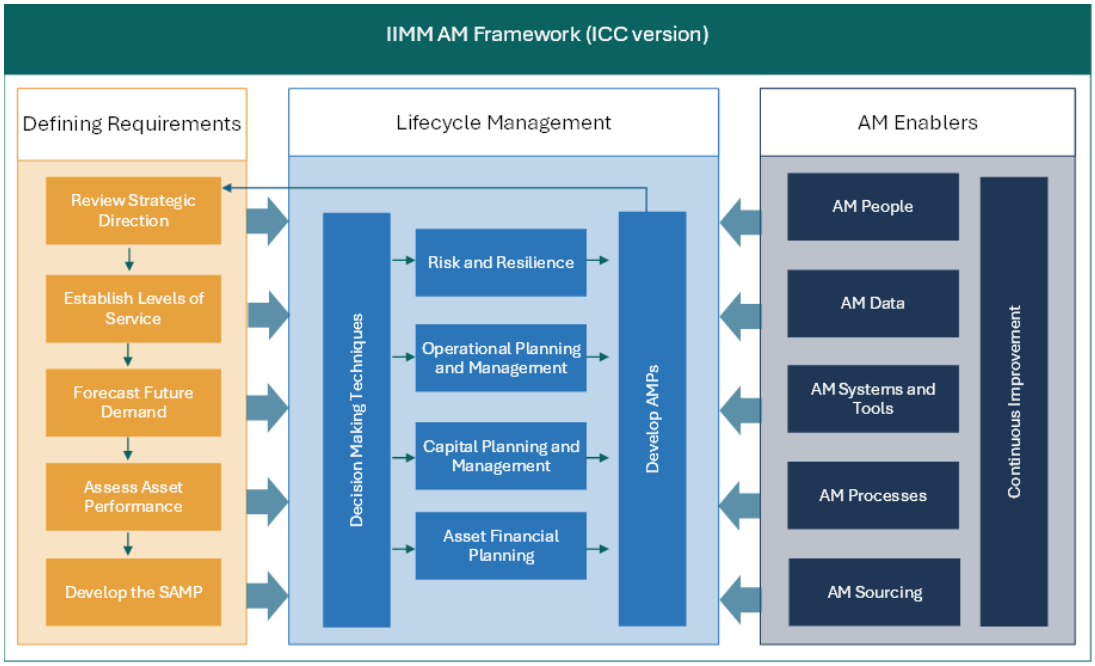


Figure 3 - ICC WSBU Asset Management Framework

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3.4.1 Maturity Assessment

In accordance with ICC's Asset Management Policy, the target asset management maturity level for each of the three water services activities (water supply, wastewater, and stormwater) is set at the core with a target of Intermediate level, as defined by the IIMM 2015 Maturity Framework. This reflects the commitment to structured, risk-based, and lifecycle-oriented asset management practices, consistent with best practice for medium-complexity networks.

A 2017 self-assessment evaluated key elements of asset management—such as service planning, lifecycle management, risk, financial planning, and continuous improvement. The results demonstrated consistent scoring across all three water services, with average maturity levels aligning with the Intermediate category. These results are illustrated in the graph below:

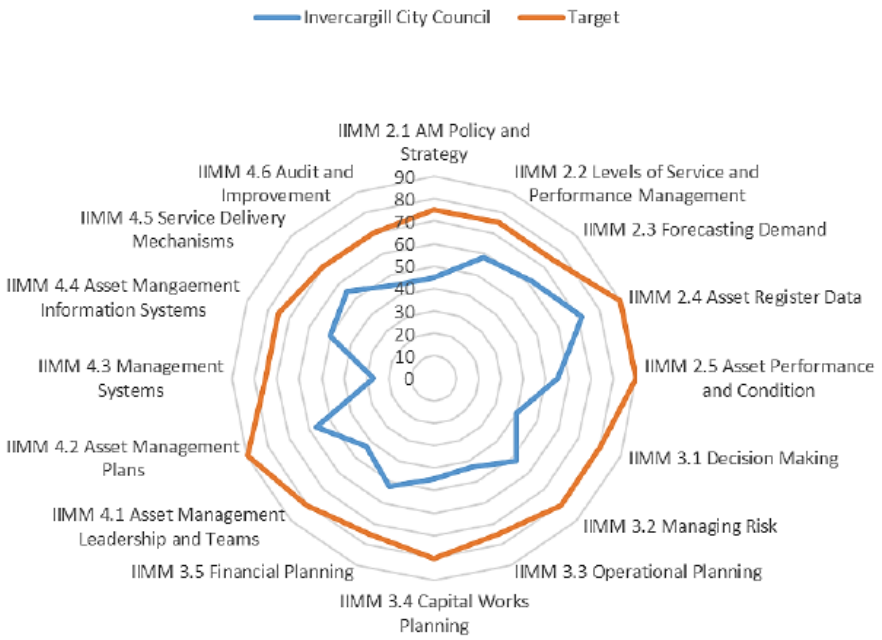


Figure 4 - Radar Map Current and Target Asset Management Capability from 2017 AMMA

Additionally, an independent review of the draft 2020 Asset Management Plans (AMPs) provided external validation of these findings. The reviewer noted that:

- Water Supply practices were "generally at the Intermediate level with minor gaps";
- Wastewater maturity "lies between Core and Intermediate";
- Stormwater management was "generally at the Intermediate level."

These findings support the continued progression towards Intermediate maturity, with a focus on addressing identified gaps and embedding continuous improvement practices across all three water services.

A comprehensive baseline maturity assessment, including recommendations and an improvement roadmap, is planned for early 2027 to establish a current view of asset management performance and capability.

Until this assessment is completed, the following sections on asset management enablers and asset management processes provide a qualitative assessment of current maturity and capability, together with the key focus areas that have been identified to support ongoing improvement and progression towards industry good practice.

3.4.2 Asset Management Enablers

Asset management enablers are the organisational foundations that support effective planning, decision-making, and delivery across the entire asset lifecycle.

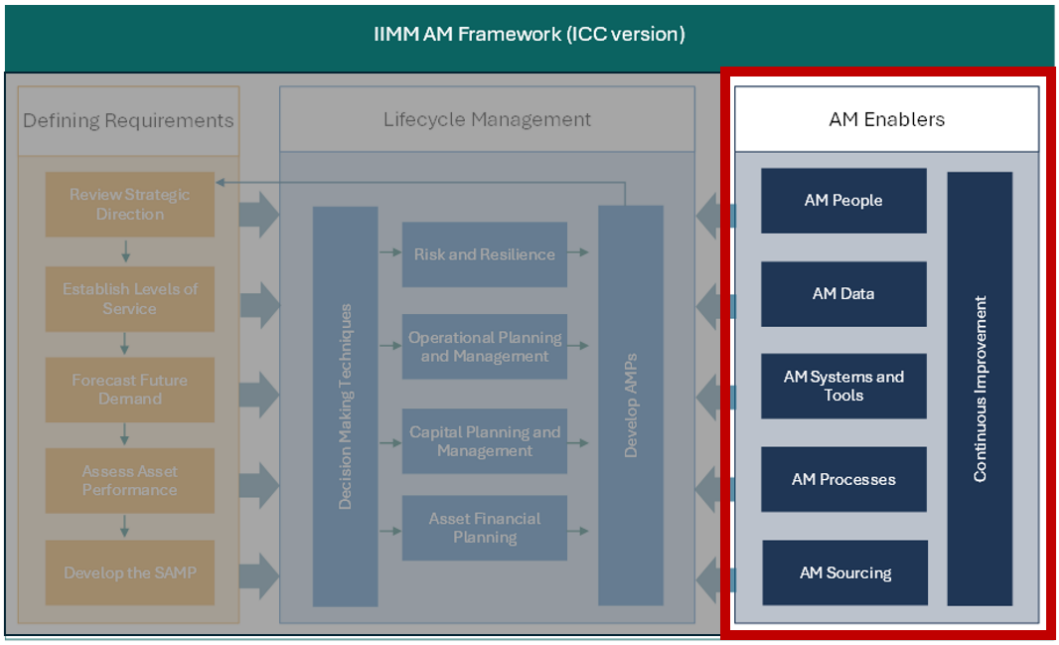


Figure 5 - ICC WSBU Asset Management Framework - ENABLERS

These enablers are undergoing significant development as we respond to increasing regulatory expectations, evolving service requirements, and growing investment demands. The following sections outline the current state of the key asset management enablers - people, data, systems and tools, asset management processes, asset management sourcing, and continuous improvement - and identify the focus areas that will strengthen asset management capability and maturity over time. Together, these enablers provide the foundation for delivering safe, reliable, resilient, and financially sustainable water services for the Invercargill community.

3.4.2.1 People

Effective asset management depends on clear leadership, defined responsibilities and people with the capacity, capability and authority to make and implement decisions. As part of the transition to a dedicated In-house Water Services Business Unit, ICC is redesigning its organisational structure and strengthening asset management responsibilities and accountabilities. The organisation benefits from considerable operational experience and institutional knowledge, but currently relies on key individuals in several areas. This increases the importance of workforce planning, succession, knowledge transfer and capability development.

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Function	Asset Management Role
Governance - Council and Water Committee	• Approves strategic direction, funding, risk settings and significant investment decisions • Monitors performance, risk and delivery
Executive and Water Services Business Unit leadership	• Converts governance direction into organisational priorities • Establishes accountabilities, resources and management controls • Oversees performance, compliance and delivery
Strategic/Tactical Asset Management and Planning	• Maintains the SAMP and activity AMPs • Coordinates levels of service, risk, asset information, lifecycle planning and investment advice • Develops renewal and improvement programmes
Operations, Maintenance and PMO/Capital Delivery	• Operates and maintains assets • Delivers capital works • Captures operational, condition, cost and performance information • Provides practical asset knowledge to planning and decision-making
Supporting Council functions	• Provides specialist financial, digital, risk, customer, workforce, policy and communications support including: o Financial forecasts, systems, assurance, engagement, workforce and policy inputs
External suppliers and specialists	• Provides contracted operations, delivery capacity or specialist expertise where required including: o Contracted services, technical advice, investigations and project delivery

Table 11 - Asset Management Function and Roles

Focus areas:

Organisation and Accountability

- Embed asset management responsibilities and accountability within the new organisational structure.
- Strengthen governance, performance reporting and compliance capability.

Capability and Capacity

- Build asset management, planning and asset information capability.
- Invest in technical training and professional development including revision of cadet programme.
- Maintain strategic partnerships to supplement internal capability.

Knowledge and Leadership

- Implement workforce development and succession planning.
- Build leadership capability and future talent pipelines.
- Increase resiliency around reliance on key individuals through improved systems, processes and knowledge management.

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3.4.2.2 Data

Reliable asset data provides the evidence needed to understand asset performance, manage risk and plan maintenance, renewal and investment. Data quality and coverage vary across the portfolio, with the following information types requiring ongoing management and improvement:

Type	Description
Fundamental asset data	Core attributes such as asset type, location, size, age and material are recorded in the asset register and spatial systems. Completeness and confidence vary between asset classes.
Maintenance and fault history	Work orders, inspections, customer complaints, faults and failures provide important evidence about asset performance. Better connection of this history to individual asset records will support maintenance planning and renewal decisions.
Condition and performance data	Condition information is drawn from inspections, CCTV surveys, failure records and staff knowledge. Coverage is improving but remains limited for parts of the wastewater and stormwater networks and for pressure mains.
Criticality	Criticality reflects the Consequence of Failure irrespective of whether the asset is brand new or nearing the end of its useful working life. Data quality and completeness is good for the network as the rating is largely based on the size of asset but also considers the qualitative consequence of asset failure for a particular location or area. Above ground assets are predominantly considered critical, however that data is not contained in the asset management system IPS.
As-built information	Drawings and records for new or modified assets need to be supplied consistently, checked and incorporated into the relevant asset, spatial and document-management systems.
Detailed asset data	The transition from Infor Public Sector (IPS) to TechOne EAM as the asset management data platform provides an opportunity to improve data structure, ownership and consistency. Future alignment with emerging three-waters asset data standards may also be considered, but is not an immediate priority.

Table 12 - Data Type Descriptions

Focus areas:

- Improve the completeness, quality and decision-relevance of asset data by prioritising critical information gaps, including CCTV, condition and performance information for underground networks and critical assets.
- Integrate CCTV, criticality, risk, maintenance and levels-of-service information with the asset register, supported by clear data ownership and governance through the transition to TechOne EAM.
- Prioritise improvement of the asset information most important for decisions, particularly condition, performance, criticality, maintenance and fault data for critical assets.
- Establish clear data ownership and minimum information requirements through the transition to TechOne EAM, while preserving the ability to align with sector data standards in the future.

3.4.2.3 Systems and Tools

Asset information systems are critical to effective asset management and to achieving the Water Services Business Unit's asset management objectives. Our systems are intended to provide asset and service managers with the information and analytical tools needed to understand asset performance, support lifecycle planning and make evidence-based investment decisions.

As asset management practices mature, stronger integration between asset, financial, spatial and operational systems will improve the consistency and transparency of decision-making.

Focus areas:

- Complete the transition from IPS to TechOne EAM, with fit-for-purpose configuration, clearly defined data ownership and maintained data quality.
- Integrate asset, spatial, operational, risk and financial information so that planning and financial forecasts are based on consistent, connected evidence.
- Strengthen modelling and scenario-analysis capability to support transparent investment prioritisation, assessment of trade-offs and long-term planning.

A detailed list of systems and tools by activity are set out in Appendix C.

3.4.2.4 Asset Management Sourcing

Asset management delivery relies on a combination of internal capability and strategically sourced external support. The WSBU retains responsibility for asset stewardship, long-term planning, risk management, investment decision-making, and overall service outcomes, while specialist expertise, operational delivery, project management office (PMO) and selected technical services may be provided through external partners where this represents the most effective and efficient use of resources.

This approach recognises the challenges facing the wider water sector, including increasing regulatory expectations, workforce shortages, and growing demand for specialist asset management, engineering, and operational skills. Long-term supplier relationships are therefore an important component of the asset management system, providing access to expertise, scalability, innovation, and delivery capacity that may not be practical or economical to maintain internally.

Focus areas:

- Strengthen in-house capability across asset planning, asset information, engineering, and operational functions while using targeted external support to address specialist skill and capacity gaps.
- Retain critical asset management knowledge and decision-making capability within the organisation through workforce development and succession planning.
- Leverage the long-term operations and maintenance contract to encourage investment in local people, systems, and resources within Invercargill.
- Improve delivery certainty and workforce capability through long-term, collaborative supplier relationships.
- Maintain the ability to efficiently scale resources and delivery capacity in response to future regulatory requirements, growth pressures, and capital programme demands.
- Balance internal capability growth with strategic outsourcing to provide flexibility, resilience, and value for money.

3.4.2.5 Asset Management Processes

Effective asset management relies on robust, consistently applied processes that translate organisational objectives into day-to-day planning, investment and delivery decisions. While core processes are in place across the WSBU, they are not always formally documented or applied consistently and can rely heavily on staff knowledge and experience. Strengthening and standardising these processes will support decisions that are repeatable, auditable and clearly linked to strategic objectives, levels of service, risk and criticality.

Focus areas:

- Document and embed consistent asset management and business-case processes across the WSBU.
- Strengthen evidence-based renewal and investment decisions by improving modelling and reducing reliance on asset age or condition alone.

3.4.2.6 Continuous Improvement of Asset Management

Continuous improvement supports the WSBU in progressively strengthening its asset management capability, practices and decision-making. Each AMP will include an Asset Management Improvement Plan that identifies agreed improvement actions, responsibilities and priorities. The Asset Management team will monitor progress against these actions and use the results to inform future updates to the AMPs and SAMP.

A relevant Asset Management Maturity Assessment was last completed in 2017. A new assessment is planned for once the transition to the WSBU and the move from IPS to TechOne EAM are complete. This will establish an updated maturity baseline, identify capability gaps and inform the next programme of asset management improvements.

Focus areas:

- Build organisation-wide understanding of asset management and strengthen the capability needed to apply asset management practices consistently.
- Complete a new Asset Management Maturity Assessment following the WSBU and TechOne EAM transitions, then use its findings to update and prioritise the Asset Management Improvement Plans.

3.4.3 Asset Management Processes

Asset management processes describe the structured set of activities and practices used to manage assets in a coordinated and efficient way. These processes support consistent, informed decision-making across the entire asset lifecycle and help ensure that assets continue to deliver agreed levels of service at an acceptable level of risk and cost. The following sections provide an overview of each asset management process and how it is applied within the overall asset management system.

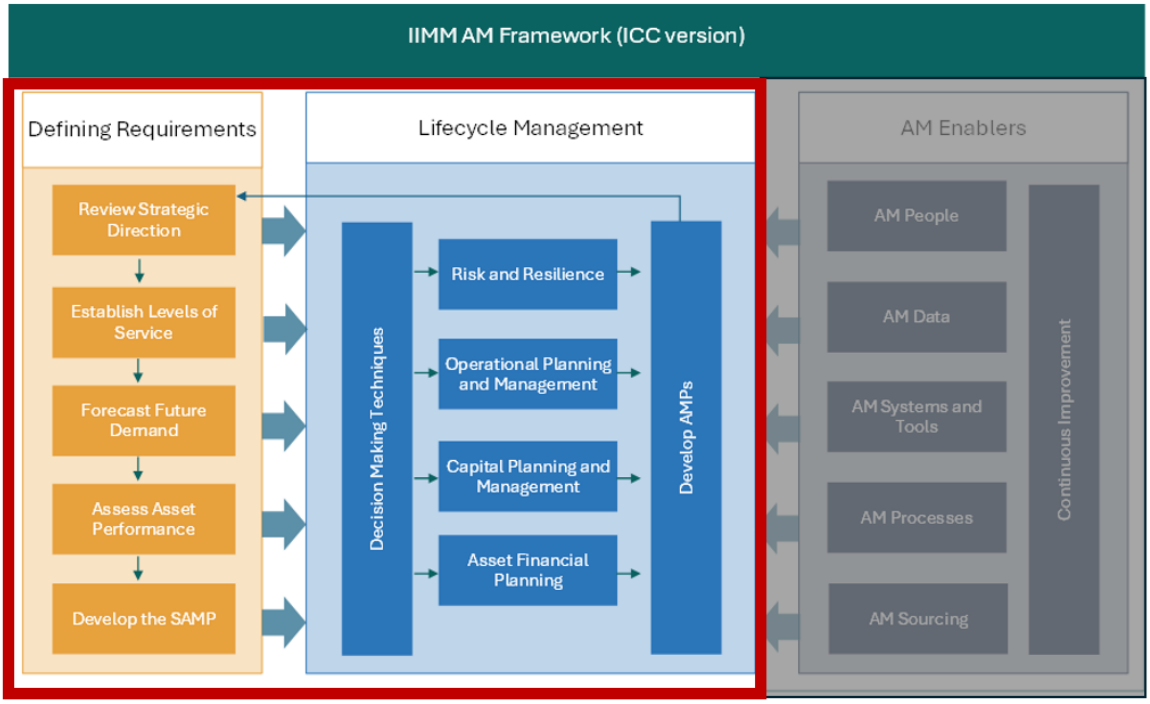


Figure 6 - ICC WSBU Asset Management Framework – PROCESSES

3.4.3.1 Review Strategic Direction

Reviewing strategic direction is the starting point for effective asset management. The WSBU will ensure its asset management approach remains aligned with Council's vision, community outcomes, strategic priorities, and the broader challenges and opportunities facing Invercargill. While it operates as a dedicated and ring-fenced entity, priorities are not determined in isolation. Rather, they are shaped by the aspirations of the community, Council's strategic objectives, and the outcomes that Invercargill City Council has committed to delivering. These higher-level priorities provide the direction for water service delivery and influence how assets are planned, operated, maintained, renewed, and invested in.

As part of the Central Government directed water services regulatory reform process, Invercargill City Council was required to prepare a Water Services Delivery Plan. Approved in 2024, the Plan established a set of Water Services Business Unit objectives reflecting both regulatory expectations and local priorities. These objectives provide the strategic link between Council key outcomes and day-to-day asset management activities and have directly informed the development of the Asset Management Objectives set out in this SAMP. Through this line of sight, asset management decisions support the delivery of safe, reliable, resilient, compliant, and financially sustainable water services while contributing to the wider economic, social, environmental, and cultural outcomes sought for the Invercargill community.

Focus areas:

- Embed the Asset Management Objectives across planning and decision-making processes to support the successful transition to the In-House Water Services Business Unit.
- Strengthen the use of strategic objectives, desired outcomes, and identified challenges to inform investment prioritisation, trade-off decisions, and business case development.

3.4.3.2 Establish Levels of Service

Levels of Service (LoS) define the outcomes the WSBU seeks to deliver and provide the basis for measuring, managing and improving service performance. Levels of Service are an important component of asset management because they translate community expectations, regulatory obligations and organisational objectives into measurable performance outcomes that can be monitored and reported over time.

The Levels of Service have been informed by community feedback, customer requests and complaints, Long Term Plan and Water Services Delivery Plan consultation, regulatory obligations and industry good practice.

Performance measures are grouped into three categories:

- **Customer Levels of Service** – describe the service outcomes experienced by consumers and are generally expressed in customer-focused language. Examples include water quality, reliability of supply, responsiveness to faults and overall customer satisfaction.
- **Technical Levels of Service** – are the measurable operational and engineering requirements that support delivery of customer outcomes. These measures are typically used to understand network performance, condition, capacity, reliability and operational efficiency.
- **Regulatory and Mandatory Performance Measures** – are prescribed through legislation, regulatory frameworks and industry reporting requirements. They include:
    - Compliance with the Drinking Water Quality Assurance Rules administered by Taumata Arowai /The Water Services Authority under the Water Services Act 2021;
    - The Mandatory Non-Financial Performance Measures (2024) prescribed under section 261B of the Local Government Act 2002 administered by the Department of Internal Affairs.

Together, these measures provide a consistent framework for monitoring service performance, identifying service gaps and improvement opportunities, supporting investment planning and decision-making, and demonstrating progress towards the outcomes and objectives established in the Water Services Strategy and other Council planning documents.

Focus areas:

- Connect fault, failure, complaint and maintenance history with asset and level-of-service information to inform renewal and capital priorities.
- Routinely analyse recurring faults and performance trends, with clear triggers for investigation or intervention.
- Require renewal and capital proposals to identify the relevant service outcome, supporting evidence, expected benefit and residual risk.
- Confirm the wastewater measures, data and reporting needed for forthcoming regulatory requirements, while monitoring emerging stormwater requirements.

A detailed table of WSBU Levels of Service is set out in Appendix E.

3.4.3.3 Forecast Future Demand

Forecasting future demand considers how changes in population, development, land use, customer behaviour, climate, regulation and service expectations may affect future water services. It helps identify whether existing assets have sufficient capacity and whether the appropriate response is to manage demand, optimise existing assets, extend or upgrade infrastructure, or defer investment until the need is clearer.

ICC forecasts demand using available population, connection, development, operational and network information. The water supply and wastewater networks are generally expected to accommodate forecast residential growth. The greatest uncertainty is the location, timing and scale of industrial development, particularly around Awarua and Bluff. Demand on the stormwater system is more strongly influenced by rainfall intensity, climate change, land-use change, impervious surfaces and local network capacity.

The spatial plan (expected mid 2027) will provide an important input to future forecasts and infrastructure sequencing. Until growth requirements are better defined, the intention is to monitor demand signals, assess network capacity and favour staged or demand-triggered responses. Growth-related network extensions are generally considered under Council's user-pays funding approach.

Focus area:

- Align AMP demand forecasts and network planning with the emerging spatial plan.
- Improve monitoring and modelling of industrial demand, network capacity, water use and changing behaviours, inflow and infiltration, rainfall and land-use change.
- Use staged, adaptable or demand-triggered investment to avoid premature infrastructure expenditure.

3.4.3.4 Assess Asset Performance and Condition

Assessing asset performance and condition provides evidence about whether assets are delivering the required levels of service and where they are within their lifecycle. Performance information helps identify service issues and emerging risks, while condition information supports timely decisions about inspection, maintenance, rehabilitation and renewal. Together with criticality, risk and cost information, this enables interventions to be planned before asset deterioration or failure results in unacceptable service, compliance or financial consequences.

ICC assesses condition using faults identified by staff, contractors and the public, together with inspections, CCTV surveys, recorded failures, maintenance history and operational knowledge. CCTV inspections are used to assess wastewater pipes and inform repairs and long-term renewal planning.

Focus area:

- Capture and validate condition ratings for critical assets to improve confidence in risk assessment, maintenance planning and renewal prioritisation.
- Utilise available funding to expand CCTV inspection coverage across wastewater and stormwater networks, prioritising critical assets, ageing assets and areas with known performance issues.
- Improve how CCTV findings are recorded, analysed and connected to asset records, so condition evidence more directly informs maintenance, rehabilitation, renewal and long-term investment decisions.
- Establish clear rules and standardised processes for assessing, grading and recording the condition of above-ground assets, including minimum inspection requirements and consistent condition-rating criteria.
- Continue developing non-destructive testing for pressure mains and integrate the results with failure history, criticality and risk information to support intervention decisions.

3.4.3.5 Decision Making Techniques

Decision making techniques provide a structured way to identify needs, assess options and prioritise asset interventions. They help ensure that investment decisions are transparent, repeatable and based on evidence, with appropriate consideration of strategic alignment, levels of service, risk, criticality, resilience, whole-of-life cost, affordability and deliverability.

ICC currently uses different decision making approaches depending on the nature and scale of the decision. Major projects are managed through the PMO, while renewal programmes are developed using staff calculations and scheduling. Extensions of service are informed by demand and consultation, and changes to levels of service are driven by regulatory requirements, strategic objectives and consultation. Projects are prioritised at a high level.

For capital projects, the asset team prepares capital bids describing the need, proposed response, estimated cost and alignment with organisational priorities. This process currently operates largely in place of a formal business-case process. Approved projects are prioritised and sequenced with regards to funding, organisational capacity, market capability, procurement requirements and project dependencies.

Focus area:

- Develop and embed a consistent, proportionate decision-making framework for renewal, capital, resilience, growth and levels-of-service decisions.
- Strengthen the capital bid process through clearer options assessment, whole-of-life costing, consequential operating expenditure, expected benefits, residual risk and delivery considerations.
- Improve the integration of asset condition, performance, criticality, risk, financial and levels-of-service information in prioritisation.
- Clearly document the evidence, assumptions, trade-offs and decision criteria used to support investment recommendations.

3.4.3.6 Manage Risk and Resilience

Effective risk management is fundamental to good asset management because it enables us to understand uncertainty, protect critical services and make informed decisions about how assets are operated, maintained, renewed and improved. It also helps us identify where existing controls are insufficient and where targeted investment is needed to reduce vulnerabilities, strengthen redundancy and increase the resilience of assets and networks to disruption and changing future conditions.

Water Services risk is managed at two levels:

- activity-level risk management, which addresses risks arising from the operation and management of the water supply, wastewater and stormwater services; and
- enterprise or strategic risk management, which addresses risks that may affect wider objectives, obligations and ability to deliver services.

The ICC Risk Management Policy 2026 and Risk Management Framework 2017 provide the common organisational approach for assessing, treating, monitoring and reporting these risks.

3.4.3.6.1 Operations Activity Level Risk Management

Operational and asset-related risks are identified and managed through the day-to-day delivery of the water supply, wastewater and stormwater activities. This includes considering asset condition and performance, service reliability, capacity, regulatory compliance, natural hazards, climate-related pressures and the consequences of asset or system failure.

Risk information is used to inform:

- inspection, monitoring and condition-assessment priorities;
- planned and reactive maintenance;



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- renewal and replacement timing;
- operational controls and response arrangements;
- capital investment and resilience improvements; and
- the management of critical assets and single points of failure.

Operational risks are recorded in the relevant risk registers. These registers document the risk event, causes and potential impacts, existing controls and treatments, inherent and residual risk ratings, ownership and required actions. The detailed risks, controls, residual exposure and resilience measures for each service are contained in the Water Supply, Wastewater and Stormwater AMPs.

3.4.3.6.2 Enterprise/Strategic Risk Management

At the enterprise level, ICC manages strategic risks affecting Council-wide objectives, operational risks arising from business-as-usual activities, and programme or project risks associated with delivering specific initiatives. Risks are maintained in registers appropriate to their level and are escalated where they exceed delegated authority or fall outside ICC's risk appetite or tolerance.

This provides a pathway for significant water-services risks to be considered beyond the individual activity. Risks that could materially affect essential service continuity, public health, regulatory compliance, environmental outcomes, financial sustainability or community confidence can be escalated for wider management and governance oversight.

Risk reporting follows the residual risk level. Extreme risks require immediate management action and frequent monitoring. High risks also require escalation and a treatment plan, with regular management and governance reporting. Medium, Low and Insignificant risks are managed and reviewed proportionately, but are escalated if exposure increases, controls fail or the risk moves outside appetite or tolerance.

This enterprise process supports alignment between water-services risk management and ICC's strategic planning, annual planning, budgeting, project delivery, procurement and policy development. It also provides oversight and assurance through the Executive Leadership Team (ELT), Risk and Assurance Committee and Internal Audit arrangements described in the Risk Management Policy and Framework.

3.4.3.6.3 Risk Management Policy and Framework

ICC's Risk Management Policy (2026) establishes the mandatory requirements, principles, governance arrangements and responsibilities for managing risk. It is aligned with ISO 31000:2018 and requires risk management to be integrated into organisational strategy and day-to-day operations. The policy is supported by the Risk Management Framework, which sets out how risk management is applied in practice, including risk assessment, registers, appetite and tolerance, escalation, monitoring and reporting.

Council recognises the following risk types:

- Strategic,
- Operational,
- Programme/Project.

Council uses the following risk categories for consequence scaling and appetite:

- Financial sustainability,
- People and knowledge,
- Service delivery, critical services,
- Legal and regulatory compliance, privacy
- Health, safety and wellbeing,
- Information management, cyber,
- Environment and climate resilience,
- Projects and property,
- Reputation, community trust,
- Achievement of strategic objectives (opportunities).

The framework also defines ICC's risk appetite. The supplied framework identifies a Balanced appetite for service delivery and critical services, financial sustainability, legal and regulatory compliance, environment and climate resilience, and the achievement of strategic objectives. A conservative appetite applies to health, safety and wellbeing and to reputation and community trust. These settings guide decision-making, but do not replace assessment of the circumstances, residual risk, delegated authority or the need for governance judgement.

Focus area:

- Capture operational risk scores from inspections and other observations in the asset register to allow better prioritisation of asset maintenance and renewals.

3.4.3.7 Operational Planning and Management

Operational planning translates ICC's strategic objectives, levels of service and risk settings into the activities, resources and procedures needed to keep water supply, wastewater and stormwater assets operating safely, reliably and efficiently. It covers two connected areas:

- Asset operation: the people, resources and activities needed to use and control assets, including staffing, energy, consumables, monitoring, process control, compliance and incident response.
- Asset maintenance: planned or reactive work undertaken to retain or restore an asset so it can continue to perform its required function.

3.4.3.7.1 Asset Operation

ICC's water-services assets are operated through a combination of Council staff and specialist contractors. Responsibilities vary by service and asset type, with operational staff supported by electrical, mechanical, reticulation and other specialist providers. Work orders and asset information have been managed through IPS and GIS, while SCADA supports real-time monitoring of critical assets and processes.

Operational plans should clearly define:

- who operates and supports each major asset group;
- required roles, competencies and responsibilities;
- operating procedures, standards and control limits;
- monitoring, reporting and escalation requirements;
- interfaces between staff, contractors and supporting services; and
- arrangements for incidents, emergencies and service disruption.

The detailed procedures and asset-specific responsibilities sit within the activity AMPs, contracts and operational documentation.

3.4.3.7.2 Asset Maintenance

ICC uses a combination of reactive, interval-based, condition-based and risk-based maintenance. Existing activities include programmed servicing, inspections, electrical and mechanical maintenance, network fault response, CCTV surveys and condition assessments.

The maintenance approach should reflect the asset's function, condition, performance, failure behaviour and criticality:

- Reactive maintenance responds to faults, failures, blockages or damage.
- Interval-based maintenance is undertaken at defined time or usage intervals.
- Condition-based maintenance is triggered by inspection, testing or performance information.
- Risk and criticality-based maintenance directs greater effort towards assets whose failure would significantly affect public health, service continuity, the environment or compliance.

Critical assets require greater monitoring, proactive maintenance and more robust contingency arrangements. Where recurring failures or increasing maintenance costs indicate that continued repair is no longer effective, rehabilitation or renewal should be considered through the lifecycle decision-making process.

3.4.3.7.3 Planning and Improvement

Operational planning should link activities and resources to levels of service, risk, compliance and asset performance. They define maintenance schedules, workflows, responsibilities, information requirements and disruption arrangements, while ensuring operational experience informs future maintenance, renewal and improvement decisions.

ICC's operating budgets have historically been informed by previous expenditure and inflation. Additional financial categories are being introduced to distinguish planned and unplanned maintenance. A more bottom-up approach would improve the link between operating expenditure and the activities and resources required to achieve levels of service and strategic outcomes.

Where additional operating expenditure is required beyond an existing approved budget or a new operational activity or project is proposed, an operational expenditure bid is prepared through the budget process. The bid identifies the reason for the request, its effect on levels of service, available offsets or savings, the proposed expenditure and funding implications. Depending on the nature of the request, a bid may seek a new budget, an increase or decrease to an existing budget, a timing change, or a transfer between activities. Approved bids are incorporated into the relevant budget and operational planning processes.

Focus area:

- connect operations and maintenance data to levels of service, risk and criticality.
- define planned, condition-based and reactive maintenance requirements.
- connect fault and maintenance history to asset register and renewals decisions.

3.4.3.8 Capital Planning and Management

Capital planning converts identified asset and service needs into prioritised, affordable and deliverable programmes. Investment needs arise through the AMPs, operational information, asset condition and performance assessments, risk, criticality, regulatory requirements, network modelling and growth planning.

Where additional capital expenditure is required beyond an existing approved budget, or a new capital project is proposed, a capital expenditure bid (similar to operational expenditure bid) is prepared through the budget planning process. A bid may seek funding for a new project, an increase or decrease to an existing project budget, a change in timing, or a transfer between activities. The bid records the problem or need, options considered, implications for levels of service, proposed expenditure (including any consequential opex required), funding sources, debt and rates impacts, and relevant supporting information.

Capital bids should demonstrate alignment with strategic objectives, levels of service, risk and criticality, compliance, resilience, whole-of-life cost, affordability and deliverability. Approved projects are prioritised and sequenced with regard to available funding, organisational capacity, market capability, procurement requirements and dependencies. As projects develop and better information becomes available, their scope, cost, timing and priority may be reviewed.

Major or significant projects are managed through the PMO. ICC's Significance and Engagement Policy 2024 provides the threshold and criteria for determining significance using the following five criteria:

- Importance to Council
- Community Interest
- Inconsistency with existing policy and strategy,



- Impact on Councils capability and capacity, and
- Cost to Council.

Focus area

- Strengthen the existing capital bid process by progressively introducing a consistent and proportionate business case approach, including clearer consideration of options, whole-of-life costs, consequential operational expenditure, expected benefits and delivery risks.
- Improve the connection between strategic objectives, levels of service, risk, criticality and capital prioritisation.
- Strengthen programme sequencing to reflect affordability, organisational capacity and market deliverability.

3.4.3.9 Asset Financial Planning

Asset financial planning identifies the funding required to acquire, operate, maintain, renew, improve and ultimately dispose of assets over their lifecycle. Asset valuations are a key element and support the asset team with planning by providing information on replacement cost, depreciated value, remaining useful life and depreciation. Accurate asset information, including complete as-built records and fault history, is essential to maintain alignment between the asset register and financial system and to support reliable valuations and renewal forecasts.

Focus area:

- Improve alignment between asset plans, capital programmes and financial forecasts.
- Incorporate consequential operational expenditure into capital planning and budgets.
- Use improved condition, performance, risk and criticality information to support renewal forecasts.

3.4.3.10 Develop Asset Management Plans

Asset Management Plans (AMPs) translate this SAMP into activity-specific planning for water supply, wastewater and stormwater. They provide the detailed evidence, risks, lifecycle requirements, programmes and improvement actions needed to support operational, renewal and investment decisions.

The 2026 AMPs use a consistent, readily updateable format that strengthens alignment across the three waters and links strategy, levels of service, risk, criticality, financial planning and investment. The structure also supports mapping to the Commerce Commission's new information disclosure requirements. Plans are prepared using internal or external resources, depending on available capacity.

Each AMP includes an Asset Management Improvement Plan setting out agreed actions, responsibilities and priorities. Progress will be monitored by the Asset Management team and used to inform future updates to the AMPs and this SAMP.

Focus area:

- Embed the AMPs into business-as-usual planning, budgeting, maintenance, renewal and investment decisions so they function as active management tools rather than standalone documents.

3.4.3.11 Supporting Council's Integrated Planning

Although the WSBU will operate as a separate, financially ring-fenced unit, it will remain part of Council's integrated planning processes. Coordination with transport, parks and other Council functions will continue where assets, locations and work programmes intersect.

Aligning forward programmes will enable related works to be planned and delivered together where practical. This will help reduce repeated disruption, improve delivery efficiency and support coordinated

use of Council resources. The AMPs will provide the forward view needed to identify dependencies and opportunities across activities.

Focus area

- Maintain regular cross-disciplinary coordination between water services and other Council teams.
- Improve visibility and alignment of forward work programmes across Council activities.
- Embed consideration of shared locations, timing and delivery dependencies into planning and programme development.

3.4.4 Stakeholder Engagement

ICC uses a combination of resident surveys, customer requests, complaints monitoring, Long Term Plan consultation, Water Services Delivery Plan engagement, elected member feedback and engagement with mana whenua to understand customer expectations and emerging service priorities. These inputs help Council understand community preferences regarding water quality, reliability, resilience, affordability and future investment priorities.

The 2024/25 Residents Survey identified water services as a high-priority community service and indicated strong support for water conservation during periods of water restrictions and the development of a secondary emergency or alternate water supply. Survey results also suggested a lower level of confidence that Council is currently doing enough to provide a safe and sustainable water supply, indicating ongoing community interest in resilience and long-term investment planning

These consumer expectations are considered alongside regulatory requirements, public health obligations, risk assessments, affordability considerations and asset condition information when establishing levels of service and prioritising future investment.

4 Current State

4.1 Summary of Services

ICC water services networks have largely met the needs of the size of population over the last 30 years. As incremental growth and spatial changes occur, future expectations need to be deliverable which supports the wider community aspirations. In addition, there are potential increases to industry which, while the location and specific requirements are not known, mean that a small increase in network growth is expected.

Where land use change occurs, the core infrastructure must be aligned to support those changes in a timely and effective manner. There will be both Central Government and community requirements for this core infrastructure, and as the legislation changes so must the response (e.g. wastewater discharge consents, Environment Southland Regional Land and Water Plans (stormwater discharges), Drinking Water Standards etc.).

As one of the older cities in Aotearoa, ICC's infrastructure is ageing and is approaching the potential peak for pipe renewals of infrastructure. Much of the original pipework was installed close to 100 years ago with two other key development peaks in the late 1950s/early 1960s and in the 1970's. Replacement age of that first phase of development is forecast to be reached during the current ten year period. This will have affordability challenges and Council must focus on criticality and value based decision making.

Although projected growth is modest, the cumulative effect will put increasing pressure on ageing infrastructure, requiring risk-based and capacity informed renewal planning. Projected growth appears distributed across all three networks, suggesting the need for coordinated renewal and upgrade programmes especially areas where multiple services are co-located.

Within the ICC boundary the following areas receive the following services:

- **Water -** Treated water supply from the Branxholme Water Treatment Plant is provided to the urban areas of Invercargill and Bluff. No reticulated water is provided to Kennington and Otatara areas.
- **Wastewater -** The Invercargill City has 3 wastewater treatment plants; Clifton wastewater treatment plant (WWTP) services the urban area of Invercargill, Otatara (part), Kennington and Moore Road area. The Bluff WWTP services the Bluff Township and the Ōmāui oxidation pond servicing the Ōmāui township.
- **Stormwater -** The urban area of Invercargill, is serviced by the piped stormwater system network that discharges to either the Waikiwi Stream, Waihōpai River, Otepuni Stream, Kingswell Creek or Clifton channel. Bluff Township is serviced by a piped stormwater system network that discharges to either Bluff Harbour or Foveaux Strait. Otatara stormwater system consists of both a pipe and open drainage system that discharges to either the New River Estuary or the Ōreti River. A number of rural drainage networks are not connected to the piped network. These areas are primarily serviced via drainage ditches.

	Number of Properties	
	Residential	Non-residential
Water Supply	21,306	1,569
Wastewater	22,628	1,583
Stormwater	21,626	1,538

Table 13 - Breakdown of properties by water service October 2026

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4.1.1 Water Supply

The ICC water supply system provides treated drinking water services to residential, commercial, industrial, and community consumers in Invercargill and Bluff. The system is designed to deliver safe, reliable, and sustainable drinking water while meeting regulatory, environmental, and customer service requirements.

Water is abstracted from the Ōreti River at Branxholme, treated at the Branxholme WTP, and distributed through a network of transmission pipelines, reservoirs, pump stations, reticulation assets, and monitoring systems. Together, these assets collect, treat, store, convey, monitor, and deliver drinking water throughout the serviced area.

Reticulated water services are currently provided to Invercargill and Bluff. Otatara and Kennington are not connected to the reticulated water supply network and generally rely on private water supplies. The Water Services Delivery Plan forecasts moderate growth in both serviced population and customer connections over the planning period.

A defining feature of the water supply system is its reliance on a single source, the Ōreti River, and a limited number of critical assets. While this configuration is operationally efficient, it increases the consequences of failure associated with source, treatment, and bulk supply infrastructure.

4.1.1.1 Portfolio

Asset Group	Primary Function	Quantity	Average Age
Raw Water Assets	Abstract and transport raw water from the Ōreti River.	1	N/A
Water Treatment Facilities	Treats raw water to meet drinking water quality requirements.	1	57 years
Treated Water Storage	Provide operational storage, balancing, and emergency supply capacity.	10	51 years
Treated Water Pump Stations	Maintain network pressure and transfer water throughout the system.	6	To be confirmed
Treated Water Reticulation Assets	Convey and distribute treated water throughout the Invercargill and Bluff networks. Includes transmission, supply, reticulation and rider mains.	422 km	56 years
Valves	Support network operation, maintenance and isolation.	3,036	54 years
Hydrants	Support firefighting and network operations.	3,075	59 years
Service Connections	Connect consumers to the reticulation network.	20,796	Approx. 13 years*
Water Monitoring and Control	Support operational monitoring, control and system management.	N/A	Predominantly installed since 2017
Water Meters	Commercial customer, bulk, district and operational meters	1,483	Approx. 19 years

Table 14 - Water Supply Portfolio Overview

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4.1.1.2 Condition

Condition knowledge varies across the water supply portfolio. It is generally stronger for above-ground facilities, where annual inspections, specialist assessments, operational monitoring and maintenance records provide direct evidence. Condition information for buried reticulation assets is less complete and relies more heavily on indirect indicators such as asset age, material, fault and burst history, leakage, criticality and operational performance.

Above-ground water supply assets are generally understood to be performing satisfactorily, although the level of condition varies between assets. Reservoir inspections have identified issues including concrete deterioration, corrosion, leakage, sediment accumulation and access-safety concerns. Further investigation has been recommended at several sites to confirm condition, define maintenance or renewal requirements and inform investment decisions.

Confidence in condition knowledge is assessed as high for the headworks and water treatment facilities, treated water pump stations, monitoring and control systems, and the inspected Branxholme and Bluff pipelines. Confidence is moderate to high for treated-water storage, moderate for valves and hydrants, and moderate to low for the wider treated-water reticulation network. Asset-level and component-level condition information is not yet recorded consistently across all asset categories, which limits comparison between assets and the ability to track deterioration over time.

4.1.2 Wastewater

The WSBU provides wastewater services to Invercargill, Bluff, Otatara, Ōmāui and Kennington. Wastewater is collected and treated through three separate networks and treatment plants, with treated effluent discharged under resource consents held by ICC.

The system includes approximately 391 km of pipelines and 31 pump stations. A significant portion of the network is ageing, including around 69 km of pipe that is more than 100 years old. Renewal planning is supported by condition investigations and flow monitoring, with particular attention given to areas affected by stormwater entering the wastewater network in the form of inflow and infiltration.

Condition information remains incomplete, with approximately 39% of the pipe network surveyed. As surveys have focused on higher-risk assets and known problem areas, the findings may not represent the condition of the wider network.

4.1.2.1 Portfolio

Asset Group	Primary Function	Quantity	Average Age
Wastewater Pump Stations	Provides pressurised wastewater conveyance to pumped reticulation pipes	31	14 years*
Wastewater Reticulation Pipes - Gravity	Provides wastewater conveyance through gravity reticulation pipes	334 km	66 years
Wastewater Reticulation Pipes - Pumped	Provides wastewater conveyance through pumped reticulation pipes	44 km	23 years
Wastewater Reticulation Manholes	Provides maintenance access to wastewater pipes	3747	62 years
Wastewater Storage Facilities	Provides operational storage for the wastewater network	1	38 years
Wastewater Treatment Facilities	Provides wastewater treatment to enable discharged of wastewater to meet consented standards	3	40 years

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Asset Group	Primary Function	Quantity	Average Age
Monitoring and Control Systems - Telemetry	Provides data monitoring for processes, primarily for wastewater pump stations and treatment facilities	55	4 years
Monitoring and Control Systems – Remote Terminal Units (RTUs)	Provides data monitoring and operational control for processes, primarily for wastewater pump stations and treatment facilities	28	4 years

**The pump stations have multiple components with variable ages, typically the original wet well structures are older than the pumping mechanical and electrical equipment. The average age for the pump units (65 total including standby pumps) is used in the above table.*

Table 15 - Wastewater portfolio Overview

4.1.2.2 Condition

Wastewater asset condition is assessed using a combination of structured inspections, operational monitoring, maintenance and work-order records, equipment performance, asset age and material, customer service requests, and staff knowledge. The confidence and detail of condition information vary across the asset portfolio, with stronger information for above-ground facilities than for buried network assets.

Pump stations are subject to routine operational monitoring and annual condition assessments, including annual load testing of standby generators where installed. Treatment plant buildings, structures and plant are also regularly inspected, with maintenance and renewal requirements reviewed annually. These practices provide moderate to high confidence in overall facility condition, although condition information is not consistently recorded at individual component level across all complex assets.

Condition information for buried wastewater assets is less complete than for pump stations and WWTPs, with approximately 39% of the pipe network surveyed. As inspections have focused on higher-risk assets and problem areas, the results should not be assumed to represent the condition of the entire network. Where direct condition information is unavailable, renewal planning draws on asset age, material, fault and maintenance history, operational performance, criticality and risk. Continuing the CCTV programme and improving component-level condition capture are priorities for strengthening confidence in renewal timing, risk assessment and investment planning.

4.1.3 Stormwater

The ICC stormwater system provides drainage services across Invercargill, Otatara and Bluff. It includes piped networks, open drains, pump stations, overland flow paths and flood-protection assets that work together to manage stormwater and reduce the effects of flooding.

The network comprises approximately 416 km of pipes, 47 km of open drains and eight pump stations. Overland flow paths also provide an important drainage function during larger rainfall events when the piped network reaches capacity.

Responsibility for flood protection is shared between ICC and Environment Southland. ICC manages the Cobbe Road and Stead Street tidal flood banks, while Environment Southland manages the main river flood-protection systems. Ongoing coordination between the organisations is therefore important to managing flood risk across the city.

4.1.3.1 Portfolio

Asset Group	Primary Function	Quantity	Average Age
Stormwater Reticulation - Pipes	Primary stormwater conveyance system	416 km	59 years

Asset Group	Primary Function	Quantity	Average Age
Stormwater Reticulation - Manholes	Provides maintenance access to stormwater pipes	3,796	48 years
Stormwater Pump Stations	Stormwater removal	8 no.	39 years (1987)
Open Drains / Overland Flow Paths	Secondary stormwater conveyance system	42 km	44 years *60% of drains don't have installed dates
Flood banks	Tidal influence / storm surge flooding protection	2 total length 3.15 km	3 years (2023)
Stormwater Ponds and treatment	Improve stormwater quality and provide operational storage for the network	2 no. settlement ponds 1 no. Jellyfish filter Approx. 8 no. rain gardens	7 years (2019) *No recorded age for one of the ponds, or any of the proprietary devices
Monitoring and Control Systems - Telemetry	Provides data monitoring for processes, primarily for stormwater pump stations and treatment / storage facilities	10	4 years
Monitoring and Control Systems – Remote Terminal Units (RTUs)	Provides data monitoring and operational control for processes, primarily for stormwater pump stations and treatment / storage facilities	5	4 years

Table 16 - Stormwater Portfolio Overview

4.1.3.2 Condition

Knowledge of stormwater asset condition varies across the portfolio. Condition information is drawn from inspections, operational monitoring, maintenance and work-order records, equipment performance, asset age and material, customer requests, and staff knowledge. Confidence is generally higher for above-ground facilities than for buried assets.

Stormwater pump stations are subject to annual inspections and condition scoring, supported by routine operational monitoring. Current practices provide moderate to high confidence at the facility level, although condition information is not consistently recorded for individual components. Inspection records are not currently available for the floodbanks and settlement ponds, while information for open drains is largely based on operational knowledge, service requests, maintenance activities and observed performance.

Condition knowledge for the buried pipe network is less developed. Direct condition information is not available across the full network, so renewal decisions also rely on asset age, material, failure history, criticality and operational performance. CCTV inspections have been targeted towards known faults and ageing areas and therefore may not be representative of the network as a whole.

Overall condition-confidence ratings range from high for recently rebuilt floodbanks and moderate to high for pump stations, to moderate for open channels and control systems, and moderate to low for the pipe network, ponds and treatment assets. Key improvement priorities are to expand buried-pipe

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condition assessments, improve component-level data for above-ground assets, and obtain better age, maintenance and condition information for settlement ponds and stormwater treatment devices.

4.2 Growth, Demand and Spatial Planning

Invercargill's water, wastewater and stormwater networks were developed to serve a larger community than the current population. This provides capacity within parts of the existing networks and means that population growth has historically created relatively few network-capacity constraints. The stormwater network has a more variable capacity context, particularly in semi-rural areas.

Current projections indicate modest population growth, with an estimated average annual increase of 0.5% to 2037. However, projections should be treated as planning assumptions rather than firm forecasts. Invercargill's growth has historically been low, and the location, timing and scale of future development remain uncertain. While expected residential demand may generally be accommodated within existing network capacity, development in unserviced areas may require network extensions. Commercial or industrial development may also create significant localised demand that is not represented adequately by population-based projections i.e. high contaminant load in wastewater or high water usage for site operations.

The greatest uncertainty relates to industrial development. Potential growth to the south of the city including around Bluff and the port could increase demand of our water supply and wastewater services. Consequently, the WSBU cannot currently confidently predict where additional capacity will be required, when it will be needed, or the volumes that may need to be serviced.

Council's spatial plan is currently in development and expected to be delivered middle of 2027. Its outcomes will provide an important input to future demand forecasting, network modelling and the sequencing of infrastructure investment. Until that direction is confirmed, infrastructure planning will need to retain flexibility and avoid assuming that growth will occur in particular locations or within specific timeframes. The SAMP, Asset Management Plans and associated investment programmes will be updated as the spatial plan progresses and more reliable information becomes available about development locations, timing and servicing requirements.

In managing this uncertainty, the WSBU will:

- monitor population, development, connection and industrial demand signals;
- assess available network capacity and constraints before committing to extensions or upgrades;
- use scenario analysis and network modelling to understand the potential effects of credible growth proposals;
- coordinate water supply, wastewater and stormwater planning with the emerging spatial plan;
- distinguish between committed development, credible proposals and longer-term opportunities; and
- favour staged, adaptable or demand-triggered responses where the timing or scale of growth remains uncertain.

As set out in ICC's Water Services Policy for Funding Growth, growth requiring an extension of the water, wastewater or stormwater network is generally funded on a user-pays basis. For new subdivisions, the property owner is responsible for the cost of the network extension in addition to individual connection costs. Extraordinary connections, including multiple-property subdivisions and properties not adjacent to an existing network asset, are assessed according to the circumstances and scope of the work required, including engineering and network-modelling reviews and core network-extension costs. Council does not currently charge development contributions.

This funding approach reflects Invercargill's historic low-growth context and supports project-specific responses where network growth is required, rather than committing the wider community to infrastructure in anticipation of uncertain demand. Council may consider funding part of a network extension where it determines that the extension has broader community value and would assist in achieving the community outcomes in the Long-term Plan. Any such departure from the user-pays approach would be considered under Council's Significance and Engagement Policy, including consultation where required.

This approach enables the WSBU to support Council's growth aspirations while managing the risk of premature or unnecessary investment. Growth-related projects will be brought forward when there is

sufficient evidence of demand, a clear understanding of network impacts, an affordable and deliverable servicing solution, and an appropriate basis for allocating and recovering costs.

Invercargill City Council is a Tier 3 local authority under the National Policy Statement on Urban Development (NPS-UD). While the NPS-UD requires integration of urban development and infrastructure planning and the provision of sufficient development capacity, the implications for Invercargill's water services are primarily reflected through growth forecasting and capacity planning. Water services investment is driven predominantly by regulatory compliance, asset renewal, resilience, environmental outcomes, and financial sustainability requirements.

4.3 Levels of Service Current Performance

Further detail including historical performance graphs can be found in each of the Asset Management Plans.

4.3.1 Water Supply

The Water Supply activity is generally achieving its established service targets. Drinking water quality compliance has been maintained, response and resolution time targets are being achieved, customer complaints remain low, and water loss remains below the current target threshold. Average water consumption has generally reduced over time, supporting more efficient use of available water resources.

Overall, current performance suggests that the water supply network is meeting customer and regulatory expectations. However, continued attention is required in areas such as network leakage, long-term demand management, resilience and quality of the raw water source, and asset condition to ensure current performance levels can be sustained over the longer term.

4.3.2 Wastewater

The Wastewater activity is generally achieving its established service targets. The current performance suggests that the wastewater network is meeting customer and regulatory expectations. However, continued attention is required in areas such as resilience, and asset condition to ensure treatment compliance and current performance levels can be sustained over the longer term.

4.3.3 Stormwater

The Stormwater activity is achieving its established service targets. Environmental discharge compliance has been maintained, response and resolution time targets are being achieved, customer complaints remain low, and the number of flooding events remains below the current target threshold.

Overall, current performance suggests that the stormwater network is meeting customer and regulatory expectations. However, continued attention is required in areas such as discharge locations, long-term flood predictions, resilience, and asset condition to ensure current performance levels can be sustained over the longer term.

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5 Looking Forwards

This section sets out the future asset management direction for the WSBU, the strategic approach for achieving it, and the significant asset-related decisions expected over the long-term planning period.

5.1 Where we want to go

The WSBU aims to manage its assets through a consistent, evidence-based and forward-looking approach that supports safe, reliable, compliant, resilient and financially sustainable water services.

Over the period of this SAMP, the organisation will focus on:

Item	Description
Maintaining current service performance	Continue to meet agreed levels of service and regulatory requirements, with no material change to current performance measures or targets unless approved through future planning processes.
Managing asset and service risk	Reduce exposure associated with ageing infrastructure, critical assets and single points of failure.
Improving resilience	Strengthen the ability of water supply, wastewater and stormwater systems to withstand natural hazards, climate-related pressures and service disruptions.
Supporting planned asset succession	Establish clear, affordable pathways for maintaining, renewing, upgrading or replacing assets before risks become unacceptable.
Improving asset intelligence	Strengthen condition, performance, criticality, maintenance and cost information so that decisions rely less on asset age or individual knowledge.
Lifting asset management maturity	Progressively improve governance, capability, processes, data and systems across all three waters.
Maintaining affordability and deliverability	Develop investment programmes that account for customer affordability, organisational capacity, market capability and funding constraints.

Table 17 - Future Areas of Focus

A comprehensive maturity assessment planned for early 2027 will establish the baseline and inform the detailed improvement roadmap.

Progress will be monitored through:

- levels of service and performance results;
- asset and service risk exposure;
- delivery of planned renewals and resilience improvements;
- asset information quality and coverage; and
- completion of Asset Management Improvement Plan actions.

5.2 How we're going to get there (Strategic Plans and Strategies)

The future approach combines two connected areas of work: improving how the asset portfolio is managed, and strengthening the asset management capability that supports decisions.

5.2.1 Asset Portfolio Strategies

Portfolio and service-specific strategies will translate the objectives in this SAMP into practical lifecycle and investment approaches. These will include:

Item	Description
Portfolio direction	Coordinate priorities across water supply, wastewater and stormwater, recognising shared risks, dependencies and affordability constraints.
Critical asset and system strategies	Develop targeted approaches for critical assets and single points of failure, including the Branxholme supply system, alternative water supply, key wastewater rising mains and significant treatment and discharge infrastructure.
Asset data improvement	Use the transition to TechOne EAM to strengthen asset data quality, ownership and governance, supporting better understanding of asset condition, performance and criticality and more informed investment decisions.
Lifecycle strategies	Define when assets should be operated, maintained, inspected, renewed, upgraded, extended or decommissioned.
Growth and demand responses	Use staged or trigger-based investment where the location, timing or scale of residential and industrial growth remains uncertain.
Climate and resilience responses	Incorporate flooding, sea-level rise, drought, seismic and other hazard information into asset and investment planning.

Table 18 - Asset Portfolio Strategies

5.2.2 Asset Management Capability

The organisation will strengthen the enablers required to implement these strategies by:

- clarifying asset management governance, responsibilities and accountabilities;
- building internal asset planning, asset information, engineering and operational capability;
- reducing reliance on key individuals through succession planning, knowledge management and standardised processes;
- completing the transition from IPS to TechOne EAM, with clear data ownership and fit-for-purpose configuration;
- improving integration between asset, spatial, operational, risk and financial information;
- embedding consistent risk-based renewal, prioritisation and business-case processes where appropriate in the WSBU;
- aligning Asset Management Plans, financial forecasts and capital programmes;
- maintaining targeted external support and collaborative supplier relationships where specialist capability or additional capacity is required; and
- implementing and monitoring coordinated Asset Management Improvement Plans.

These actions reflect the capability, data, systems, process, sourcing and continuous-improvement priorities already identified in the SAMP.

5.3 Future Significant Decisions

The following decisions are expected to have material implications for service performance, risk, affordability, resilience and long-term investment. Timing, costs and preferred options will be refined as investigations, engagement, consenting and business cases progress.

5.3.1 Emergency and Alternative Water Supply

A decision is required on the role and scale of an alternative water supply at Awarua. This decision will depend on confirmation of available water volumes and quality, and determine the treatment, storage and network connections required.

The primary supply risk is reliance on the Ōreti River as the sole raw water source and the Branxholme WTP as the only treatment facility serving Invercargill and Bluff. A prolonged interruption affecting the source or treatment plant could disrupt potable water supply and results in impacts on public health, essential services and/or economic activity.

The Alternative Water Supply Project is intended to reduce this dependency by developing a supplementary groundwater source within the Awarua Plains. Investigations undertaken to date indicate that the aquifer may support an emergency supply and potentially a larger alternative supply. This is still subject to further investigation, monitoring, consenting and Council decisions.

The WSBU is planning to take a multi staged approach to this project/programme:

- Phase 1 - Emergency Supply: approximately 6 ML/day of treated water, intended to provide about 80 litres per person per day during a prolonged outage. Planned for delivery by 2030.
- Phase 2 - Alternative Supply: potential expansion to 15 ML/day, including treatment and connections to the existing network at Tramway Road and Rockdale Road.
- Phase 3 - Expanded Alternative Supply: potential expansion to 20 ML/day, including a secondary WTP, storage reservoir and pump station at Skye Street and further network reticulations and service connections.

Decisions on whether Phases 2 or 3 go ahead will be made following aquifer performance outcomes of Phase 1 and Business Case recommendations.

5.3.2 Wastewater Treatment and Discharge Pathways

Long-term discharge solutions are required for the Bluff and Clifton WWTPs. Potential options include existing or extended marine discharges, land discharge, and beneficial or industrial reuse of Clifton WWTP effluent.

Updated estimates indicate that the Clifton wastewater treatment and discharge options may cost significantly more than previously anticipated. Further assessment is required before a preferred option is selected, and the capital programme currently includes an average allowance across the options being considered.

5.3.3 Water Metering and Demand Management

Additional water meters are proposed across the network to improve understanding of water use, leakage and asset performance. The first phase will focus predominantly on trunk mains, helping identify areas of water loss and assets that may require rehabilitation or replacement.

A future decision will be required on the scope and phasing of a potential second phase involving meters at individual connections. This decision will consider the information gained from the first phase, customer impacts, costs, demand-management benefits and the potential use of metering as a basis for charging.

5.3.4 Growth Related Infrastructure

Residential growth is expected to remain modest, but future industrial development, particularly around Awarua and Bluff, could create significant and uncertain demand for water supply and wastewater services.

The Morrison Low report on the viability of development contributions (August 2026) identifies the following water supply projects as including a growth component:

- Supply development and treatment at Awarua
- Pipe network connection to and from Awarua
- Skye Street water supply reservoir and pump station
- Additional water supply capacity to Bluff
- Additional water supply capacity from Waikiwi to Doon Street

Decisions on whether, when and how to proceed with these projects will be informed by confirmed demand, the emerging spatial plan, network capacity and modelling, affordability, deliverability and an appropriate approach to cost recovery. Staged or demand-triggered responses will be preferred where the location, timing or scale of growth remains uncertain.

5.3.5 Stormwater and Wastewater Laterals

On 6 October 2026, the Water Committee agreed that ICC would accept legal ownership of wastewater and stormwater laterals. The remaining decisions concern the financial management approach and implementation of that decision.

Council will consider the funding options and their implications through its budgeting workshops, including depreciation funding, renewal requirements, affordability and the effect on wastewater and stormwater charges. Implementation planning will address asset boundaries and records, valuation and accounting treatment, responsibilities, any necessary bylaw changes, customer engagement and the steps required to give effect to the ownership decision.

5.3.6 Other Emerging Decisions

Other significant decisions may emerge as asset information improves and regulatory, climate, growth and service requirements develop. These may include:

- the scale and timing of investment required to address ageing water, wastewater and stormwater networks;
- resilience and adaptation responses for assets exposed to flooding, sea-level rise, drought and seismic hazards;
- intervention strategies for critical assets where condition information or redundancy is limited; and
- changes to service performance measures or targets arising through future planning and regulatory processes.

As these matters develop, significant decisions will be supported by evidence proportionate to their scale and risk, including assessment of options, service impacts, risk and resilience, whole-of-life cost, affordability, deliverability, stakeholder interests and implementation dependencies.

6 Key Opportunities and Improvement Plan

The Asset Management Improvement Plan provides a coordinated pathway for progressively strengthening asset management across the WSBU. Each improvement links to one or more Asset Management Objectives, providing clear line of sight between the change and the outcomes it supports.

Improvements are prioritised and logically sequenced rather than undertaken all at once, recognising that some actions establish the people, information, systems or processes needed for later improvements. As implementation builds capability and generates new knowledge, completed actions may identify further gaps or opportunities, allowing the improvement programme to evolve through an ongoing cycle of implementation, learning and refinement.

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
Develop a Buried Asset Condition Assessment Programme	Limited buried asset condition information requires the development of a structured condition assessment programme for water reticulation assets, including targeted investigations, inspections and condition grading.	Enable planned succession of assets	Improves confidence in renewal timing and reduces the risk of unexpected failures.	X	X	X
Hydraulic Model Calibration	The wastewater network hydraulic model needs to be calibrated to ensure it is accurate to the current network.	Enable planned succession of assets	A calibrated hydraulic model can used to assess changes to the network, growth, and overflow risks. This will enable more informed investment decisions.	X		
Lateral Ownership	Wastewater and Stormwater laterals are currently considered private property up to the wastewater main. However, the WSBU does renew and rehabilitate wastewater laterals up to the property boundary when undertaking renewal work on wastewater mains.	Enable planned succession of assets	The water committee is currently considering ownership of lateral assets to the boundary. If laterals remain private ownership, the property owner will be responsible for replacement when there is a fault.	X		X

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Strategic Asset Management Plan
6 Key Opportunities and Improvement Plan

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
Addressing network Inflow & Infiltration (I&I)	I&I investigations are required to identify the locations of the network that are most susceptible to wet weather flows and notify property owners of contributing faults in their private systems. Rehabilitation and renewal works will then be needed to remediate portions of the wastewater network.	Improve resilience to climate and natural hazards	Reducing I&I in the network will improve the capacity of the network during wet weather and reduce the risk of wastewater surcharging and overflows.	X		
Climate Risk and Adaption Planning	No detailed climate risk assessment has been completed for any of the three waters activities. Therefore consequence of failure, exposure and vulnerabilities are not well understood. Assess the vulnerability of the various three water supply assets to drought, flooding, storm events, earthquake and climate change impacts. Use findings to prioritise resilience improvements and future investment planning.	Improve resilience to climate and natural hazards	Enable risk-based asset investment and evidence to support climate risk investments.	X	X	X
Asset Management Capability Development	Strengthen asset management knowledge and practices across the WSBU by embedding whole of life asset costs, risk-based decision making and continuous improvement into O&M and planning.	Lift asset management maturity	Builds asset management capability and ownership, improving consistency and confidence in decision making.	X	X	X
Asset Information Standards Alignment	Implement a staged approach to aligning asset data, hierarchies (parent, child and component assets), classifications and attributes with the 3WADS	Lift asset management maturity	Improves data quality, consistency and traceability for reporting, planning and investment decisions.	X	X	X

Strategic Asset Management Plan
6 Key Opportunities and Improvement Plan

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
Asset Class/Cohort Planning	Parent/child relationship. Complex assets include pump stations and treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, plant and equipment or telemetry equipment etc. and some component-level assets are missing from the asset data. It is intended to improve the data capture and links between these assets as part of the move to the new TechOne data system.	Lift asset management maturity	Improving asset data quality and visibility or these assets will provide operators better information to manage the existing system and will improve the ability to make appropriate planning decisions for these assets.	X	X	X
Asset Management Maturity Assessment	Undertake a formal asset management maturity assessment and develop an improvement roadmap aligned with the Strategic Asset Management Plan.	Lift asset management maturity	Targeted improvement and governance of water services.	X	X	X
Functional Descriptions and Operation and Maintenance (O&M) Manuals	Most pump stations and treatment facilities have functional descriptions available through the SCADA system, but a small number are missing and need to be created and uploaded to the system. Required sites such as Clifton and Bluff WWTPs have O&M Manuals but these are not up to date and not available digitally. These should also be updated and available digitally.	Maintain safe, compliant and efficient water services	Having accurate and accessible functional descriptions and O&M manuals help operators to manage the applicable sites particularly if they experience complex issues that need to be addressed.	X	X	X
Flow Monitoring Improvements	The doppler flow meters within the Cliffton WWTP are inaccurate and there is no flow monitoring for flows entering the Ōmāui Oxidation Pond. These systems require improved systems to monitor flows.	Maintain safe, compliant and efficient water services	Understanding the flows through Cliffton WWTP will enable better performance control and monitoring of the treatment processes. Monitoring the flows into the Ōmāui Oxidation Pond will	X		

Strategic Asset Management Plan
6 Key Opportunities and Improvement Plan

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
			improve the understanding of capacity in the Ōmāui wastewater network, and treatment and irrigation system.			
Mitigation of Overflows at Turnbull Thomson Park	The manhole upstream of the Lindisfarne Pump Station in Turnbull Thomson Park is known to surcharge in large wet weather events. This poses a risk to public health and safety as well as the reputation of ICC and the WSBU. The current approach to address the risk is to reduce upstream inflow and infiltration sources.	Maintain safe, compliant and efficient water services	Preventing the overflows from occurring will eliminate the risk to public health from the wastewater ponding and will stop ICC received infringement notices, abatement notices, or prosecution for having an unconsented overflow event.	X		
Hydraulic Model Development	There is no comprehensive stormwater model, and overland flow path mapping and flood risk understanding is incomplete. WSBU has purchased a stormwater modelling package and will progressively improve the understanding of flood risks.	Maintain safe, compliant and efficient water services	Improve the understanding of where flooding occurs and will inform a CAPEX and OPEX programme.			X
Risk and Emergency Arrangements	Document emergency arrangements and procedures, such as how to maintain or restore services in a major event.	Maintain safe, compliant and efficient water services	Controlled and resilient environment.	X	X	X
Water Service Performance Framework	Review and refine levels of service, performance measures and reporting processes to align with Water Services Strategy and Information Disclosure requirements.	Maintain safe, compliant and efficient water services	Improves transparency and provides clearer links between service outcomes, performance and investment.	X	X	

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Strategic Asset Management Plan
6 Key Opportunities and Improvement Plan

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
Fault and failure data analysis	Analyse three waters network asset data including condition information, customer requests and maintenance records to identify failure trends, high-risk assets and renewal priorities. Integrate findings into risk assessments and renewal planning.	Maintain safe, compliant and efficient water services	Improves understanding of network performance, supports evidence based renewal planning and reduces reliance on age and material based assumptions.	X	X	X
CCTV Condition Assessments Expansion	There is limited coverage of the network for CCTV condition assessments. The programme of CCTV assessments needs to progress to increase network coverage and improve understanding of the condition of the network.	Reduce risk from ageing and critical assets	A better understanding of the condition of the network will enable more targeted investment decisions so the areas most in need of rehabilitation can be remediated first	X		X
Lifecycle Planning Improvement	Develop improved deterioration modelling, intervention strategies and renewal forecasting methodologies across major asset classes.	Sustain core infrastructure over the long term	Supports long-term stewardship of assets and improves confidence in lifecycle investment forecasts.	X	X	X
Use Additional Asset Data Points to Inform Renewal Programme	Integrate asset condition data, criticality, performance and risk information to support evidence and risk based decisions including renewal programme prioritisation.	Sustain core infrastructure over the long term	Directs investment towards assets with the highest risk and service consequences.	X	X	X
Three Waters Critical Asset Framework Development	Criticality mapping is incomplete and evidence requires validation. The 2017 Project Max criticality framework is focused mainly on asset types and does not provide a complete view of critical water supply assets. Expand criticality framework/register to include source, treatment, storage, pumping	Sustain core infrastructure over the long term	Enable risk-based asset investment and evidence to support investments.	X	X	X

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Strategic Asset Management Plan
6 Key Opportunities and Improvement Plan

Improvement	Description	AM Objective	Benefit	Wastewater	Water Supply	Stormwater
	and SCADA assets. Ensure it is aligned with ICC's Risk Management Framework					
Trade Waste Monitoring	Incoming flows to the Cliffton WWTP, combined with the reported average water usage indicates that there is a large portion of wastewater flows coming from non-residential trade waste users. In future trade waste flows are to be monitored and reported separately.	Lift asset management maturity	Separate flow monitoring and reporting enables a greater accuracy of understanding of network flows.	X		
Flow Monitoring Improvements	The doppler flow meters within the Cliffton WWTP are inaccurate and there is no flow monitoring for flows entering the Ōmāui Oxidation Pond. These systems require improved systems to monitor flows.	Maintain safe, compliant and efficient water services	Understanding the flows through Cliffton WWTP will enable better performance control and monitoring of the treatment processes. Monitoring the flows into the Ōmāui Oxidation Pond will improve the understanding of capacity in the Ōmāui wastewater network, and treatment and irrigation system.	X		

Table 19 - Asset Management Improvement Items

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Appendices

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Appendix A Related Documents, Frameworks and Policy

Name	Description	Location
Investment and Delivery Plan 2026		
Water Services Strategy 2026		
Water Supply Asset Management Plan 2026		
Wastewater Asset Management Plan 2026		
Stormwater Asset Management Plan 2026		
Risk Management Framework and Policy 2026		
Invercargill City Council Water Services Delivery Plan 2024		
Risk and Criticality Framework 2017		
Asset Management Policy 2017		

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Appendix B ICC WSBU Risk Register

Risk Register

Filter: Portfolio(s): Water Services

RESIDUAL 12.0 HIGH
INHERENT 12.0
R00897

WATER SERVICES, OPERATIONS & SERVICE DELIVERY, WATER SERVICES - 3WATERS - WTP, WATER SERVICES - BUSINESS UNIT

Insufficient or interrupted drinking-water supply from single-source dependency

Loss of potable water, sanitation and firefighting capability; interruption to industry and essential services; major public-health, economic and reputational impacts.

OWNER Peter Patton
CREATED 24/08/2026 1:45:24 pm

CONSEQUENCE	Catastrophic
LIKELIHOOD	Possible
RESIDUAL CONSEQUENCE	Catastrophic
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00925

Water Safety Plan; treatment and source monitoring; emergency response arrangements; water restrictions; approximately two days of reservoir storage; intake seismic work; Branxholme supply-main renewal; alternative/emergency source investigation; planned trunk-main, manifold and pump redundancy; emergency tanker and community-tap arrangements.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 12.0 HIGH
INHERENT 16.0
R00902

WATER SERVICES, GOVERNANCE, REPUTATION, LEGISLATIVE COMPLIANCE & CONTROL, WATER SERVICES - 3WATERS - WWTP, WATER SERVICES - BUSINESS UNIT

Wastewater treatment and discharge consents cannot be renewed or complied with affordably

Consent delay or breach, prosecution, environmental harm, major unplanned capital cost and constraints on growth or service delivery.

OWNER Peter Patton
CREATED 24/08/2026 2:01:11 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Moderate

CONTROL MC00930

Consent monitoring; early regulator engagement; technical investigations into discharge-to-water and land-disposal options; staged LTP investment; specialist legal and engineering advice; planned Clifton and Bluff consent upgrade projects.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

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Strategic Asset Management Plan

RESIDUAL 12.0 HIGH
INHERENT 16.0
R00914

WATER SERVICES, FINANCIAL, WATER SERVICES - BUSINESS UNIT

Water-services investment and operating costs are not financially sustainable

Deferred critical works, higher rates or debt, declining service, breach of financial strategy, intergenerational inequity and reduced organisational resilience.

OWNER Peter Patton
CREATED 24/08/2026 2:44:12 pm

CONSEQUENCE Major
LIKELIHOOD Likely
RESIDUAL CONSEQUENCE Major
RESIDUAL LIKELIHOOD Moderate

CONTROL MC00942

LTP and infrastructure strategy; financial modelling; prioritisation; debt and rates planning; staged investment; asset plans and procurement controls.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 9.0 MEDIUM
INHERENT 16.0
R00907

WATER SERVICES, INFORMATION MANAGEMENT, PROPERTY & ASSETS, WATER SERVICES - BUSINESS UNIT

Asset information and asset-management maturity are insufficient for reliable decisions

Poorly prioritised investment, unreliable regulatory disclosures, inefficient maintenance, incorrect valuations and failure to identify critical service risks.

OWNER Peter Patton
CREATED 24/08/2026 2:18:49 pm

CONSEQUENCE Major
LIKELIHOOD Likely
RESIDUAL CONSEQUENCE Moderate
RESIDUAL LIKELIHOOD Moderate

CONTROL MC00935

Asset maturity assessment; EAM implementation; CCTV programme; asset-register and criticality improvement actions; data confidence review; SAMP/AMP programme; specialist support and governance reporting.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 9.0 MEDIUM
INHERENT 12.0
R00903

WATER SERVICES, OPERATIONS & SERVICE DELIVERY, WATER SERVICES - 3WATERS - WWTP, WATER SERVICES - BUSINESS UNIT

Wastewater network failure or overflow

Extended sewage discharge, environmental and public-health harm, property damage, service interruption, prosecution and expensive emergency response.

OWNER Peter Patton
CREATED 24/08/2026 2:03:49 pm

CONSEQUENCE	Major
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Moderate
RESIDUAL LIKELIHOOD	Moderate

CONTROL MC00931

Preventive maintenance; CCTV and flow monitoring; sealed-joint renewals; overflow and alarm monitoring; emergency repair and sucker-truck response; standby generator deployment; planned duplication of Mersey, Lindisfarne, Otatara and Preston rising mains.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 9.0 MEDIUM
INHERENT 16.0
R00900

WATER SERVICES, GOVERNANCE, REPUTATION, LEGISLATIVE COMPLIANCE & CONTROL, WATER SERVICES - BUSINESS UNIT

Incomplete visibility and non-compliance across private drinking-water supplies

ICC cannot reliably assess community exposure; suppliers may miss regulatory requirements; intervention may be late and public confidence may be affected.

OWNER Peter Patton
CREATED 24/08/2026 1:55:23 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Moderate
RESIDUAL LIKELIHOOD	Moderate

CONTROL MC00928

Community Access Register; direct follow-up; operator communications; engagement with the Water Services Authority; three-yearly review process.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 12.0
R00901

WATER SERVICES, OPERATIONS & SERVICE DELIVERY, WATER SERVICES - BUSINESS UNIT

Private-supply contingency capacity is insufficient during drought or widespread disruption

Communities and businesses cannot access sufficient safe water; ICC network demand rises during an already constrained period; vulnerable users require emergency support.

OWNER Peter Patton
CREATED 24/08/2026 1:59:00 pm

CONSEQUENCE	Major
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00929

Registered water carriers; ICC filling stations; Emergency Management Southland arrangements; community guidance and emergency planning.

SIGNOFF(S):	Peter Patton
DUE DATE:	24 Aug 2026
FREQUENCY:	Once

RESIDUAL 8.0 MEDIUM
INHERENT 18.0
R00898

WATER SERVICES, HEALTH, SAFETY & WELLBEING, WATER SERVICES - 3WATERS - WTP, WATER SERVICES - BUSINESS UNIT

Drinking-water contamination or treatment failure

Water-borne illness, potentially widespread public-health effects, loss of service, regulatory intervention, prosecution and severe loss of public confidence.

OWNER Peter Patton
CREATED 24/08/2026 1:48:39 pm

CONSEQUENCE	Catastrophic
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00926

Water Safety Plan; four treatment barriers at Branxholme; sampling and compliance monitoring; alarms and incident response; operator competency; backflow devices on new/renewed connections; ongoing backflow programme; purpose-built tanker fill station.

SIGNOFF(S):	Peter Patton
DUE DATE:	24 Aug 2026
FREQUENCY:	Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 16.0
R00904

WATER SERVICES, OPERATIONS & SERVICE DELIVERY, WATER SERVICES - 3WATERS - SW PUMP STATIONS, WATER SERVICES - BUSINESS UNIT

Stormwater network capacity and flood-management dependencies are inadequate

More frequent or severe urban flooding, property damage, unsafe access, service disruption, legal claims and loss of community confidence.

OWNER Peter Patton
CREATED 24/08/2026 2:06:16 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00932

Flood response; CCTV and inlet/outfall maintenance; floodgate inspection; standby generation and duplicate pumps; five-year storm design standard for renewals; secondary flow paths; modelling; capital works; low-impact design and onsite attenuation controls; coordination with Environment Southland.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 8.0 MEDIUM
INHERENT 12.0
R00905

WATER SERVICES, ENVIRONMENT, WATER SERVICES - BUSINESS UNIT

Stormwater quality requirements cannot be met within planned funding

Non-compliance, receiving-environment harm, unplanned investment, delayed development and reputational damage.

OWNER Peter Patton
CREATED 24/08/2026 2:09:14 pm

CONSEQUENCE	Major
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00933

Consent and environmental monitoring; catchment planning; industrial-property audits and contaminant source tracing; cultural health monitoring with Te Ao Marama; design standards; staged LTP investment; engagement with Environment Southland.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 12.0
R00906

WATER SERVICES, PROPERTY & ASSETS, WATER SERVICES - BUSINESS UNIT

Ageing water networks and constrained renewals lead to service failure

Unexpected failures, higher reactive cost, declining levels of service, water loss, overflows, property damage and an increasing long-term funding requirement.

OWNER Peter Patton
CREATED 24/08/2026 2:11:17 pm

CONSEQUENCE	Moderate
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00934

Condition assessment; maintenance; smoothed renewal programmes; differentiated replacement approach for critical and non-critical assets; criticality assessment; AMPs; capital prioritisation and performance monitoring.

SIGNOFF(S):	Peter Patton
DUE DATE:	24 Aug 2026
FREQUENCY:	Once

RESIDUAL 8.0 MEDIUM
INHERENT 16.0
R00908

WATER SERVICES, PROJECT-QUALITY MANAGEMENT, WATER SERVICES - BUSINESS UNIT

Water capital programme is not delivered to time, cost or required outcomes

Critical resilience and compliance works are late, budgets increase, planned levels of service are not achieved and regulatory or growth constraints remain.

OWNER Peter Patton
CREATED 24/08/2026 2:24:39 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00936

Capital governance; project management processes; procurement planning; portfolio reporting; staging and prioritisation; use of external delivery resources.

SIGNOFF(S):	Peter Patton
DUE DATE:	24 Aug 2026
FREQUENCY:	Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 12.0
R00909

WATER SERVICES, PLANNING & STRATEGY, WATER SERVICES - BUSINESS UNIT

Growth and land-use change exceed water infrastructure capacity

Development is constrained or enabled without adequate service; levels of service decline; emergency investment and planning changes are required.

OWNER Peter Patton
CREATED 24/08/2026 2:31:22 pm

CONSEQUENCE Major
LIKELIHOOD Moderate
RESIDUAL CONSEQUENCE Major
RESIDUAL LIKELIHOOD Possible

CONTROL MC00937

Growth forecasts; spatial and infrastructure planning; development contributions; consent processes; capacity modelling; LTP investment.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 8.0 MEDIUM
INHERENT 16.0
R00910

WATER SERVICES, CECS - PEOPLE & CULTURE, PEOPLE & KNOWLEDGE, WATER SERVICES - BUSINESS UNIT

Water-services capability and capacity are insufficient or not retained

Burnout, loss of institutional knowledge, reduced compliance and service performance, delayed programmes and greater dependence on expensive external support.

OWNER Peter Patton
CREATED 24/08/2026 2:33:25 pm

CONSEQUENCE Major
LIKELIHOOD Likely
RESIDUAL CONSEQUENCE Major
RESIDUAL LIKELIHOOD Possible

CONTROL MC00938

Workforce planning; programme resourcing; specialist contractors; recruitment and retention activity; workload prioritisation; succession and knowledge transfer.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 16.0
R00915

WATER SERVICES, CECS - GOVERNANCE & LEGAL, GOVERNANCE, REPUTATION, LEGISLATIVE COMPLIANCE & CONTROL, WATER SERVICES - BUSINESS UNIT

Legislative and regulatory change invalidates water-service plans or assumptions

Rework, stranded investment, non-compliance, cost escalation, delayed decisions and failure to meet community or regulator expectations.

OWNER Peter Patton
CREATED 24/08/2026 2:46:10 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00943

Legislative monitoring; sector engagement; specialist advice; scenario planning; governance reporting and adaptable programme plans.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 8.0 MEDIUM
INHERENT 16.0
R00896

WATER SERVICES, GOVERNANCE, REPUTATION, LEGISLATIVE COMPLIANCE & CONTROL, WATER SERVICES - BUSINESS UNIT

Water Services Business Unit implementation and regulatory readiness

Missed obligations, unreliable disclosures, weak accountability, rework, additional cost and loss of confidence in ICC's ability to deliver water services.

OWNER Peter Patton (Portfolio Manager)
CREATED 24/08/2026 1:41:05 pm

CONSEQUENCE	Major
LIKELIHOOD	Likely
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00924

Accepted WSDP; programme PID and PSG governance; milestone plan; workstream reporting; regulatory gap analysis; TechOne ring-fencing work; specialist legal, finance and asset-management support.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 8.0 MEDIUM
INHERENT 18.0
R00913

WATER SERVICES, CECS - STRATEGY, POLICY & ENGAGEMENT, ENVIRONMENT, WATER SERVICES - BUSINESS UNIT

Climate change and natural hazards undermine water infrastructure resilience

Asset failure, flooding, treatment disruption, environmental discharge, loss of service and major unplanned resilience investment.

OWNER Peter Patton
CREATED 24/08/2026 2:41:57 pm

CONSEQUENCE	Catastrophic
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Major
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00941

Infrastructure strategy; emergency planning; climate-adjusted stormwater design; asset criticality; reservoir earthquake valves; planned relocation of pump stations from liquefaction areas; resilience projects; hazard information and insurance.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 6.0 MEDIUM
INHERENT 18.0
R00912

WATER SERVICES, WATER SERVICES - BUSINESS UNIT

Emergency and business-continuity arrangements do not sustain water services

Extended loss of essential services, unmanaged public-health or environmental impacts, ineffective coordination and delayed community recovery.

OWNER Peter Patton
CREATED 24/08/2026 2:37:58 pm

CONSEQUENCE	Catastrophic
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Moderate
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00940

Business-continuity and emergency plans; Emergency Management Southland and lifelines arrangements; standby power; incident response; mutual aid; critical spares; sucker trucks; emergency tanker and community-tap supply.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Strategic Asset Management Plan

RESIDUAL 6.0 MEDIUM
INHERENT 12.0
R00899

WATER SERVICES, GOVERNANCE, REPUTATION, LEGISLATIVE COMPLIANCE & CONTROL, HEALTH, SAFETY & WELLBEING, WATER SERVICES - 3WATERS - WTP, WATER SERVICES - BUSINESS UNIT

Public-health event from non-reticulated drinking-water supplies

Undetected contamination, illness among vulnerable users, emergency demand on ICC and concern that Council did not adequately identify or communicate the exposure.

OWNER Peter Patton (Portfolio Manager)
CREATED 24/08/2026 1:52:12 pm

CONSEQUENCE	Major
LIKELIHOOD	Moderate
RESIDUAL CONSEQUENCE	Moderate
RESIDUAL LIKELIHOOD	Possible

CONTROL MC00927

Community Access to Drinking Water assessment and register; targeted engagement; guidance on testing, treatment and Water Safety Plans; emergency potable-water support arrangements.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

RESIDUAL 4.0 LOW
INHERENT 20.0
R00911

WATER SERVICES, HEALTH, SAFETY & WELLBEING, WATER SERVICES - BUSINESS UNIT

Water infrastructure and field operations contribute to fatality or serious harm

Fatality or serious injury to staff, contractors or the public; WorkSafe action; operational shutdown; prosecution and severe reputational harm.

OWNER Peter Patton
CREATED 24/08/2026 2:35:56 pm

CONSEQUENCE	Major
LIKELIHOOD	Almost Certain
RESIDUAL CONSEQUENCE	Low
RESIDUAL LIKELIHOOD	Likely

CONTROL MC00939

Critical-risk controls; permits and isolation; competency and supervision; engineering controls; PPE; contractor management; inspections; incident and near-miss processes.

SIGNOFF(S): Peter Patton
DUE DATE: 24 Aug 2026
FREQUENCY: Once

Appendix C Systems and Tools Table

Activity	System/Tool CURRENT	Comment
Asset Register	Infor Public Sector (IPS)	Transition underway to TechOne (EAM)
As-Builts	Objective	Transition underway to TechOne (ECM)
Asset Inspections	IPS (through WO or inspection schedule under C807)	Transition underway to TechOne (EAM)
Billing	Pathway	
CCTV	ICC server (Footages and reports), Catalogue in Objective	Catalogue to move to ECM
Compliance information incl lab information and consent monitoring	Data consolidated to Excel	
Compliance Management and Reporting	Data consolidated to Excel	
Financial Information and Planning	TechOne Enterprise	
Customer concerns/requests	Pathway	
Mapping	ArcGIS, CityMap (Web version of GIS)	
Meter Reading	Pathway	
Modelling - water supply	Mike Urban	Transition underway to InfoWorks WS Pro
Modelling - wastewater	Mike Urban	Transition underway to InfoWorks ICM
Modelling - stormwater	Excel - Stormwater	Transition underway to InfoWorks ICM
Policies and Strategies	TechOne ECM	Document and drawing tracking system
Project Management	Con.qa	Predominantly used only for LTP and not for entire PM
Purchase Orders	TechOne	
Risk register & Management	Nintex Process Manager (ProMap)	
SCADA	AVEVA SCADA Software	
SOPs	ProMap	
Spatial Analysis	ArcGIS	Transition to Arc Pro
Trade Waste		
Valuations	IPS	Transition underway to TechOne
Work Orders	IPS	Transition underway to TechOne

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Appendix D Risk Appetite (by Category)

As per ICC Risk Management Framework Feb 2026 (A6327585)

Risk category	Typical Risk Appetite Level	Description of posture
Financial sustainability	Balanced	Council maintains a financially sustainable position over the long term, balancing affordability, service levels and investment in infrastructure. Moderate risk is accepted where supported by robust financial planning, prudent debt management and clear alignment with Long-Term Plan outcomes. Financial risks are actively monitored and managed within approved limits.
People & Knowledge	Balanced	Council maintain a capable and resilient workforce, accepting moderate risk to enable recruitment, retention and organisational change. Critical roles, succession and institutional knowledge are actively managed to ensure continuity of operations and delivery of strategic priorities.
Service delivery / critical services	Balanced	Council delivers reliable and responsive services to the community, accepting moderate risk where this supports service improvement, efficiency or innovation. Critical services are prioritised with appropriate controls, asset management and business continuity arrangements to minimise disruption.
Legal & regulatory compliance	Balanced	Council seeks to meet all legislative and regulatory obligations and maintains systems and controls to support compliance. While minor or unintentional breaches may occur, these are addressed promptly. There is no tolerance for deliberate, systemic or material non-compliance.
Health, Safety & Wellbeing	Conservative	Council has a low tolerance for health and safety risks. All reasonably practicable steps are taken to eliminate or minimise risks to employees, elected/appointed members and the public. A strong safety culture, clear accountability and continuous improvement are maintained.
Information management / cyber / privacy	Balanced	Council protects its information, systems and data while enabling appropriate access and use. Moderate risk is accepted where supported by effective controls. Priority is given to preventing significant cyber incidents, privacy breaches or loss of critical information.
Environment & climate resilience	Balanced	Council manages environmental impacts and climate-related risks in a proactive and planned manner. Moderate risk is accepted to enable sustainable development and adaptive responses with decisions supported by long-term planning, resilience strategies and regulatory requirements.
Reputation / community trust	Conservative	Council has low tolerance for risks that could undermine public trust or confidence. Decision-making is transparent, evidence-based and aligned with community expectations. Communications is proactive and issues are managed promptly to maintain credibility and trust.
Achievement of strategic objectives / opportunities	Balanced	Council pursues its strategic objectives and outcomes with a willingness to take measured and informed risks. Innovation and continuous improvement are supported where risks are understood, well managed and aligned with Council's strategic direction and community outcomes.

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Appendix E Levels Of Service Table

The tables below summarise the performance measures, targets, and links to ICC's community outcomes

KPI	Performance indicator	Annual Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
1.1a-1.1j	The extent to which the local authority's drinking water supply complies with the following parts of the drinking water quality assurance rules: (a) 4.4 T1 Treatment Rules; (b) 4.5 D1.1 Distribution System Rule; (c) 4.7.1 T2 Treatment Monitoring Rules; (d) 4.7.2 T2 Filtration Rules; (e) 4.7.3 T2 UV Rules; (f) 4.7.4 T2 Chlorine Rules; (g) 4.8 D2.1 Distribution System Rule; (h) 4.10.1 T3 Bacterial Rules; (i) 4.10.2 T3 Protozoal Rules; and (j) 4.11.5 D3.29 Microbiological Monitoring Rule	100% compliance	Drinking Water Quality Assurance Rules / regulatory compliance	Safe drinking water	Safe drinking water / public health
2.1	The percentage of real water loss from the Council's networked reticulation system. (Calculated according to the methodology outlined in Water NZ Water Loss Guidelines publication)	<30%	Water NZ Water Loss Guidelines / existing ICC target	Efficient and sustainable use of water	Sustainable and efficient water services
2.2	The average consumption of drinking water per day per resident within the Invercargill City Council territorial district	<300 L/person/day	Existing ICC target / demand management	Responsible water use and affordability	Efficient use of resources
3.1	The median response time for **urgent** callouts, (from the time the Council receives notification to the time that service personnel reach the site)	4 hours	Existing service response target	Responsive service during faults	Reliable and responsive service
3.2	The median time to resolve **urgent** callouts (from the time the Council receives notification to the time that service personnel confirm resolution of the fault or interruption)	24 hours	Existing service response target	Timely restoration of service	Reliable water supply
3.3	Attendance for **non-urgent** call-outs: from the time that council receives notification to the time that service personnel reach the site	5 working days	Existing service response target	Timely response to non-urgent issues	Responsive customer service

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KPI	Performance indicator	Annual Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
3.4	Resolution of **non-urgent** call-outs: from the time that the Council receives notification to the time that service personnel confirm resolution of the fault or interruption	10 working days	Existing service response target	Timely resolution of non-urgent issues	Responsive customer service
3.5	The total number of complaints received by Council per 1,000 connections about any of the following: -(a) Drinking water clarity -(b) Drinking water taste -(c) Drinking water odour -(d) Drinking water pressure or flow -(e) Continuity of supply -(f) Council's response to any of these issues	<10 total	Existing ICC target / mandatory customer satisfaction measure	Acceptable water quality, pressure, continuity and responsiveness	Customer confidence and service reliability

KPI	Performance indicator	Annual Target Year 1-10	Basis for target	Customer expectation addressed	WSS/community outcome supported
6.1	DIA Performance Measure 1 (system and adequacy) Number of dry weather wastewater overflows per 1,000 properties	Max 4	Existing service response target	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health.	To safeguard public health and the environment
6.2	DIA Performance measure 2 (discharge compliance) Compliance with ICC's resource consents for discharge from its sewerage system measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions received by ICC in relation to those resource consents.	Max 0	Existing service response target	Council monitors and effectively manages the stormwater network to support environmental health and efficient use of resources.	To safeguard public health and the environment
7.1	a) The median response time from notification to arrival on-site to attend wastewater overflows resulting from a blockage or other fault in the sewerage system	<1 hour	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental	To support economic growth of the community

Strategic Asset Management Plan

				health and efficient use of resources.	
7.2	b) The median response time from notification to resolution of wastewater overflows resulting from a blockage or other fault in the sewerage system	<6 hours	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community
7.3	DIA Performance Measure 4 (customer satisfaction) The number of complaints received about: • sewage odour • system faults • system blockages • ICC's responsiveness (expressed per 1,000 properties connected to the Council's sewerage system)	Max 4	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources.	To support economic growth of the community

KPI	Performance indicator	Annual Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
4.1	The number of flooding events that occur in the Invercargill City district	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability
4.2	For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to the WSBU's stormwater system)	0	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability

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4.3	Compliance with the WSBU's resource consents for discharge from its stormwater system, measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions received by WSBU in relation to those resource consents.	0 non-compliance notices	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Environmental Wellbeing
5.1	The median response time to attend a flooding event, measured from the time that the WSBU receives notification to the time that service personnel reach the site	<1 hour	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Responsive customer service
5.2	The number of complaints received about the performance of the stormwater system (expressed per 1,000 properties connected to the WSBU's stormwater system)	<4 complaints	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability

Appendix F Compliance Map

Clause	Number	Specific Requirement	Section					
			1	2	3	4	5	6
Strategic asset management plan – general requirements	C1	(1) The strategic asset management plan must— (a) specify the date on which it was approved and who approved it for the regulated supplier; and (b) specify the period to which the plan relates; and (c) specify any significant assumptions used in the preparation of the plan and, for each significant assumption, an explanation of: (i) any qualifications that apply to the assumption; and (ii) the reason why the assumption is significant; and (d) include a summary that provides a brief overview of the contents and highlights information that the regulated supplier considers is significant; and (e) specify how the plan aligns with other planning documents, including any asset management plan or water services strategy. (2) The plan must include the information specified in clauses C2 to C5. (3) Financial forecasts are not required in a strategic asset management plan.	X					
Strategic asset management plan – asset management framework	C2	The strategic asset management plan must specify— (a) if the regulated supplier has an asset management policy, how the asset management policy promotes a consistent approach to asset management and to decision-making across the organisation by aligning with relevant organisational policies and strategies; and (b) the regulated supplier's asset management objectives, and (c) how the asset management objectives align with and support the priorities, objectives, outcomes, and expectations specified in the water services strategy under clause 2(1)(a) and (b) of Schedule 3 of the LGWS Act, and, for that purpose, specify— (i) any strategies that the regulated supplier intends to implement to achieve the asset management objectives; and (ii) any processes the regulated supplier intends to use to ensure the asset management objectives are realistic and achievable; and (d) any other strategies, plans, and asset management documents that influence the asset management practices and how each of these documents relate to each other; and (e) how stakeholder engagement informs the regulated supplier's asset management practices, including how the regulated supplier— (i) uses analysis of stakeholder engagement to shape asset management objectives; and (ii) addresses competing interests and expectations at a strategic level; and (iii) ensures its asset management decisions reflect a balanced consideration of diverse stakeholder needs; and (f) the current maturity and effectiveness of asset management within the organisation.		X	X		X	

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Strategic Asset Management Plan

Clause	Number	Specific Requirement	Section					
			1	2	3	4	5	6
Strategic asset management plan – risk management	C3	(1) The strategic asset management plan must specify— (a) the risk management framework used by the regulated supplier; and (b) how the framework informs decision making, investment planning, and resilience; and (c) the regulated supplier's risk policies. (2) In specifying the matters in subclause (1), the plan must specify— (a) how the asset management system supports resilience to natural hazards, including the identification, prioritisation, and mitigation of risks associated with natural hazards; and (b) how the following matters are incorporated into the risk management framework: (i) impacts of climate change: (ii) risks identified in drinking water safety plans, source water risk management plans, and wastewater network risk management plans: (iii) results of asset criticality assessments: (iv) existing and future Treaty settlement obligations (including how expectations for relationships with hapū, iwi, and other Māori organisations are recognised and embedded in the identification, assessment, and management of cross-boundary and climate-related risks): (v) perspectives of consumers. (3) The plan must specify the regulated supplier's risk appetite in relation to risk management, including— (a) the types and levels of risk that the regulated supplier is willing to accept or avoid in planning and investment decisions; and (b) how the risk appetite influences strategic priorities, trade-offs, and decision making; and (c) any formal statements, thresholds, or criteria used to define acceptable risk. (4) The plan must specify any risk management strategies that are in place to address potential challenges in achieving the strategic asset management plan.			**X**			
Strategic asset management plan – lifecycle asset management	C4	(1) The strategic asset management plan must specify the regulated supplier's full lifecycle asset management processes, including how needs are identified, prioritised, and addressed through planning, investment, and operational activities. (2) In specifying the matters in subclause (1), the plan must specify each of the following: (a) the process the regulated supplier uses to identify asset-related needs, including those that arise due to factors such as population and demand growth, the need to enhance service levels, asset condition and performance issues, regulatory changes, Treaty settlement obligations, and the need to mitigate risks and improve resilience: (b) the regulated supplier's definition of criticality in the context of the provision of the regulated service (including, for example, different levels of reliance for different consumer groups), health and safety, environmental protection, and financial sustainability: (c) any criteria that the regulated supplier uses to prioritise asset-related needs (for example, criteria relating to risk, compliance, cost-effectiveness, service impact, or alignment with strategic goals): (d) how decisions are made to support growth, maintain or improve (or maintain and improve) levels of service, undertake maintenance and renewals, and manage trade-offs, including how lifecycle cost			**X**	**X**	**X**	

Strategic Asset Management Plan

Clause	Number	Specific Requirement	Section					
			1	2	3	4	5	6
		considerations influence decision-making and how the regulated supplier seeks to optimise lifecycle cost and act for the long-term benefit of consumers: (e) any high-level plan for the regulated supplier's asset portfolio that outlines the key activities (for example, acquisition, operation, maintenance, renewal, and disposal) that are to support the delivery of asset management objectives: (f) the regulated supplier's approach to asset renewals, including how the regulated supplier makes decisions whether to replace or refurbish assets proactively or to do so reactively in response to failures and criteria used in those decisions (for example, criteria relating to risk, cost-effectiveness, service impact, or alignment with strategic goals): (g) the ways (if any) that condition and performance data are used to optimise decisions in relation to asset maintenance, renewal, and replacement and how the regulated supplier balances cost, risk, and service outcomes: (h) any asset renewal backlog that the regulated supplier has identified and the regulated supplier's approach to managing the backlog, including— (i) an estimate in years of the time that it will take to address the backlog; and (ii) the key risks associated with the backlog; and (iii) how the regulated supplier intends to manage those risks until the backlog is addressed: (i) the regulated supplier's metering strategy, which may include— (i) the rationale for metering or not metering specific consumer groups or areas; and (ii) the adoption and use of smart metering technologies; and (iii) the systems and processes in place for managing and utilising meter data to support demand forecasting, billing, and network planning.						
Strategic asset management plan – governance and organisation	C5	In relation to the organisation of the regulated supplier, the strategic asset management plan must specify the following— (a) how the regulated supplier has ensured consistency with Treaty settlement obligations in relation to the provision of the regulated service: (b) the governance and organisational leadership structure of the regulated supplier: (c) the role that governance and organisational leadership has in delivering the regulated supplier's asset management functions, including the responsibilities and accountabilities for asset management at the governance level, the management level, the operations level, and at any other level identified by the regulated supplier: (d) the skills, resources, and capabilities that are required to meet the regulated supplier's asset management objectives and the mitigation strategies that the regulated supplier intends to use to fill any skill or resource gaps: (e) the current capability and capacity of the regulated supplier's governance, organisational leadership, internal teams, and supply chain to deliver the strategies and plans set out in the asset management documents, including: (i) the systems, processes, and resources in place to support the delivery of the strategic asset		**X**			**X**	**X**

Strategic Asset Management Plan

Clause	Number	Specific Requirement	Section					
			1	2	3	4	5	6
		management plan, asset management plan, and investment and delivery plan; and (ii) any planned changes to those systems, processes, or capabilities; and (iii) the timelines associated with the implementation of those changes, including any timelines for the fulfilment of the intended benefits of the changes; and (iv) how governance and leadership structures enable effective oversight for asset management and the delivery of operational and capital programmes; and (v) any known constraints with governance, leadership, or delivery capability, and the mitigation strategies that the regulated supplier intends to implement.						

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Water Supply Asset Management Plan

Invercargill City Council

In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
Invercargill City Council

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Prepared by:
Stantec New Zealand

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Drafting conventions

Commerce Commission Information Disclosure references are included in the Section tables throughout the document to identify relevant clauses and demonstrate alignment with Schedule C requirements.

For example:

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity specific strategic, regulatory, policy, sustainability and climate drivers.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN callouts at the end of each section identify:

- information gaps or missing evidence;
- matters requiring WSBU confirmation or professional judgement; and/or
- actions required to improve AMP maturity and support future updates.

For example:

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN
No specific stormwater climate risk assessment has yet been completed. Complete a stormwater climate risk and resilience assessment and incorporate findings into future AMP update
Confirm key issues and should we add climate resilience? Test before workshop

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Executive Summary

The Water Supply Asset Management Plan sets out how Invercargill City Council and its in-house Water Services Business Unit will manage the water supply activity over the next 30 years. The activity currently delivers safe, reliable drinking water to Invercargill and Bluff and is generally achieving its established service targets. However, reliance on a single source and treatment system, ageing infrastructure, incomplete buried-asset condition information, changing regulatory expectations and uncertainty over future industrial demand will place increasing pressure on resilience, investment and delivery.

The water supply system serves approximately 48,561 people through 21,094 residential and 1,553 non-residential connections. Water is abstracted from the Ōreti River, treated at the Branxholme Water Treatment Plant and distributed through source, treatment, storage, pumping, transmission, reticulation, monitoring and control assets. The portfolio includes approximately 422 km of treated-water reticulation, ten reservoirs, six identified pump stations, and more than 3,000 valves and hydrants. Current planning information indicates that the system has sufficient source, treatment, storage, pumping and network capacity to meet existing demand and forecast residential growth.

The most significant strategic risk is security of supply. Invercargill and Bluff currently depend on the Ōreti River as the sole raw-water source and Branxholme as the sole treatment facility, while key bulk transmission routes also have limited redundancy. The Alternative Water Supply Project is the principal long-term response and is intended to progressively establish an emergency and supplementary groundwater supply from the Awarua Plains. Its final scope, timing, cost, consenting pathway, aquifer performance and resilience benefits remain subject to further investigation and Council decisions.

The system is performing well against its current service measures. Drinking water compliance has been maintained, urgent and non-urgent response targets are being achieved, complaints remain below the established target, and reported water loss remains below the current 30% threshold. The principal lifecycle uncertainty is the condition and remaining life of buried reticulation assets. Condition knowledge is stronger for treatment, storage and pumping facilities, while buried assets rely more heavily on age, material, fault history, leakage, criticality and operational knowledge. Improving this evidence base, extending the critical-asset framework, strengthening water-loss and network intelligence, and developing more robust risk-based renewal forecasts are therefore priorities.

Planned investment is focused on maintaining safe and compliant services, improving security of supply and critical asset resilience, renewing ageing infrastructure, managing water loss and demand, and supporting adaptable responses to future growth. Major initiatives include the Alternative Water Supply Programme, duplication of critical Branxholme infrastructure, pipe and pumping-station renewals, metering and leak detection, hydraulic-model calibration, backflow protection and future network capacity improvements. Delivery will need to remain affordable and achievable, with programme phasing reflecting funding, organisational capacity, contractor availability and market constraints. Continued improvement in asset information, condition assessment, climate-risk understanding, governance and programme oversight will strengthen investment confidence and support future updates of the AMP and Investment Delivery Plan.

DRAFT

1 Introduction and Plan Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C6
This chapter should demonstrate	Approval, assumptions, summary and planning-document alignment.

1.1 Purpose and Scope

The water supply activity is one of the core infrastructure activities addressed in the Invercargill City Council (ICC) Long Term Plan (LTP) and is managed and delivered by the Water Services Business Unit (WSBU) at ICC. This Water Supply Asset Management Plan (AMP) is closely linked to the overall strategic direction for the city.

The purpose of this AMP is to outline the WSBU's planning and management practices for the water supply activity. The water supply networks and associated assets serving the urban areas of Invercargill and Bluff are strategic assets and play a critical role in providing safe and reliable drinking water services that support public health, economic activity, fire protection, and community wellbeing. This AMP describes the management of these assets on behalf of customers and stakeholders and supports the achievement of ICC and the WSBU 's strategic objectives and statutory obligations. The AMP integrates management, financial, engineering, and technical practices to ensure the required levels of service are delivered in a sustainable, efficient, and resilient manner. It is based on current levels of service, available asset information, and the existing knowledge and professional judgement of WSBU staff.

The AMP also identifies a programme of continuous improvement to strengthen asset information, risk management, whole of life asset planning, and investment decision-making. These improvements will increase confidence in future planning assumptions, expenditure forecasts, and service delivery outcomes while supporting the ongoing development of asset management capability across the WSBU.

This AMP has been structured to align with the Commerce Commission Water Services Information Disclosure requirements and follows ICC’s asset management planning framework. The document addresses customer requirements and outcomes, levels of service, asset performance, demand, risk, resilience, lifecycle management, investment planning, and continuous improvement to support the sustainable delivery of drinking water services.

1.2 Planning Horizon

This AMP adopts a 30-year planning horizon to support long-term infrastructure stewardship and intergenerational investment decision-making. Detailed service levels, expenditure forecasts and performance targets are generally presented for the first ten years, aligned with the Water Services Strategy, Investment and Delivery Plan and ICC’s long-term planning framework. Planning assumptions, demand forecasts and investment priorities are reviewed periodically to ensure they remain appropriate and reflect changing community expectations, regulatory requirements and operating conditions.

1.3 Relationships with other ICC Documents

The water supply activity operates within a wider planning framework that includes statutory planning documents, asset management strategies, infrastructure planning, bylaws and regulatory obligations.

The AMP supports the delivery of ICC and the WSBU’s long-term objectives by translating strategic direction into activity-specific service levels, lifecycle strategies, risk management approaches and

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investment requirements. The relationship between the principal water planning documents is shown below.

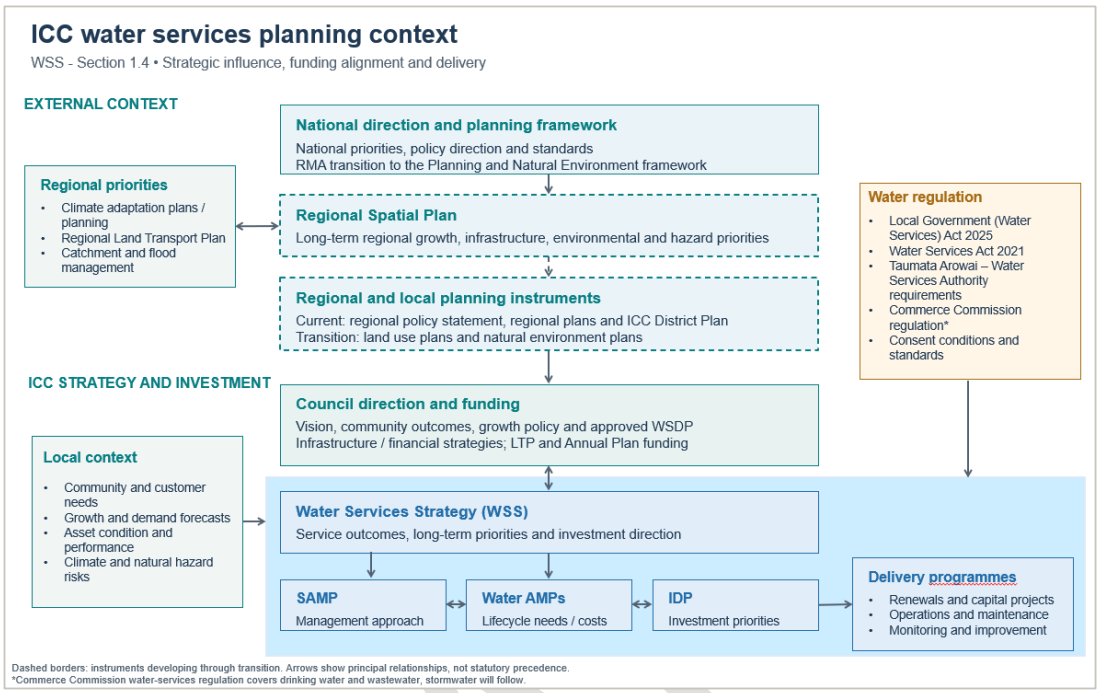


Figure 1-1: Water Services Planning Context

1.4 Relationships with other Commerce Commission Documents

The Water Supply AMP does not operate in isolation. It forms part of ICC's integrated planning framework, providing the link between strategic objectives and asset management decision-making for the water supply activity. The relationship between the key planning documents is outlined below.

Under the Local Government (Water Services) Act 2025, water service providers are required to prepare a Water Services Strategy (WSS) that describes how water services will be delivered, the outcomes sought for customers and communities, and the associated costs and investment requirements. This AMP supports implementation of the WSS by identifying the levels of service, lifecycle strategies, risks, renewal requirements, and investment needs required to achieve those outcomes.

Table 1-1: Relationship with other Commerce Commission planning documents

Document	Role	How this AMP Links
Water Services Strategy (WSS)	Sets long-term outcomes, service expectations, strategic direction and investment priorities for water services.	Provides the strategic outcomes and customer expectations that are translated into asset management requirements within this AMP.
Strategic Asset Management Plan (SAMP)	Establishes asset management objectives, policies, principles and decision-making frameworks.	Provides the asset management approach, lifecycle planning methodology, and risk management framework applied in this AMP.

Document	Role	How this AMP Links
Asset Management Plan (AMP)	Provides activity-specific planning for the water supply service.	Identifies levels of service, demand drivers, risks, lifecycle needs, investment requirements and improvement actions for the water supply activity.
Investment Delivery Plan (IDP)	Converts identified needs into prioritised, staged and fundable programmes.	Uses the investment needs and priorities identified in this AMP to develop coordinated delivery programmes and expenditure forecasts.

Together, these documents provide a clear line of sight from strategic objectives through to operational delivery. The WSS establishes desired outcomes, the SAMP defines how asset management decisions are made, the AMP identifies the actions and investment required for the water supply activity, and the IDP translates those requirements into prioritised delivery programmes.

1.5 Activity Overview

Water supply services are delivered by ICC through its WSBU, which is responsible for the planning, management and operation of water service assets. The WSBU owns and maintains water supply assets on behalf of the community, providing a reticulated drinking water service to the urban areas of Invercargill and Bluff.

Treated drinking water is supplied to consumers in Invercargill and Bluff. Ōtātara, Omaui, and Kennington are not supplied by the reticulated water service and generally rely on alternative private water sources. The water supply system comprises source water abstraction, treatment, storage, pumping, transmission, reticulation and monitoring assets that work together to supply drinking water to customers.

The supply of safe drinking water to residential, commercial and industrial customers protects public health, supports economic growth, contributes to community wellbeing, and supports emergency response capability through the provision of water for firefighting. In urban areas, drinking water is most effectively supplied through a reticulated (piped) water supply system. This allows the costs associated with maintaining high drinking water quality standards and reliable infrastructure to be shared across the community.

The objectives of water supply activity are:

- To safeguard public health through the provision of safe and reliable drinking water.
- To support economic growth and community wellbeing.
- To provide a cost-effective and sustainable water supply service.
- To maintain compliance with applicable legislative and regulatory requirements for drinking water services.
- To provide a resilient water supply system capable of meeting customer expectations and supporting emergency response needs.
- To ensure the long-term stewardship of water supply assets through effective asset management and investment planning.

The activity operates within an environment of changing regulatory requirements, evolving customer expectations, ageing infrastructure and the need to maintain long-term water supply resilience.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Provide an updated map or schematic showing water supply source, treatment, reticulation area (including pump station locations etc).

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1.6 Significant Assumptions

This AMP identifies the key assumptions that influence service levels, risk, lifecycle planning, resilience and investment decisions. These assumptions represent the best information available at the time of preparing this AMP and will be reviewed and updated as new information becomes available. Table 1-2 presents assumptions that will influence this AMP.

Table 1-2 Significant Assumptions

Assumption	Qualification	Reason for Significance
Future demand and growth will remain within current projections	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Asset condition and remaining life information is adequate for AMP-level planning	Condition data is incomplete and actual asset life may differ from assumptions.	Influences renewal timing, expenditure forecasts and asset failure risk.
Existing water take and treatment residuals discharge consents remain available for the duration of their current consent terms, and replacement consents can be obtained when required.	Future consent applications may result in amended consent requirements.	Material changes could affect source availability, treatment operations, resilience investment, operating costs and affordability.
Alternative Water Supply Project proceeds broadly as planned	Scope, timing, cost, consent pathway and aquifer performance remain subject to further investigation and decisions.	Influences security of supply, resilience outcomes and long-term capital investment.
Assets will perform broadly in line with assumed useful lives and deterioration profiles	Actual asset performance may vary due to condition, environment, installation and operational practices as well as unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Drinking water compliance requirements remain broadly consistent with current planning assumptions	Future standards and regulatory requirements may change.	Influences treatment requirements, operating costs and capital investment needs.
Capital and renewal programmes will be delivered substantially as planned	Delivery depends on funding, contractor availability and organisational capacity.	Influences the timing of risk reduction, renewals and service improvements.
Sufficient skilled staff and contractor resources will be available to operate and deliver water services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery.	Influences service delivery, asset management maturity and programme delivery. Elevated costs as IBU's compete with CCO's within the same market.

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Assumption	Qualification	Reason for Significance
Asset information quality will continue to improve	Future condition, performance and criticality information may alter current assumptions.	Influences confidence in forecasting, risk assessments and investment decisions.
Climate impacts remain within the range currently considered	Climate change may affect source reliability and asset performance.	Influences resilience requirements, levels of service and future investment needs.
Water metering and network intelligence initiatives proceed as planned	Timing, scope and future universal metering decisions remain uncertain.	Influences demand management, water loss reduction and future network investment.
Critical assets continue to perform broadly in line with current expectations	Failure of key assets may occur and some assets have limited redundancy.	Influences service reliability, resilience planning and emergency response requirements.
Legislative and regulatory reform remains broadly consistent with current planning assumptions	Future changes to economic, environmental and drinking water regulation remain uncertain.	Influences investment priorities, compliance costs and future levels of service.

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2 Strategic and Regulatory Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity-specific strategic, regulatory, policy, sustainability and climate drivers.

2.1 Strategic Context

2.1.1 Purpose of the Activity

The purpose of local government (Section 10 of Local Government Act) is meeting the current and future needs of communities for local infrastructure, public services, and regulatory functions. The Water Supply Activity contributes to the purpose of local government through the provision of infrastructure under section 10 of the Local Government Act 2002 and is identified as a core service under section 11A(1)(e).

The activity contributes to the community outcomes identified in Table 3 below:

Table 2-1: Alignment of the Water Supply Activity with Community Outcomes

Community Outcomes	How the activity contributes
Nobody is Left Behind – Our youth, older people, different neighbourhoods and communities basic needs are met through cost effective investment, and they feel valued and proud to live here.	Provides safe, reliable drinking water to protect public health.
A vibrant, safe city which meets our people's diverse cultural needs.	Provides reliable water supply and sufficient flow and pressure for firefighting.
A future focused economy delivered through innovation and partnership and supported by appropriate infrastructure.	Provides infrastructure capacity to support development and economic activity.
A healthy, resilient environment supporting a healthy, resilient community.	Manages water resources efficiently and improves the resilience of the water supply.

Delivery of these outcomes requires the WSBU to balance service reliability, resilience, regulatory compliance, environmental outcomes and affordability when making long-term asset management and investment decisions. These considerations are reflected throughout this AMP through the levels of service, risk management, lifecycle management and investment planning frameworks.

The 2024/25 Residents Survey identified water services as one of ICC's highest priority services. This reinforces the importance customers place on drinking water quality, service reliability, responsiveness and long-term resilience. The WSBU must balance these expectations with affordability considerations, statutory obligations and prudent stewardship of water supply assets when determining future investment priorities.

2.2 Strategic Issues

The key strategic issues and challenges facing the Invercargill City Council are:

- Meeting the changing needs of our rangatahi as part of our wider community.
- Meeting and preparing for the changing needs of our wider community that is growing older and more diverse.
- Delivering financially sustainable and affordable investment in the core infrastructure the city needs to thrive, innovate and grow.

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- Building resilience and preparedness as we navigate through increasingly complex environmental challenges including climate change, land contamination and earthquake risks and other natural hazards.
- Investing in partnerships and new ways of working to achieve more together.
- Ensuring Council leadership and delivery is credible and effective, building community trust and engagement and effectively navigating regulatory change.

The water supply activity faces a range of strategic challenges that will influence service delivery, risk management and investment decisions over the planning period. These challenges arise from changing regulatory requirements, ageing infrastructure, customer expectations, resilience needs and uncertainty surrounding future demand. The strategic issues outlined below are considered the most significant influences on the future management of the water supply activity.

2.2.1 Security of Supply and Resilience

Security of supply is the most significant strategic issue facing the water supply activity. The current system relies on a single source and treatment system, increasing the consequences of major supply interruptions and limiting operational flexibility during emergency events.

Improving resilience remains a key priority for the WSBU. Investment continues to focus on reducing vulnerability to service interruptions, strengthening critical infrastructure, improving emergency response capability and increasing the ability to maintain water services during unusual or extreme events. The Alternative Water Supply Project is the WSBU's primary long-term resilience initiative and is intended to reduce reliance on a single source while improving security of supply

2.2.2 Asset Condition Knowledge and Renewal Confidence

The WSBU has good visibility of the condition and performance of most treatment, storage and pumping assets through inspections, operational monitoring and maintenance activities. However, confidence in the condition of buried reticulation assets remains lower due to limited direct condition information.

This uncertainty affects renewal forecasting, risk assessments and long-term investment planning. Improving understanding of asset condition and remaining life is therefore a key asset management priority and will support more targeted, evidence-based renewal investment over time.

2.2.3 Demand Management and Future Growth

While forecast residential growth can generally be accommodated within the existing water supply system, future demand remains uncertain. Demand may vary due to population change, water use behaviour, climate conditions and economic activity.

The greatest uncertainty relates to future industrial growth within Bluff, Awarua and Ocean Beach. Significant changes in industrial demand could influence future infrastructure requirements, including source, treatment, storage and network investment. The WSBU will continue to monitor demand trends and growth assumptions to ensure investment remains appropriately timed and targeted

2.2.4 Service Coverage and Community Expectations

Customers continue to place high value on drinking water quality, reliability, responsiveness and resilience. The 2024/25 Residents Survey identified water services as one of ICC's highest priority services, reinforcing the importance of maintaining customer confidence and service reliability.

The WSBU must balance customer expectations with affordability, regulatory obligations and prudent asset stewardship. Future decisions regarding service extensions, service levels and investment priorities will need to consider community outcomes alongside longer term financial sustainability.

2.2.5 Deliverability and Affordability

The scale of future investment required across water services is increasing due to resilience initiatives, renewals, regulatory compliance and service expectations. At the same time, programme delivery is influenced by organisational capacity, contractor availability, market constraints and affordability considerations.

The WSBU must balance service outcomes, risk reduction and affordability when prioritising expenditure. Investment programmes must remain achievable and aligned with available delivery capacity while continuing to address the highest service and infrastructure risks.

2.2.6 Regulatory Change

The water services sector is undergoing significant regulatory change, including reforms relating to drinking water regulation, economic regulation and long-term water services planning. These reforms are increasing expectations regarding public health protection, transparency, accountability and financial sustainability.

Maintaining compliance with changing regulatory requirements will remain a key driver of operational activities, asset management practices and future investment decisions throughout the planning period.

2.2.7 Climate Resilience and Environment Change

Climate change has the potential to affect water demand, source reliability, asset performance and emergency response requirements over the long term. Increased frequency and severity of droughts, flooding and extreme weather events may create additional challenges for the delivery of water supply services.

While climate related risks have been considered through a range of planning and risk management processes, a detailed climate risk assessment has not yet been completed for the water supply activity. Improving understanding of climate vulnerabilities and adaptation requirements remains a priority for future asset management planning.

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Asset Management Plan
2 Strategic and Regulatory Context

Table 2-2: Translation of Strategic Drivers to the Water Supply Activity

SAMP Strategic Driver	What this means for Water Supply	AMP Response
Asset Condition and Renewals - Looking After Existing Infrastructure	• Average network age is approximately 56 years. • Limited condition information exists for buried assets. • Renewal decisions cannot rely on age alone. • The WSBU needs to improve evidence quality while prioritising critical assets and highest consequence failures.	• Improve buried asset condition knowledge. • Develop pipe condition assessment programme. • Prioritise renewals using condition, criticality, risk and performance. • Align renewal planning with critical asset framework.
Compliance and Environment - Protecting People and the Environment	• Compliance with drinking water regulations remains non-negotiable. • Protection of source water quality and consent compliance are key obligations. • Future regulatory change may drive further treatment, monitoring and reporting requirements.	• Maintain compliance with Drinking Water Quality Assurance Rules. • Maintain source water and treatment plant performance. • Monitor emerging Taumata Arowai and Commerce Commission requirements. • Include compliance considerations in investment prioritisation.
Growth and Demand- Supporting Change in the Right Places	• Residential growth is expected to remain modest. • Existing network capacity is generally sufficient. • The greatest uncertainty is industrial growth, particularly around Bluff, Awarua and Ocean Beach.	• Focus investment on monitoring demand rather than major growth infrastructure. • Maintain flexibility to respond to industrial development. • Consider future network extensions and servicing decisions through business case processes.
Climate Change and Resilience - Preparing for Disruption and Uncertainty	• Increased risk to source water reliability. • Potential flooding of critical treatment, storage and pumping infrastructure. • Increased service disruption from extreme events. • Greater uncertainty regarding future demand patterns.	• Alternative Water Supply Project. • Critical asset resilience improvements. • Climate risk assessment programme. • Integration of climate considerations into future renewals.
Financial Sustainability and Affordability - Balancing Risk, Benefits and Cost	• Significant investment is required for resilience, renewals and compliance. • Customer affordability must remain a consideration. • Not all desirable improvements can be delivered immediately.	• Risk-based prioritisation of expenditure. • Staged implementation of major projects. • Consideration of whole-of-life cost. • Balancing service, risk and affordability when selecting interventions.
Capability and Capacity - Building the People, Knowledge and Systems We Need	• Asset management maturity is still developing. • Better condition, risk and asset information is required. • Delivery relies on both internal staff and specialist providers.	• Improve asset information systems. • Develop pipe condition programme. • Strengthen planning capability.

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Asset Management Plan
2 Strategic and Regulatory Context

SAMP Strategic Driver	What this means for Water Supply	AMP Response
		• Reduce reliance on key personnel.
Deliverability - Turning Plans into Achievable Programmes	• Capital delivery capacity is constrained. • Contractor availability and market conditions affect programme timing. • Investment programmes must be realistic and achievable.	• Rephase programmes where necessary. • Consider delivery constraints in investment planning. • Balance urgency with practical delivery capability
Uncertainty of Industrial and Residential Growth - Preparing for Growth Without Overinvesting	• Future industrial demand is the largest planning uncertainty. • Future requirements in Bluff and Awarua could materially change demand forecasts. • Premature investment could create affordability issues.	• Maintain adaptable planning assumptions. • Use trigger-based investment decision making. • Continue monitoring major users and development proposals.

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The strategic drivers identified in the SAMP provide the context for the management of the Water Supply activity. These drivers influence levels of service, demand forecasting, risk management, lifecycle planning, investment prioritisation and the improvement initiatives described throughout this AMP. The Water Supply AMP applies these strategic drivers to the specific challenges, opportunities and asset management requirements of the water supply network.

2.3 Regulatory and Legislative Context

The WSBU operates within a comprehensive legislative and regulatory framework that governs the delivery of drinking water services. These requirements establish obligations relating to public health, drinking water quality, environmental management, emergency preparedness, service performance, financial sustainability and infrastructure planning.

The primary regulatory agencies relevant to the water supply activity are:

- **Taumata Arowai** - regulates drinking water safety and monitors compliance with drinking water quality requirements.
- **Commerce Commission** -regulates water services through Information Disclosure (ID) requirements and performance transparency.
- **Environment Southland** -regulates water abstraction and environmental effects through resource consent processes.

Compliance with legislative and regulatory obligations is a core requirement of the water supply activity and is reflected throughout this AMP through levels of service, risk management, lifecycle planning and investment decision making

Table 2-3: Key legislation and regulation

Legislation / Regulation Requirements	Relevance to Water Supply
Water Services Act 2021	Establishes drinking water safety obligations, including drinking water safety planning, incident reporting, supplier responsibilities, and compliance with drinking water quality requirements.
Taumata Arowai Act 2020	Establishes the drinking water regulator and provides for regulatory oversight, monitoring, compliance, enforcement, and public health protection.
Local Government Act 2002	Establishes local government planning, financial-management and accountability requirements relevant to the provision and long term management of water infrastructure.
Local Government (Water Services) Act 2025	Establishes Local Water Done Well requirements, including preparation of Water Services Strategies, annual budgets and annual reports. Requires water service providers to demonstrate how services will be delivered, provide transparency regarding investment and costs, support long-term financial sustainability, and enable accountability through public reporting and performance monitoring.
Commerce Act 1986 *(Water Services Information Disclosure Determination 2026)*	Establishes the economic regulation framework for water services and requires disclosure of financial, asset management, operational, investment, risk, and service performance information to improve transparency, accountability, and regulatory oversight.
Health and Safety at Work Act 2015	Requires management of risks to workers, contractors and the public.

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Legislation / Regulation Requirements	Relevance to Water Supply
Civil Defence Emergency Management Act 2002	Requires emergency preparedness, business continuity planning, and resilience measures to support continued delivery and restoration of essential water services during emergencies.
Resource Management Act 1991 and successor legislation	Regulates water takes, discharges, environmental effects, land use, and consenting requirements for water supply infrastructure. Requires protection of water resources, management of environmental effects and natural hazards, and compliance with planning and environmental requirements.
Natural Environment Act 2026	Establishes the future framework for managing natural resources and environmental effects, including restrictions and permitting requirements for water abstraction, discharges, riverbeds and land use. It also provides for environmental limits, natural environment plans and consideration of activities affecting drinking water source water.
Planning Act 2026	Establishes the future framework for regional spatial planning, land use planning, infrastructure designations and planning consents. It will influence the location, development, protection and consenting of water supply infrastructure and the alignment of infrastructure with future growth.
Drinking Water Standards Regulations 2022, Drinking Water Quality Assurance Rules 2022, and Acceptable Solutions and Aesthetic Values	Establish the technical and operational requirements that ICC must meet to demonstrate drinking water safety and compliance. Prescribe treatment, monitoring, operational, reporting and competency requirements, and provide recognised compliance pathways and guidance for consumer acceptability, including water taste, odour, appearance, and clarity.
National Policy Statement on Urban Development 2020 (NPS-UD)	ICC is a Tier 3 local authority. The NPS-UD informs growth forecasts and the alignment of infrastructure planning with future development.
Hazardous Substances and New Organisms Act 1996 and Health and Safety at Work (Hazardous Substances) Regulations 2017	Regulate the approval, use, storage, handling and disposal of hazardous substances, including protection of workers, the public and the environment. The Branxholme Water Treatment Plant uses lime, polyaluminium chloride (PACl), polyelectrolyte, hydrogen peroxide, chlorine and fluoride in its treatment processes.
Southland Water and Land Plan (partially operative)	Sets regional objectives, policies and rules for water takes and discharges to water and land, including requirements relevant to the Ōreti River abstraction and Branxholme Water Treatment Plant discharges.

2.4 Resource Consents and Compliance Obligations

The delivery of water supply services depends on resource consents that authorise water abstraction and treatment plant discharge activities. These consents establish the conditions under which water can be taken, treated and supplied to customers and are a key dependency for the ongoing provision of drinking water services.

Source water quality and availability are managed through resource consent conditions, catchment monitoring, the Source Water Risk Management Plan and the Drinking Water Safety Plan. Together, these arrangements support the WSBU's obligations to provide safe and reliable drinking water services.

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Table 2-4: Summary of key resource consents related to the Water Supply Activity.

Consent	Description	Expiry
AUTH-99139-V1	Water permit authorising abstraction from the Ōreti River at Branxholme for town supply, up to 47,200 m³/day and 546 L/s, subject to river flow limits, low-flow water conservation measures, and abstraction monitoring and reporting requirements.	10 June 2038
AUTH-94556-V1	Discharge consent associated with the residuals or waste stream from the Branxholme Water Treatment Plant (WTP).	9 May 2038
Awarua Water Source Development	Potential future consents for the take and use of water from a new groundwater source at Awarua, together with any associated discharge or infrastructure-related approvals required to support development of the source.	Resource consents to be sought if Council proceeds with development.

The Ōreti River water take consent (AUTH-99139-V1) is a critical dependency for the water supply activity. The consent authorises abstraction of up to 47,200 m³/day from the Ōreti River and includes flow-based restrictions, monitoring requirements and water conservation measures that apply during low-flow conditions.

Future renewal, amendment or replacement of water supply consents may influence source water availability, operational practices and future investment requirements. The proposed Awarua groundwater source will require new consents if development proceeds.

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3 Consumers Groups and Levels of Service

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C7 and C10
This chapter should demonstrate	Consumer groups and impacts, expectations, satisfaction, complaints, connection practices, indicators and ten-year targets.

3.1 Consumer and Service Baseline

3.1.1 Service Area

The WSBU provides reticulated drinking water services to the urban areas of Invercargill and Bluff. The adopted FY2024/25 planning baseline includes approximately 48,561 serviced residents, 21,094 residential connections and 1,553 non-residential connections. By FY2036/37, the serviced population equivalents is forecast to increase to approximately 51,555, with residential and non-residential connections increasing to 22,395 and 1,649 respectively. Water supply services are not currently provided to Ōtātara and Kennington.

3.1.2 Current and Forecast Consumers

Measure	FY2024/25	FY2036/37	Change
Serviced Population Equivalent	48,561	51,555	+2,994
Residential connections	21,094	22,395	+1,301
Non-residential connections	1,553	1,649	+96

3.1.3 Consumer Groups and Service Requirements

Consumer Group	Service Requirement
Residential customers	Safe, reliable and affordable drinking water
Commercial and industrial customers	Reliable supply, adequate pressure and business continuity
Major industrial water users	Reliable supply to support continuous industrial operations and economic activity.
Critical customers (hospital, schools, emergency services etc.)	High reliability and emergency response capability
Future customers	Capacity available to accommodate growth
Mana whenua and community stakeholders	Sustainable management of water resources

3.2 Customer Expectations and Engagement

ICC and the WSBU use resident surveys, customer requests, complaints data, consultation processes and stakeholder engagement to understand customer expectations and service priorities.

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These engagement channels provide insight into customer expectations for drinking water quality, service reliability, resilience, affordability and responsiveness. Customer feedback is used to inform levels of service, risk management and investment planning.

3.3 Levels of Service Framework

Levels of Service (LoS) define the outcomes the WSBU seeks to deliver through the water supply activity and provide the basis for measuring service performance. They translate customer expectations, regulatory requirements and strategic objectives into measurable service outcomes that can be monitored and reported over time.

The water supply activity exists to provide safe, reliable and sustainable drinking water services to customers within the serviced area. LoS establish a clear and consistent framework for measuring whether these outcomes are being achieved.

The LoS framework, Table 3-1, has been informed by customer feedback, resident surveys, service requests, regulatory requirements and ICC's planning processes. It enables the WSBU to monitor performance, identify areas for improvement and demonstrate accountability to customers, Council and regulators.

Table 3-1: Levels of Service Framework

Outcome	Indicator / Evidence	Working target / status
Safe drinking water / Public Health	Compliance with Drinking Water Quality Assurance Rules	100% compliance
Efficient and sustainable water supply	Real water loss from the network	Less than 30%
Responsible use	Average consumption per resident	Less than 300 L/person/day
Responsive customer service	Attendance and resolution of urgent and non-urgent call outs	Achieve adopted response time targets
Consumer confidence and satisfaction	Water quality, pressure, continuity of supply and service complaints	Less than 10 complaints per 1,000 connections

Table 3-2: Impact to Consumer Groups if level of service is not achieved

Consumer Group	Service Impact if Level of Service Not Achieved
Residential customers	Loss of access to safe drinking water, reduced pressure or supply interruptions, public health impacts and inconvenience.
Commercial and industrial customers	Business interruption, production losses, reduced firefighting capability and economic impacts.
Critical customers (hospital, schools, emergency services)	Disruption to essential services and reduced emergency response capability.
Future customers and developers	Constraints on growth, development delays and increased service costs.
Mana whenua and community stakeholders	Reduced confidence in service delivery, resource management and long-term stewardship of water services.

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3.3.1 Levels of Service Hierarchy (Framework)

ICC and the WSBU use a hierarchy of service measures to provide a line of sight between community outcomes, customer expectations, operational performance and regulatory compliance. This framework ensures service performance is measured at both a customer and operational level.

The hierarchy consists of:

- **Community Outcomes** –longer term outcomes sought through the delivery of water supply services, including public health, reliability, resilience and the sustainable management of water resources.
- **Customer Levels of Service** – the service outcomes experienced by consumers, such as safe drinking water, continuity of supply and timely response to service requests.
- **Technical Levels of Service** – operational and engineering measures used to monitor the performance, reliability and efficiency of the water supply system.
- **Regulatory Measures –** performance measures prescribed through legislation, regulation and industry reporting requirements, including drinking water compliance (administered by Taumata Arowai) and mandatory performance measures administered by the Department of Internal Affairs (DIA).

Together, these measures provide a framework for monitoring performance, identifying service gaps and demonstrating achievement of customer, community and regulatory outcomes.

3.3.2 Levels of Service – Performance Measures and Targets

The WSBU monitors performance against a combination of mandatory regulatory measures and locally adopted service measures. Collectively these measures provide evidence that the activity is delivering safe, reliable and sustainable drinking water services and achieving the outcomes established through the WSS. 2 summarises the performance indicators, the associated targets, and how these support customer expectations as well as Water Services Strategy and community outcomes.

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Asset Management Plan
3 Consumers Groups and Levels of Service

Table 3-3: Levels of Service – Performance Indicators and Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
1.1a-1.1j	The extent to which the local authority's drinking water supply complies with the following parts of the drinking water quality assurance rules: (a) 4.4 T1 Treatment Rules; (b) 4.5 D1.1 Distribution System Rule; (c) 4.7.1 T2 Treatment Monitoring Rules; (d) 4.7.2 T2 Filtration Rules; (e) 4.7.3 T2 UV Rules; (f) 4.7.4 T2 Chlorine Rules; (g) 4.8 D2.1 Distribution System Rule; (h) 4.10.1 T3 Bacterial Rules; (i) 4.10.2 T3 Protozoal Rules; and (j) 4.11.5 D3.29 Microbiological Monitoring Rule	100% compliance	Drinking Water Quality Assurance Rules / regulatory compliance	Safe drinking water	Safe drinking water / public health
2.1	The percentage of real water loss from the Council's networked reticulation system. (Calculated according to the methodology outlined in Water NZ Water Loss Guidelines publication)	<30%	Water NZ Water Loss Guidelines/existing ICC target	Efficient and sustainable use of water	Sustainable and efficient water services
2.2	The average consumption of drinking water per day per resident within the Invercargill City Council territorial district	<300 L/person/day	Existing ICC target / demand management	Responsible water use and affordability	Efficient use of resources
3.1	The median response time for **urgent** callouts, (from the time the Council receives notification to the time that service personnel reach the site)	≤4 hours	Existing service response target	Responsive service during faults	Reliable and responsive service
3.2	The median time to resolve **urgent** callouts (from the time the Council receives notification to the time that service personnel confirm resolution of the fault or interruption)	≤24 hours	Existing service response target	Timely restoration of service	Reliable water supply
3.3	Attendance for **non-urgent** call-outs: from the time that council receives notification to the time that service personnel reach the site	≤5 working days	Existing service response target	Timely response to non-urgent issues	Responsive customer service
3.4	Resolution of **non-urgent** call-outs: from the time that the council receives notification to the time that service personnel confirm resolution of the fault or interruption	≤10 working days	Existing service response target	Timely resolution of non-urgent issues	Responsive customer service

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Asset Management Plan
3 Consumers Groups and Levels of Service

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
3.5	The total number of complaints received by Council per 1,000 connections about any of the following: -(a) Drinking water clarity -(b) Drinking water taste -(c) Drinking water odour -(d) Drinking water pressure or flow -(e) Continuity of supply -(f) Council's response to any of these issues	<10 total	Existing ICC target / mandatory customer satisfaction measure	Acceptable water quality, pressure, continuity and responsiveness	Customer confidence and service reliability

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3.4 Current Performance

The WSBU monitors performance against a range of customer, operational and regulatory measures to assess whether agreed levels of service are being achieved. Performance results indicate that the water supply activity is generally meeting its established service targets.

Drinking water quality compliance has been maintained, response and resolution time targets are being achieved, customer complaints remain low, and water loss remains below the current target threshold. Average water consumption has generally reduced over time and has remained below the WSBU's target since 2021/22. Overall, current performance indicates that the water supply system is delivering safe, reliable and compliant drinking water services. Continued focus on asset condition knowledge, water loss management and system resilience will help maintain performance and respond to future challenges

The subsections sections below discuss performance trends over the last five to six years.

3.4.1 Safe Drinking Water

Providing safe drinking water is the WSBU's highest service priority. Compliance with the Drinking Water Quality Assurance Rules demonstrates that the water supply system is achieving its primary objective of delivering safe drinking water to consumers.

Compliance has been maintained throughout the reporting period, indicating that treatment processes, operational controls and network management practices are effectively managing public health risks. Maintaining compliance remains a core operational and regulatory focus for the WSBU.

3.4.2 Water Loss

Water loss has remained below the WSBU's target throughout the reporting period, indicating that the network is performing within the expected level of service. While annual results vary, current performance reflects the effectiveness of leakage management, maintenance activities and renewal programmes.

Ongoing monitoring of water loss supports efficient use of water resources and helps identify opportunities to improve network performances.

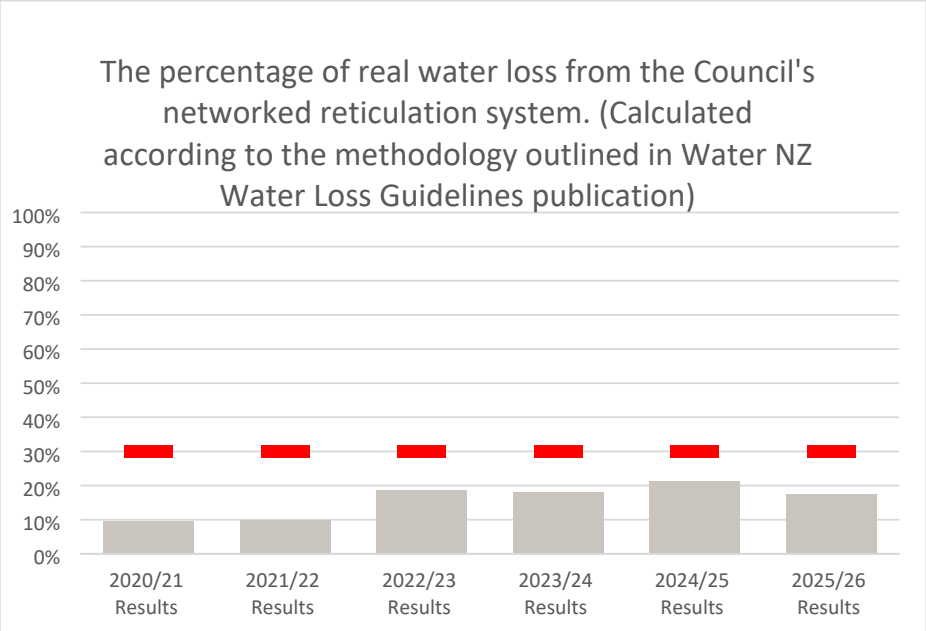


Figure 3-1: Real Water Loss from the Water Supply Network

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3.4.3 Average Consumption

Average water consumption has remained below the WSBU's target in recent years and has generally reduced over time. This trend reflects more efficient use of water and supports the sustainable management of available water resources.

Managing demand helps reduce pressure on water supply infrastructure and supports long-term water supply resilience.

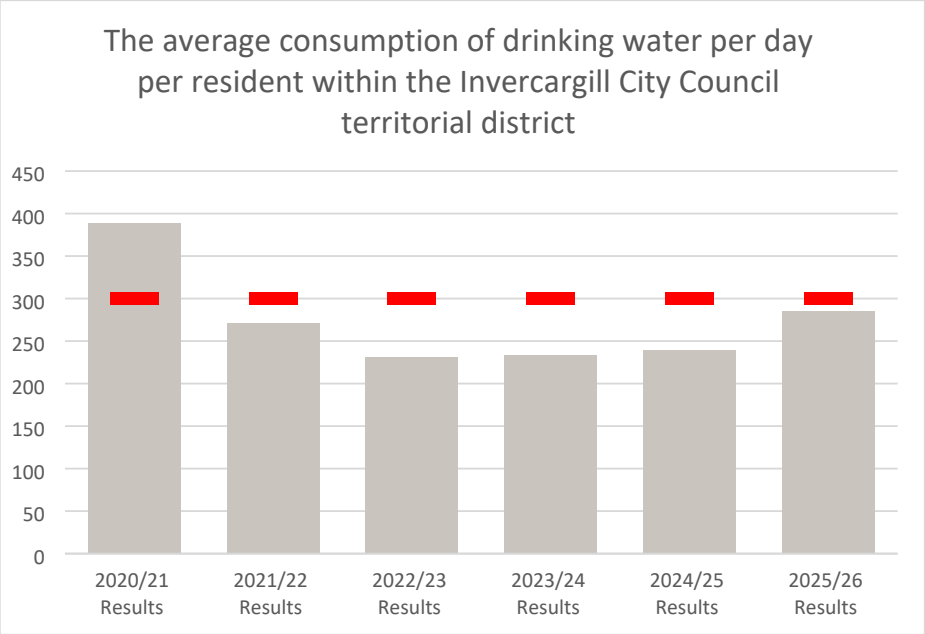


Figure 3-2: Average Daily Drinking Water Consumption per Resident

3.4.4 Urgent Attendance

Urgent callout attendance times have consistently met the target response levels throughout the reporting period. This demonstrates the WSBU's ability to respond promptly to service interruptions, faults and other urgent operational events. Timely attendance helps reduce customer impacts and supports reliable service delivery.

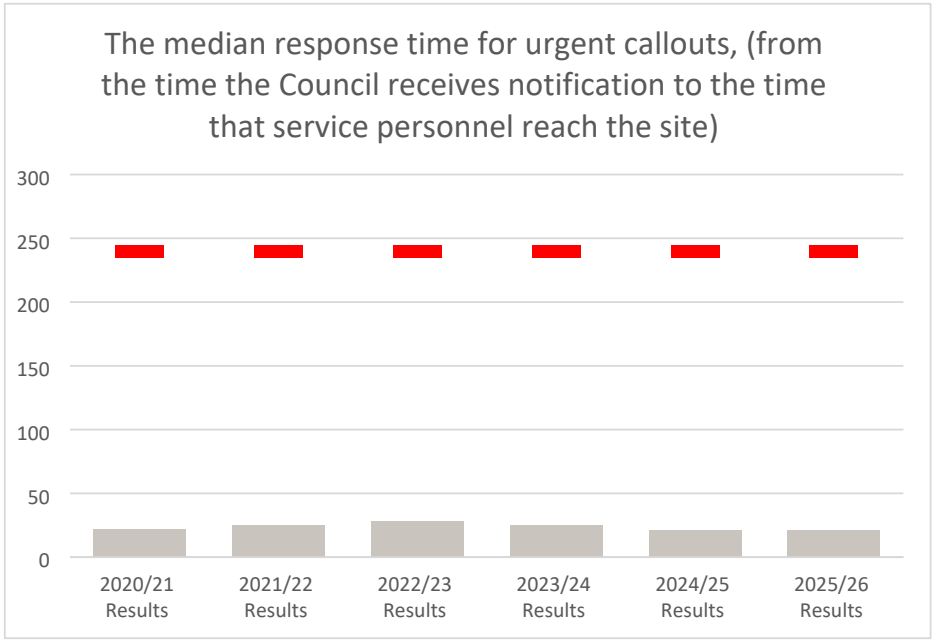


Figure 3-3: Median Response Time for Urgent Water Supply Callouts

3.4.5 Urgent Resolution

Urgent fault resolution times have consistently remained within target levels. Performance indicates that urgent interruptions and network faults are generally being resolved quickly, minimising disruption to customers and maintaining service reliability.

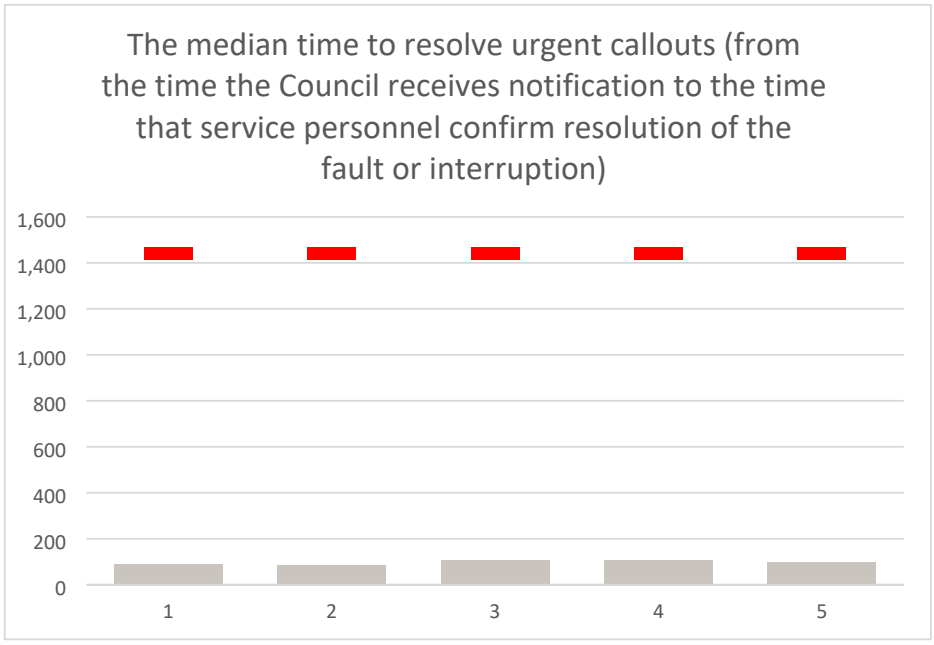


Figure 3-4: Median Resolution Time for Urgent Water Supply Callouts

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3.4.6 Non-Urgent Attendance

Non-urgent attendance times have improved over the reporting period and remain within target levels. This indicates routine customer requests and operational issues are being managed effectively and within expected response timeframes.

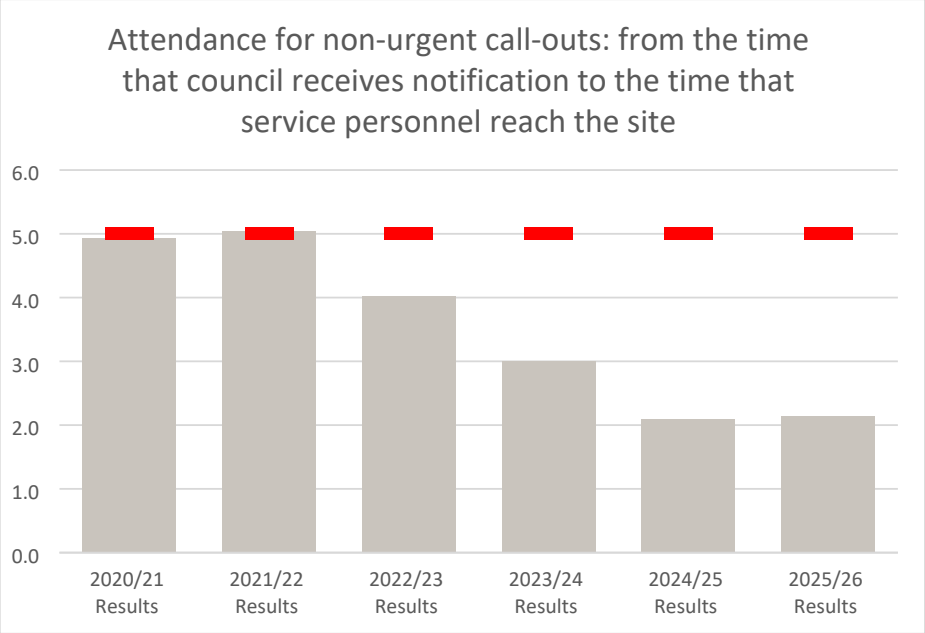


Figure 3-5: Median Response Time for Non-Urgent Water Supply Callouts

3.4.7 Non-Urgent Resolution

Non-urgent resolution times have consistently remained within target levels. Performance indicates that routine maintenance and customer service requests are being addressed efficiently and in accordance with agreed service standards.

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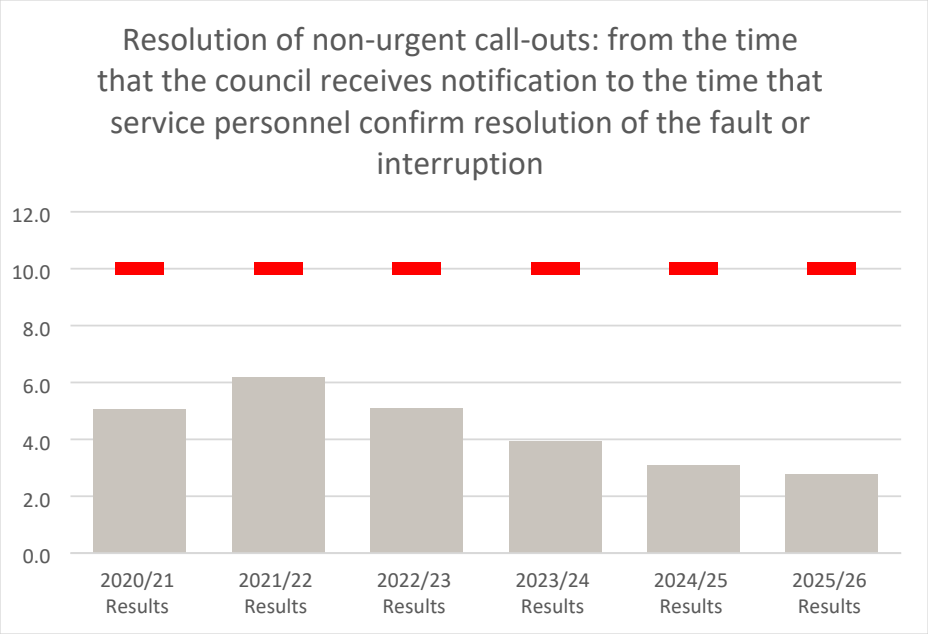


Figure 3-6: Median Resolution Time for Non-Urgent Water Supply Callouts

3.4.8 Customer Satisfaction

Customer complaints have remained below the current target throughout the reporting period. This indicates that customers are generally satisfied with water quality, pressure, continuity of supply and service responsiveness. Complaint trends continue to be monitored by the WSBU as an indicator of service performance and emerging customer concerns.

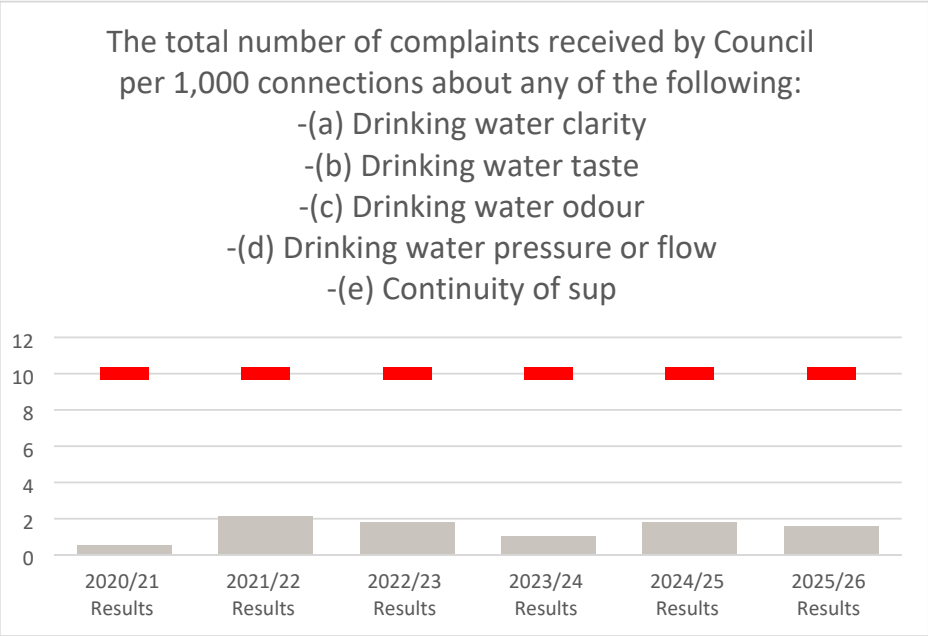


Figure 3-7: Water Supply Customer Complaints per 1,000 Connections

Customer complaints relating to water quality, continuity of supply, pressure, flow and responsiveness have remained within the established performance target throughout the reporting period. Complaint information is reviewed alongside service requests and operational performance data to identify recurring issues, emerging risks and opportunities for service improvement.

3.5 Future Levels of Service

The WSBU does not currently propose any changes to the water supply levels of service, performance measures or targets. The existing framework is considered appropriate for monitoring service performance, demonstrating compliance and reflecting current customer expectations.

Levels of service will continue to be reviewed through the Water Services Strategy, AMP reviews, annual performance reporting and customer engagement activities. Future changes may be influenced by regulatory reform, changing customer expectations, growth, resilience requirements, climate-related risks or improvements in asset and service performance information.

Any approved changes will be incorporated into future updates of the WSS, AMP and IDP to maintain alignment across the water services planning framework.

3.6 Complaints and Requests

The WSBU monitors customer requests, service enquiries and complaints through Council's customer service systems. Customer feedback provides an important source of information about service performance, consumer expectations and emerging operational issues.

Complaint and request information is regularly reviewed to:

- Identify recurring service issues and trends
- Monitor performance against established levels of service
- Identify potential asset performance or condition issues
- Prioritise operational and maintenance responses
- Inform future renewal, resilience and improvement planning

Customer requests and complaints are considered alongside operational performance data, asset condition information, risk assessments, and regulatory requirements when determining future investment priorities.

Although complaint levels remain low relative to current targets, ongoing monitoring of customer feedback remains important for understanding customer experiences and maintaining service performance.

3.7 Links to the Investment Delivery Plan

The Levels of Service (LoS) framework provides a direct link between customer expectations, service performance and investment planning. Performance against agreed service levels is monitored to identify service gaps, emerging risks and opportunities for improvement. Where current or forecast performance is not expected to achieve agreed service levels, the WSBU will consider an appropriate operational or capital investment response through the IDP.

Investment associated with Levels of Service is generally directed towards one or more of the following drivers:

- Maintaining existing levels of service.
- Improving resilience and risk management.
- Meeting regulatory requirements.
- Supporting growth and future demand.
- Enhancing customer outcomes.
- Improving environmental performance and operational efficiency.

Significant projects currently expected to contribute to service level outcomes include:

- Alternative Water Supply Project.
- Water metering and network intelligence initiatives.
- Reticulation extensions to currently unserved communities.
- Capacity improvements associated with future growth and industrial demand.
- Critical asset resilience improvements.

This approach provides a clear line of sight between customer expectations, service performance, identified needs and future investment decisions.

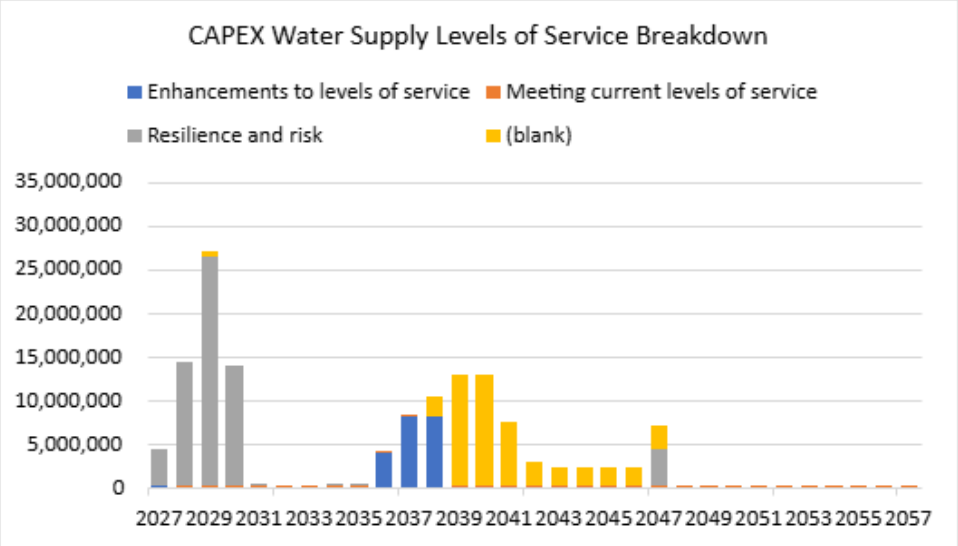


Figure 3-8: Capital Expenditure by Level of Service Breakdown

SECTION 2: DRAFTING GAP / ICC CONFIRMATION REQUIRED

- *Confirm alignment with IDP – once Capital Works programme lands*

4 Asset Portfolio, Condition and Performance

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C8 and C13
This chapter should demonstrate	Portfolio, maps, critical assets, condition, capacity, performance and asset statistics.

4.1 System/Network Overview

The water supply system provides treated drinking water services to residential, commercial, industrial and community consumers in Invercargill and Bluff. Water is abstracted from the Ōreti River, treated at the Branxholme Water Treatment Plant (WTP), and conveyed through a network of transmission mains, reservoirs, pump stations, reticulation assets, valves, hydrants, service connections and monitoring systems before being delivered to customers.

The water supply system has sufficient capacity to meet current demand and forecast residential growth. Future investment is primarily focused on maintaining service reliability, improving resilience, managing asset condition and meeting regulatory requirements.

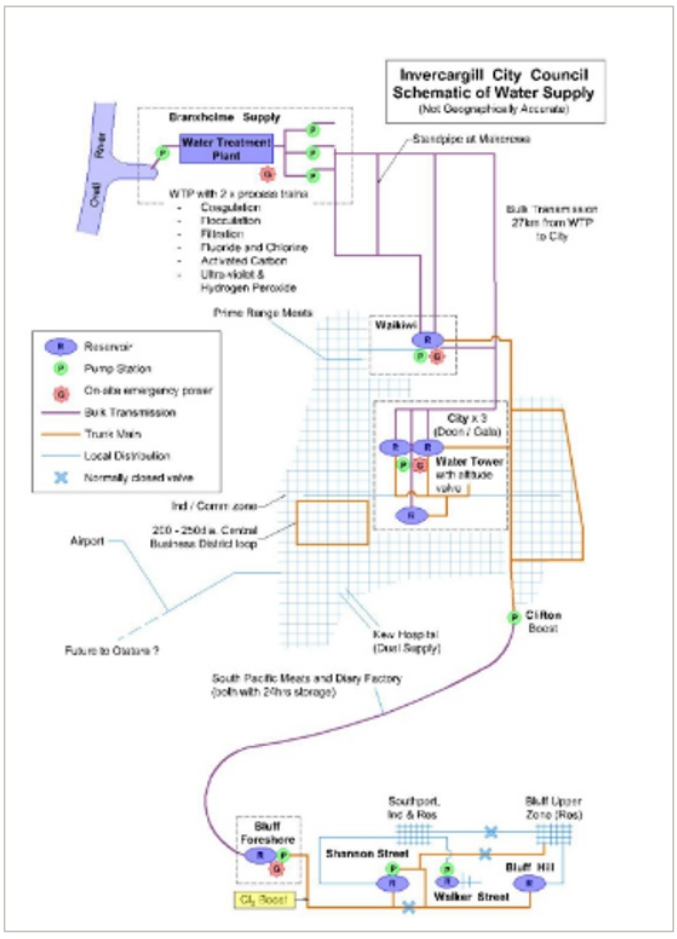


Figure 4-1: Schematic of the water supply network

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4.2 Asset Categories and Description

The Water supply asset portfolio has been grouped into asset categories that align with the Water Services Information Disclosure asset categories including:

- Raw water assets
- Water treatment facilities
- Treated water storage
- Treated water pump stations
- Treated water reticulation assets
- Water monitoring and control

These categories are used throughout this AMP to describe the asset portfolio, assess performance and condition, identify renewal needs and plan future investment.

Table 4-1: Asset Portfolio Summary

Asset Group	Primary Function	Quantity	Average Age
Raw Water Assets	Abstract and transport raw water from the Ōreti River.	1	N/A
Water Treatment Facilities	Treats raw water to meet drinking water quality requirements.	1	57 years
Treated Water Storage	Provide operational storage, balancing, and emergency supply capacity.	10	51 years
Treated Water Pump Stations	Maintain network pressure and transfer water throughout the system.	6	To be confirmed
Treated Water Reticulation Assets	Convey and distribute treated water throughout the Invercargill and Bluff networks. Includes transmission, supply, reticulation and rider mains.	422 km	56 years
Valves	Support network operation, maintenance and isolation.	3,036	54 years
Hydrants	Support firefighting and network operations.	3,075	59 years
Service Connections	Connect consumers to the reticulation network.	20,796	Approx. 13 years*
Water Monitoring and Control	Support operational monitoring, control and system management.	N/A	Predominantly installed since 2017
Water Meters	Measure and record water consumption and network flows to support billing, demand management, water loss monitoring and network performance assessment.	1,483	Approx. 19 years

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Note: Valve quantities exclude backflow prevention devices and toby valves and represent reticulation network valves only. Service connection age should be treated with caution, as installation date records are more complete for newer connections than older assets.

The treated water reticulation network comprises approximately 422 km of pipeline and includes transmission mains, supply mains, reticulation mains, rider mains and service connections. The network conveys treated water from the Branxholme WTP to reservoir storage and distributes it throughout Invercargill and Bluff.

4.2.1 Raw Water Assets

Raw water is abstracted from the Ōreti River at Branxholme through an inlet channel located approximately 100 metres from the river. Four raw-water pumps transfer water from the intake to the clarification process at the Branxholme WTP, where lime is added as part of the initial treatment process. The source-water asset category comprises the river intake, inlet channel, raw-water pumping equipment, associated headworks and the infrastructure used to convey raw water into the treatment process. These assets provide the sole existing raw-water supply pathway for the Invercargill and Bluff water supply system.

The Ōreti River catchment is subject to land uses and activities that may affect source-water quality, including agricultural activity, transport corridors, consented discharges and natural hazards. Source-water risks are managed through catchment surveillance, source-water monitoring, treatment barriers and the actions identified in the Source Water Risk Management Plan.

4.2.2 Water Treatment Facility

The Branxholme WTP is the sole treatment facility serving the Invercargill and Bluff. Treatment asset includes raw water transfer infrastructure, chemical storage and dosing systems, coagulation and clarification equipment, coal media filters, ultraviolet and hydrogen peroxide treatment, granular activated carbon filters, chlorination systems, treated-water storage, pumps, standby power, instrumentation, SCADA, and associated buildings and structures.

The plant uses multiple treatment barriers comprising coagulation, clarification, filtration, UV/hydrogen-peroxide treatment, granular activated carbon filtration and chlorination. Chlorine dosing at the Bluff Pump Station maintains the disinfectant residual within the Bluff distribution network.

Figure 3 below illustrates the primary treatment processes and associated residuals management streams at the Branxholme WTP.

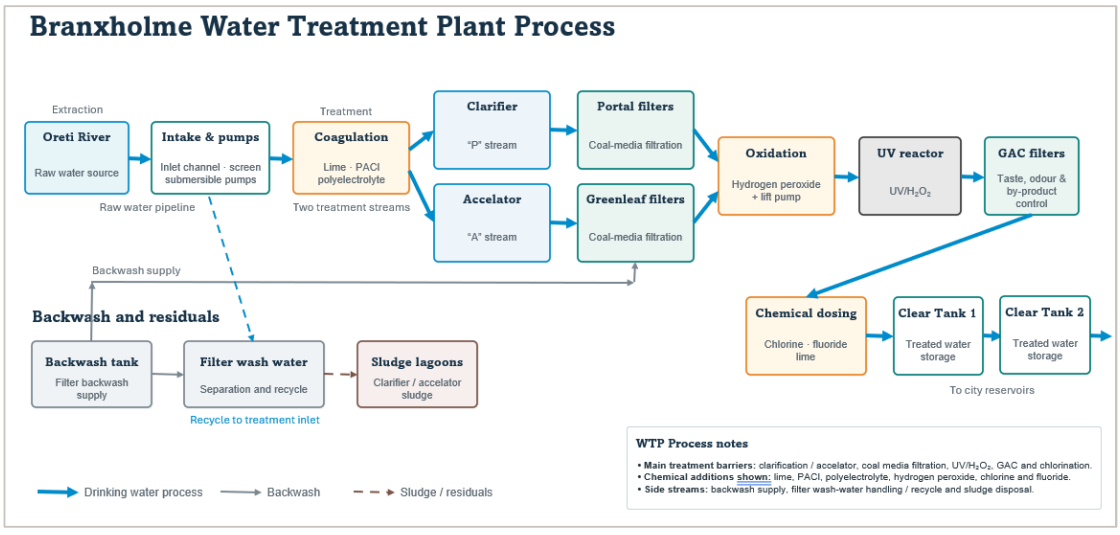


Figure 4-2: Branxholme Water Treatment Plant Processes

4.2.3 Treated Water Storage

The treated water is stored across ten reservoirs. These assets provide operational balancing storage, emergency reserve capacity and firefighting supply, while also helping to stabilise pressure within the distribution network. Storage assets includes two (2) chambers at Waikiwi, four (4) City reservoirs, and reservoirs at Bluff, Shannon Street, Walker Street and Bluff Hilltop.

The treated water storage category includes the principal storage structures and their associated inlet, outlet, overflow and scour arrangements, together with connected pipework, valves, access systems, level monitoring equipment and site structures.

4.2.4 Treated Water Pump Stations

Pump stations transfer water between Branxholme, Invercargill and Bluff, as well as maintain network pressure and support the movement of water through the transmission and distribution systems. Key pump stations include Waikiwi, (Doon Street) City, Clifton, Bluff, Shannon Street and Walker Street, together with the Pomona booster station. Most stations incorporate multiple pumps, providing operational redundancy when individual units are unavailable for maintenance or repair.

Pump station assets generally comprise the installed pumps and the mechanical, electrical and control equipment required for their operation. The precise component hierarchy for each station, including its pipework, valves, instrumentation, telemetry, switchgear, standby-power equipment and associated structures, should be confirmed against ICC's asset register and facility records before detailed component descriptions are adopted.

4.2.5 Treated Water Reticulation Assets

The treated water reticulation network conveys treated water from the Branxholme WTP to reservoir storage and distributes it to consumers throughout Invercargill and Bluff. The network is divided into bulk transmission pipelines and the interconnected distribution network within the serviced urban areas.

Transmission/supply mains convey treated water between major system components. This includes two pipelines from Branxholme to the Invercargill reservoirs and the trunk supply route from Invercargill to Bluff. Within the distribution system, supply mains are generally between 250 mm and 600 mm in diameter. They convey water in bulk between reservoirs, major distribution zones and other principal network assets.

Reticulation mains are generally between 50 mm and 200 mm in diameter. These interconnected pipelines are typically located within road corridors and distribute water at street level. Rider mains form part of the local distribution network and support property connections where connection to a larger main is not appropriate.

Property service connections are generally between 20 mm and 50 mm in diameter and extend from a reticulation or rider main to the property boundary. These connections form part of the water supply asset portfolio and provide the final network link for supplying potable water to individual properties.

The treated water reticulation category also includes valves, hydrants, fittings and other ancillary components. Valves enable flow control and network isolation for operational, maintenance and emergency purposes. Hydrants provide access to water for firefighting and network operations. Fittings connect and support the various pipeline components required to operate and maintain the network.

The Bluff distribution network is divided into upper and lower pressure zones. **Error! Reference source not found.** shows the currently mapped boundaries of these zones and provides spatial context for the operation and management of the Bluff reticulation network.

Figure 4-3 and Figure 4-4 illustrate the Invercargill and Bluff water supply systems, respectively. The Invercargill network is actively pressure managed through pump operations, typically maintaining pressures between 370 and 410 kPa. Pressure management can, however, be implemented through the Shannon Street Pump Station when required, such as during operational testing, maintenance activities, or system investigations.

The Bluff network is divided into upper and lower pressure zones, operating at approximately 730 kPa and 640 kPa respectively. Unlike Invercargill, the Bluff network is not routinely pressure managed and instead relies on reservoir head to maintain system pressures.

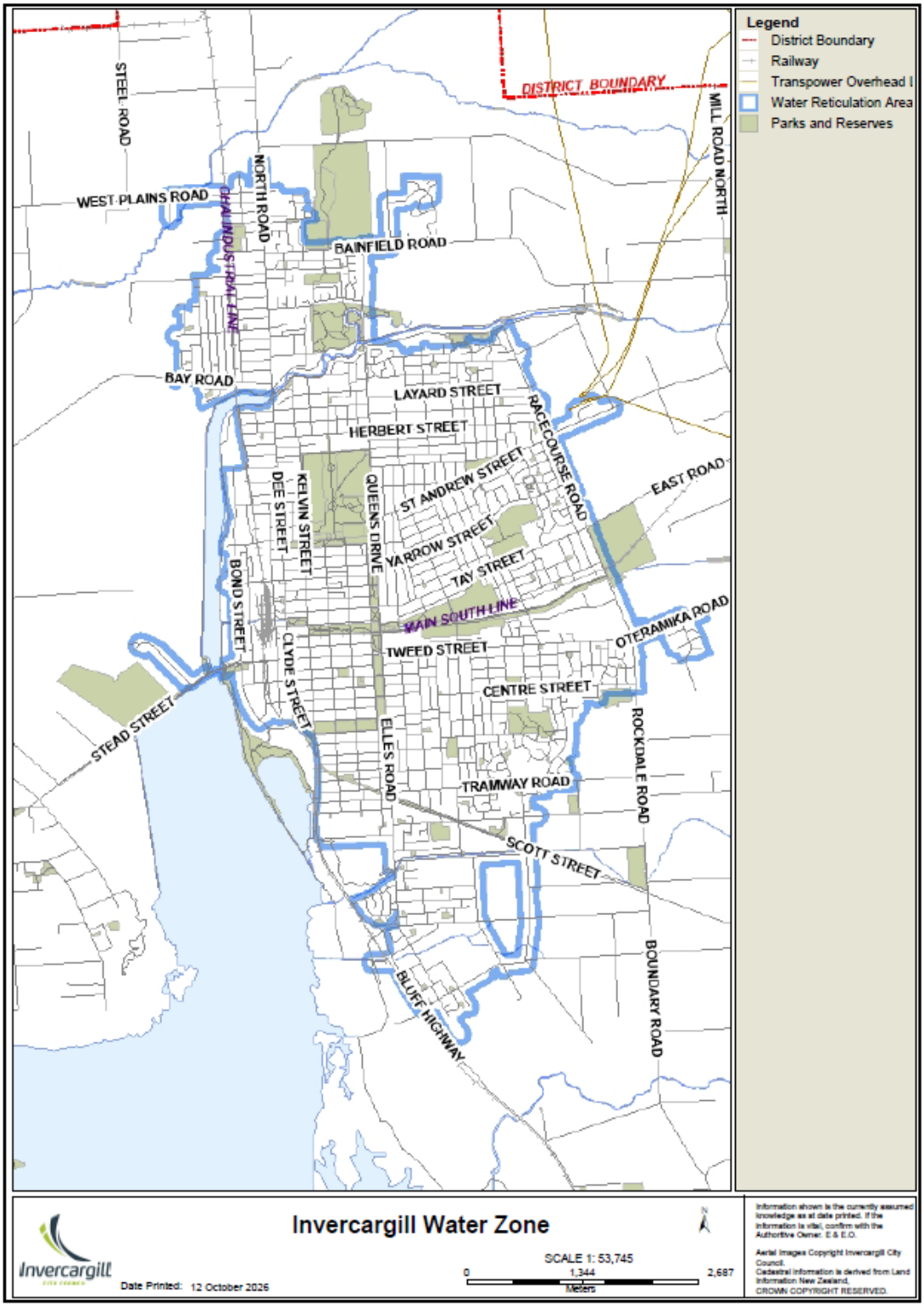


Figure 4-3: Invercargill City Water Zone Map

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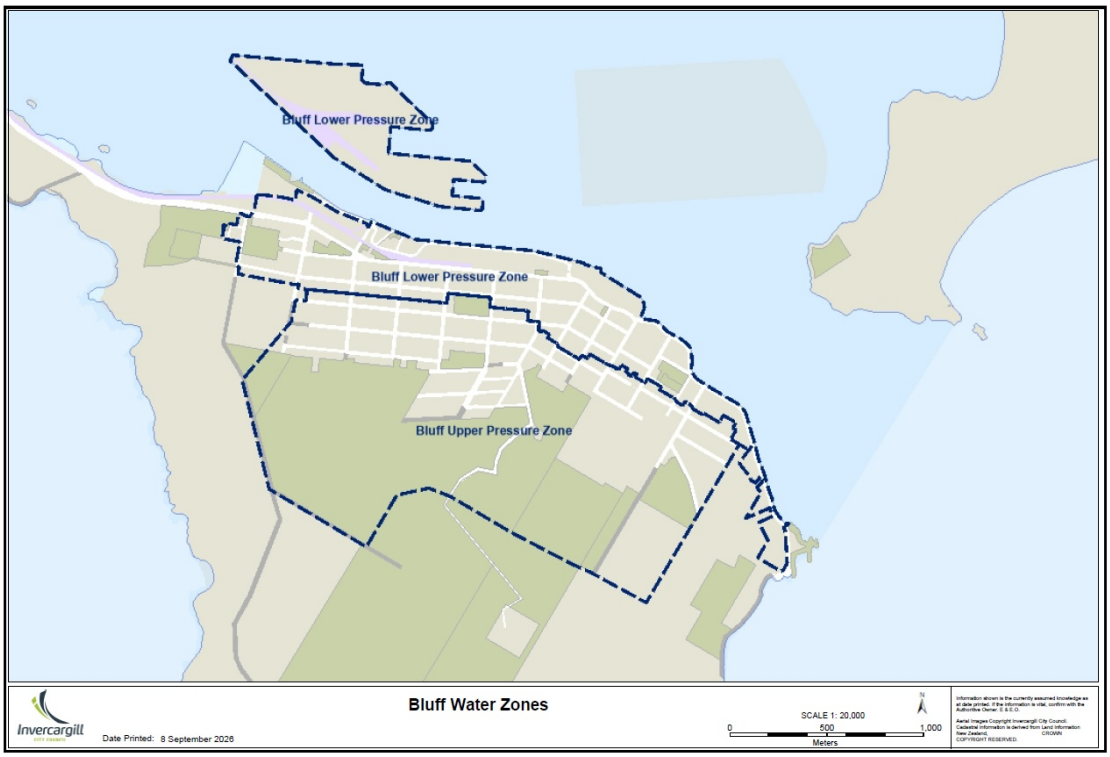


Figure 4-4: Bluff Water Pressure Zones Map

4.2.6 Monitoring and Control Systems

The water supply system is supported by Supervisory Control and Data Acquisition (SCADA) systems and associated field-monitoring and control equipment. These systems monitor treatment processes, reservoir levels, pump-station operation and selected conditions within the distribution network. They provide operators with real-time information and enable operational control of connected assets.

The monitoring and control asset category includes SCADA equipment, telemetry, communications equipment, field instrumentation, sensors, alarms and process control equipment. Relevant field devices include equipment used to monitor flow, pressure, reservoir level and water-quality parameters. The detailed classification of these components should be aligned with the WSBU's operational asset hierarchy and the configuration of the asset register.

4.2.7 Non-Network Assets

Non network assets support the management and operation of the water supply activity but do not form part of the physical water supply network. This category includes resource consents, information technology systems other than SCADA, asset management systems, office buildings, vehicles, tools and machinery.

These assets support activities such as operational management, regulatory compliance, asset information management, inspections and maintenance. Their inclusion in the asset portfolio provides visibility of the supporting resources required to manage the water supply activity, while distinguishing them from source, treatment, storage, pumping, reticulation and operational control assets.

4.3 Asset Age and Remaining Life

Asset age and remaining useful life provide an initial indication of when renewal investment may be required. The available planning information identifies an average age of approximately 56 years for the water supply network. Age information is considered alongside asset condition, performance, failure history, criticality and consequence of failure when assessing renewal needs.

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The age of an asset does not by itself, determine its condition or the timing of renewal. Assets of the same age and material can deteriorate at different rates because of variations in design, manufacture, installation, operating environment, loading, maintenance history and exposure to external hazards. Theoretical remaining life should therefore be treated as a planning indicator rather than a confirmed forecast of asset failure.

For buried pipelines, installation date, material and theoretical life provide important baseline information because direct condition evidence is limited. These records are supplemented by burst history, leakage, fault records, rehabilitation history, hydraulic importance, criticality and operational knowledge. For above-ground assets, age and remaining-life information can be considered with evidence from inspections, maintenance records and operational monitoring.

Confidence in age and remaining-life information is affected by incomplete or assumed installation dates, uncertain material records and inconsistencies in asset status and classification. The asset data also requires reconciliation to distinguish active assets from abandoned, removed, duplicated, private, proposed and hazard-related records. Until this work is completed, age and remaining-life profiles should be presented with an appropriate statement of data confidence.

Renewal forecasts should be developed for defined asset cohorts rather than by applying a single average age or standard life across the portfolio. Relevant cohorts may be based on asset category, material, installation period, location, function and operating environment. This approach allows theoretical remaining life to be assessed alongside observed performance and risk, providing a more defensible basis for long-term renewal planning. The current source material identifies this as a future planning requirement rather than an established WSBU forecasting method.

4.3.1 ` Material Profile

The water supply pipe portfolio comprises a range of materials installed during different periods of network development. Figure 4.3.1shows the distribution of the water supply network by pipe material, comprising approximately 440 km of pipe across a range of materials. Asbestos cement is the largest component at approximately 162 km, followed by cast iron at 121 km. Polyethylene and PVC account for approximately 77 km and 71 km respectively. Smaller quantities of galvanised iron, ductile iron, steel, copper and concrete are also recorded, with less than 1 km classified as unknown.

Asbestos cement and cast iron together make up 64% of the recorded pipe network. These materials are concentrated within older parts of the network and are therefore relevant to long-term renewal planning. Polyethylene and PVC reflect progressive network development and the replacement or rehabilitation of older pipes.

Material and installation date provide important baseline information, particularly because direct condition evidence for buried assets is limited. However, material and age do not, on their own, provide evidence of an asset’s physical condition or determine when it should be renewed. Pipes of the same material and age may deteriorate differently because of variations in manufacture, installation, operating environment, loading, maintenance history and exposure to external hazards.

The WSBU considers material information alongside installation date, failure and burst history, leakage, maintenance requirements, hydraulic function, location, criticality and consequence of failure. Direct condition evidence and operational knowledge are also considered where it is available. This combined approach provides a more reliable basis for prioritising investigations and renewals than standard material-life assumptions alone.

The material profile is based on current asset register records. Although the recorded quantity of unknown material is small, asset data still requires reconciliation to distinguish active pipes from abandoned, removed, duplicated, private, proposed and other records.

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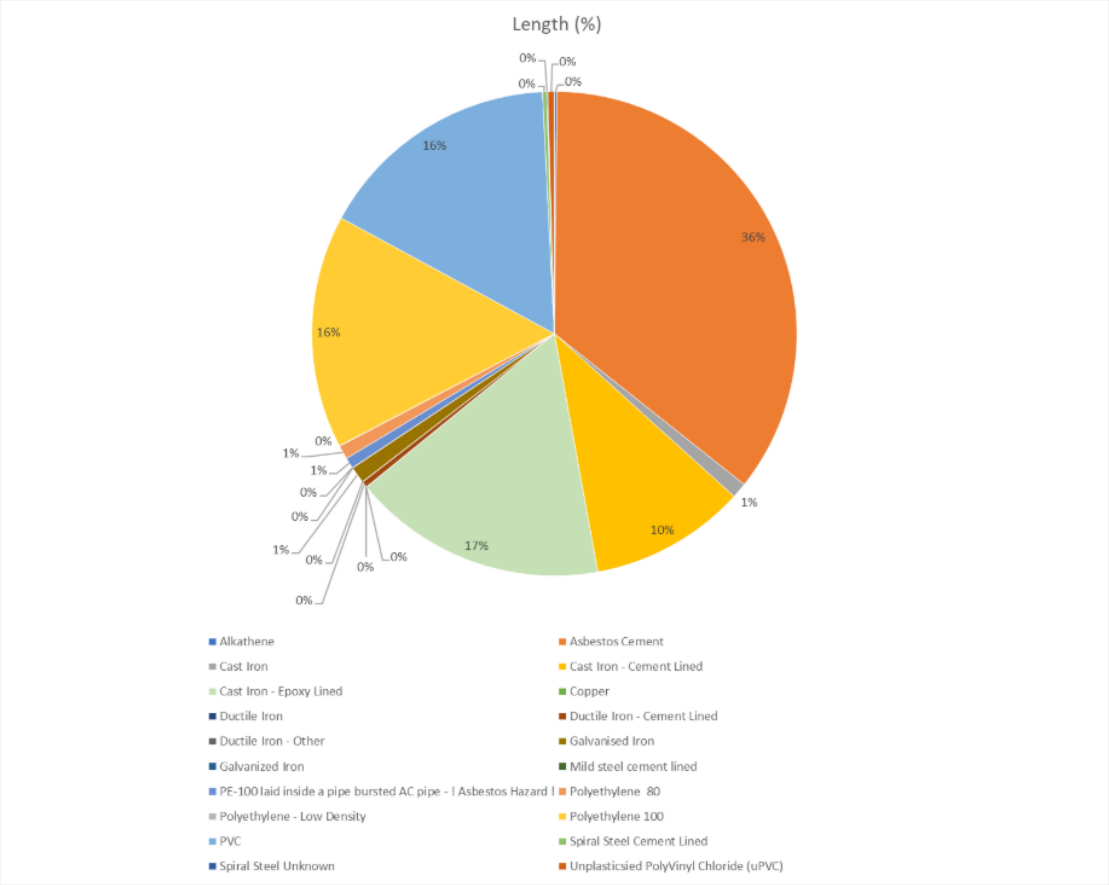


Figure 4-5: Water Supply Reticulation by Pipe Material

4.4 Asset Condition

Asset condition information supports the WSBU's assessment of maintenance needs, failure risk, renewal timing and future investment requirements. The strength of this information varies across the portfolio. Condition is better understood for inspected above-ground facilities than for buried reticulation assets, where direct physical evidence remains limited.

4.4.1 Condition Assessment Approach

The WSBU obtains condition information from annual facility inspections, specialist reservoir assessments, routine operational inspections, maintenance and work-order records, equipment monitoring, asset age and material data, customer service requests, and the operational knowledge of staff and contractors. No single source provides a complete assessment. The WSBU therefore considers these sources together when evaluating asset condition and identifying maintenance, investigation or renewal needs.

Condition information is not yet recorded consistently at component level across all asset categories. In some cases, an inspection provides a useful assessment of the overall facility but does not assign separate condition grades to its structural, mechanical, electrical and control components. This limits the WSBU's ability to compare individual assets and trace deterioration over time.

4.4.2 Above Ground Assets

There is generally good visibility of the condition of above ground facilities, which are assessed through operational monitoring and structured inspections. Annual facility inspections record visible deterioration, maintenance requirements, safety concerns and changes in asset condition. Specialist

reservoir inspections provide more detailed evidence on structural and internal components where required. The findings inform maintenance planning, risk assessment and renewal consideration.

4.4.2.1 Treated Water Storage Assets

Annual facility inspections and specialist reservoir assessments indicate that conditions vary across the storage portfolio, with most above-ground assets performing satisfactorily. However, condition issues have been identified at several reservoirs, including concrete deterioration, corrosion, leakage, sediment accumulation and access safety concerns.

The assessments recommend further investigation of a number of sites to confirm condition, identify renewal requirements and inform future investment decisions. These findings support ongoing maintenance, renewal planning and risk management activities.

4.4.3 Below Ground Assets

The condition of buried water supply assets is less well understood than that of above-ground assets due to the limited availability of direct condition information. Condition assessments rely primarily on asset age, material, fault history, leakage records, criticality and operational performance. As a result, confidence in condition is lower, and improving buried asset condition knowledge remains a key priority to support risk-based renewal planning and investment decisions.

4.4.4 Confidence in Current Asset Condition Information

Confidence in condition knowledge varies across the water supply asset portfolio. Confidence is generally high for above ground assets, supported by inspections, operational monitoring and specialist assessments. Confidence is lower for buried reticulation assets due to limited direct condition information, with assessments relying on age, material, failure history and operational performance. Improving buried asset and component-level condition data remains a priority.

Table 4-2: Confidence in Current Asset Condition Information

Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
Head works & Water treatment facilities	High	Daily operational monitoring and annual condition assessments	Major upgrades completed in 2017. Routine inspections indicate assets are generally in good condition, with ongoing monitoring supporting proactive maintenance and renewal planning.
Treated water storage	Moderate - High	Annual operational inspections supported by annual condition reviews	Condition varies materially across the storage portfolio. Specialist inspections identify structural, corrosion, access-safety, water-ingress, leakage and sediment issues at several reservoirs. Further structural assessment has been recommended for Bluff Hilltop, Bluff Foreshore, Doon Street rectangular reservoirs and Waikiwi. Inspection findings and recommended actions should be tracked through maintenance, risk and renewal programme

Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
Treated water pump stations	High	Weekly condition inspections and condition scoring	Annual inspections since 2021 indicate that most pumping and control equipment is operating satisfactorily, although maintenance issues such as vegetation management, minor leaks, drainage issues, obsolete monitoring equipment and building maintenance requirements were identified at several sites. Recent component renewals, including pump and control equipment replacements, have been undertaken at some facilities.
Branxholme and Bluff treated water reticulation pipelines	High	Annual inspections by Water Operations staff, supported by continuous flow and pressure monitoring	Inspection records and pipe failure investigations provide a good understanding of condition. Historical assessments of asbestos cement pipes indicate a wide range of condition grades, with failure trends monitored to inform renewal planning
Treated water reticulation	Moderate-Low	Fault history, burst records and operational performance monitoring	Direct condition information is limited. Asset condition is primarily inferred from network performance, fault history and operational experience, resulting in lower confidence than above-ground assets.
Valves and Hydrants	Moderate	Operational inspections	Condition information is gathered during operational and maintenance activities; however, asset-level condition data is not yet consistently recorded across the network. Improvements to condition capture are planned as asset management practices mature
Water Monitoring and Control	High	Daily operational monitoring (WTP) supported by annual site inspections	Condition and operational performance are regularly reviewed as part of treatment plant and site inspections, providing good visibility of asset reliability and performance

4.5 Asset/System Performance

The water supply system is performing well against its key service and regulatory requirements. Drinking water quality compliance has been maintained, customer service targets are being achieved, and network performance remains within established levels of service. Current performance indicates

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that the system is capable of meeting existing demand and service expectations. Ongoing investment in asset condition, resilience and network intelligence will support continued performance and inform future investment decisions.

Key aspects of system performance include:

- **Drinking water quality** – The Branxholme WTP treats water abstracted from the Ōreti River and is critical to delivering safe drinking water and maintaining regulatory compliance.
- **Reliability of supply** – Service reliability is influenced by the performance of critical assets, including the Ōreti River intake, Branxholme WTP, bulk transmission pipelines, reservoirs and pump stations. Failure of these assets could have significant consequences for service delivery.
- **Pressure and firefighting capability** – Reservoirs, pump stations and the reticulation network work together to maintain network pressures and support firefighting requirements.
- **Operational resilience** – Storage facilities, pumping infrastructure and SCADA systems support network operations, system monitoring and response to operational events.
- **Regulatory compliance** – Compliance with drinking water and other regulatory requirements is a key driver of operational activities and future investment planning.

Overall, the water supply system is considered capable of meeting current service requirements, with future investment focused on maintaining reliability, improving resilience and supporting ongoing regulatory compliance. Detailed performance results and service level outcomes are presented in Section 3.

4.6 Asset Capacity and Utilisation

Current planning information indicates that the water supply system has sufficient source, treatment, storage, pumping and network capacity to meet existing demand and forecast residential growth. Future investment is primarily focused on resilience, reliability, regulatory compliance and asset renewals rather than addressing widespread capacity constraints. The key uncertainty remains future industrial demand, particularly in Bluff, Awarua and Ocean Beach.

4.6.1 Source Water

The Ōreti River provides sufficient source water to meet current demand and forecast growth. The current abstraction consent permits up to 47,200 m³/day, and previous planning assessments have not identified any source water capacity issues. Ongoing monitoring of demand, climate conditions and source water availability will support future planning and security of supply.

4.6.2 Water Treatment Plant

The Branxholme WTP is capable of processing up to 45,000 m³/day of raw water. This provides sufficient capacity to meet current demand and near-term forecast growth. Current planning information does not identify any treatment-related capacity constraints, and future investment is focused on maintaining treatment performance, compliance and operational resilience.

Branxholme Water Treatment Plant 2025/2026 SCADA Data
Branxholme Water Treatment Plant

Month / Year	May -25	May -26
Total Monthly Flow (m³)	700,146	709,280
Average Daily Flow (m³)	22,585	22,880
Maximum Daily Flow (m³)	25,543	25,807
Minimum Daily Flow (m³)	19,555	20,010
Monthly Rainfall (mm)	92	60

4.6.3 Water Storage

The water supply system has approximately 65,000 m³ of storage capacity across its reservoir network. This storage supports operational balancing, emergency reserves, firefighting requirements and network resilience. Current planning information indicates sufficient storage capacity to meet forecast demand and levels of service.

4.6.4 Pump Stations

Existing pump station infrastructure is considered capable of meeting current and forecast demand. While capacity constraints have not been identified, pump stations perform important operational and resilience functions and remain a focus for ongoing maintenance and renewal planning.

4.6.5 Reticulation

The reticulation network has sufficient capacity to accommodate forecast residential growth within the existing service area. The main uncertainty relates to future industrial demand, particularly in Bluff, Awarua and Ocean Beach, which may influence future network investment requirements. Current planning assessments have not identified any significant capacity constraints requiring immediate upgrade.

4.7 Critical Assets

The WSBU uses a network criticality framework to identify assets whose failure could significantly affect public health, service continuity, regulatory compliance, environmental outcomes or operational performance. Criticality is assessed based on the consequence of failure, service impact, redundancy and available system capacity. Assets are assigned one of six ratings:

Table 4-3: General Definitions of Levels of Criticality

Criticality Level	General Description
Insignificant / Minor 1 and 2	Insignificant is at a level of incidents affecting only a few customers and causing minor inconvenience. Failure of the asset is quite site-specific. Minor is similar but affecting groups of customers, but with the response completed within the target Levels of Service. Failure of these assets may be indicative of overall deterioration.
Low 3	This group includes several types of assets that justify management at a more intense level than 1 or 2. This would include situations where adverse effects justify an escalation of the provider's normal response. It also includes assets that receive regular (or event specific) inspections for security, graffiti, maintenance, cleaning, operational status, etc. Such inspections may be augmented by SCADA monitoring for status and operational purposes. Asset failures can occur but are expected to have relatively minor consequences.
Moderate 4	Assets in this group are likely arterial with significant impacts when failure occurs. Monitoring and pro-active management would be in place but not to the 'avoid at all costs' level of Major. Single failures might occur and this would trigger an urgent response to avoid recurrence.
Major 5	This is likely to be the highest Consequence of Failure that a provider would choose to adopt. The asset involved would be highly monitored and pro-actively renewed with a strong focus on avoidance of any failure occurring.
Extreme (Catastrophic) 6	This column is intended to indicate the most extreme outcomes that could conceivably occur. Ideally assets would be re-configured to avoid this possibility even if the Likelihood of Failure is very low.

A higher rating indicates a greater consequence to service delivery if the asset fails. Criticality reflects an asset's importance but does not, by itself, represent asset risk. Risk is assessed separately by considering criticality alongside condition, performance and likelihood of failure. Together, this information informs operational monitoring, maintenance, renewal planning and resilience investment.

The water supply system relies on several assets with limited operational alternatives or redundancy. These include the Ōreti River intake, Branxholme Water Treatment Plant, bulk transmission pipelines, key reservoirs, major pump stations, and SCADA and control system.

Table 4-4: Critical Water Asset Summary

Critical Asset	Why Critical?	Consequence of Failure	Criticality
Ōreti River Intake	Sole raw water source for Invercargill and Bluff	Loss of source water supply and reduced security of supply	
Branxholme WTP	Sole treatment facility	Loss of treatment capability and supply interruption	
Branxholme–Invercargill Transmission Mains	Primary bulk supply route to Invercargill reservoirs	Major disruption to water supply	
Invercargill–Bluff Transmission Mains	Sole bulk supply route to Bluff	Loss of supply to Bluff	
Key Reservoirs	Provide storage, emergency reserves, firefighting capacity and pressure management	Loss of operational storage, pressure and firefighting capacity	
Major Pump Stations	Convey water through the network and maintain pressure	Reduced network performance and service continuity	
SCADA and Control Systems	Provide real time monitoring, operational control and alarm management for critical water supply assets, including treatment, storage, pumping and transmission infrastructure.	Reduced operational monitoring and control capability. Reduced ability to monitor, control and respond to events affecting the water supply system.	

Previous critical asset work undertaken through Project Max in 2017 established a criticality framework focused primarily on pipe assets. This work provides a useful basis for identifying critical transmission and reticulation assets. However, its scope, methodology and current applicability should be confirmed before it is adopted as the WSBU's current critical asset framework.

Current network criticality mapping identifies the Branxholme to Invercargill and Invercargill to Bluff transmission systems, together with associated bulk supply infrastructure, as the highest-criticality pipe assets. These assets form essential supply routes and have limited redundancy if a failure occurs.

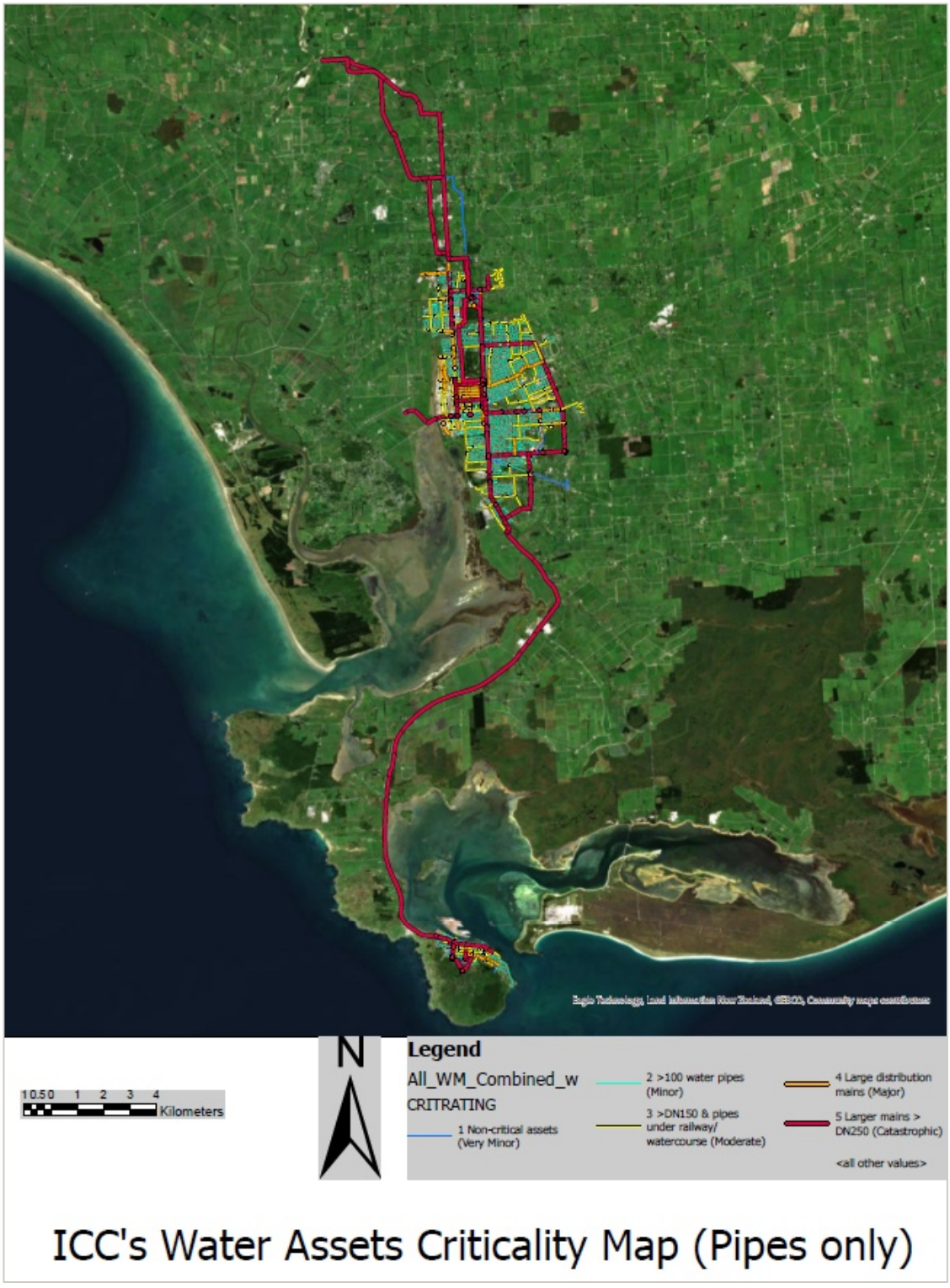


Figure 4-6: ICC Water Network Criticality Mapping for Pipe Assets

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The current framework and mapping focus primarily on pipe assets. The WSBU intends to review and extend the framework to include above-ground assets, including source-water, treatment, storage, pumping, electrical, telemetry and SCADA assets. The review should also reconcile critical assets with the asset register and align the framework with the WSBU's current risk-management approach.

Extending the framework will provide a more complete view of the assets essential to service delivery. It will also strengthen the links between criticality, condition, performance, risk, maintenance, renewal planning and investment decisions.

Critical assets receive greater operational oversight and consideration in maintenance, renewal and resilience planning. Current and planned responses include management of critical transmission assets, investment in pumping and storage resilience, emergency response arrangements and development of an alternative water supply.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Insert the current network map and critical assets; populate B4(6) counts, weighted age and theoretical life; establish a pipe-condition evidence programme.

- *Asset Cohort Groups – alignment with ID CAPEX Sheets*
- *Asset age/ Remaining Useful Life*

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5 Future Demand and Impact of Drivers

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(1)
This chapter should demonstrate	Demand, utilisation, capacity, uncertainty, growth, constraints, demand management and water loss.

5.1 Demand Forecast

ICC's forecast assumes annual growth of 0.5% in population and 0.4% in households in Invercargill and Bluff.

The serviced population is forecast to increase from approximately 48,561 in FY2024/25 to 51,555 by FY2036/37. Over the same period, residential connections are forecast to increase from 21,094 to 22,395 and non-residential connections from 1,553 to 1,649. The forecast therefore indicates moderate growth in the number of consumers served by the water supply network.

Table 5-1: Water Connections Demand Forecast

Measure	FY2024/25	FY2036/37	Change
Serviced population	48,561	51,555	+2,994
Residential connections	21,094	22,395	+1,301
Non-residential connections	1,553	1,649	+96

The forecast figures establish the expected change in serviced population and connections. However, the supporting evidence reviewed for this AMP does not yet document how these forecasts have been converted into average-day, peak-day or peak-hour water demand. The consumption assumptions, allowance for water loss, treatment of seasonal variation and assumptions for commercial and industrial users require confirmation before the demand forecast is finalised.

Current planning information indicates that forecast residential growth can generally be accommodated within the existing water supply system. This conclusion remains subject to confirmation of the demand methodology and supporting capacity assessment. The principal demand uncertainty is future commercial and industrial development, particularly in Bluff, Awarua and Ocean Beach, which may result in demand differing materially from the adopted baseline.

5.2 Factors Influencing Demand

Water demand is influenced by the number and type of consumers served, the volume of water used by those consumers, and water losses within the distribution network. The primary factors considered in planning for the water supply activity are:

- changes in serviced population and connections;
- residential consumption and water-use behaviour;
- commercial and industrial activity;
- seasonal and climatic variability;
- real water losses within the network;
- the location, timing and type of urban development; and
- potential extensions of the reticulated service area.

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Seasonal weather conditions and consumer behaviour may affect daily and peak water use. Extended dry periods may increase demand and coincide with reduced source-water availability. The extent of this effect has not yet been quantified in the evidence reviewed for this AMP and should therefore be treated as a forecast uncertainty rather than an established demand allowance.

Real water loss also increases the volume of water that must be abstracted, treated and conveyed through the system. Water loss performance is presented in Section 3.4.2, with demand and water loss management discussed in Section 5.5. Water loss should be incorporated explicitly into the demand-forecast methodology.

5.3 Growth and Development

Growth and development affect water demand through increases in serviced population and connections, changes in land use, new commercial or industrial activity, and extensions to the reticulated service area.

The adopted planning baseline indicates moderate population and connection growth within the existing Invercargill and Bluff service areas. Current planning information indicates that forecast residential growth can generally be accommodated within existing water supply capacity and is not expected to be the principal driver of major capacity investment. This conclusion should be confirmed against the final demand forecast and supporting source, treatment, storage, pumping and hydraulic capacity assessments.

Future commercial and industrial development may have a greater effect on infrastructure requirements than forecast residential growth and may create demand that is not represented by population growth alone. The scale, timing, location and operating characteristics of major developments may affect average demand, peak demand and the capacity required within source, treatment, storage, transmission and local distribution assets. Potential development in Bluff, Awarua and Ocean Beach is therefore a material planning uncertainty. The timing, location and scale of this demand should be monitored separately from the residential growth forecast.

Expansion of the reticulated network to currently unserviced areas would represent a separate growth and service-coverage decision. Any proposed extension should be assessed against forecast demand, levels of service, public-health and environmental outcomes, lifecycle cost, affordability, funding arrangements, capacity, risk and deliverability. The potential extension of services is identified in the draft investment programme, but the areas, timing, scope and approval status require confirmation.

Growth related investment decisions will be coordinated with the applicable district planning, infrastructure planning, development contribution and investment planning processes. References to future regional spatial strategies or replacement resource-management planning instruments will be updated when the relevant requirements and their implications for ICC and the WSBU are confirmed.

5.4 Demand Uncertainty and Planning Assumptions

Demand forecasts are uncertain because actual water use may differ from the adopted planning baseline. The forecast is influenced by changes in population, connections, consumer behaviour, commercial and industrial activity, water loss, climate conditions, development patterns and the extent of the serviced area.

The principal planning assumptions for this AMP are that:

- serviced population and connections increase broadly in line with the adopted forecast;
- residential consumption and water loss remain broadly consistent with the allowances used in the demand assessment;
- no unplanned major commercial or industrial development creates a material step change in demand;
- the existing reticulated service area does not change materially unless an extension is approved; and
- source, treatment, storage, pumping and network capacity remain available as assumed in the supporting capacity assessment.

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The most significant demand uncertainty is future commercial and industrial development, particularly in Bluff, Awarua and Ocean Beach. New or expanded high volume users could materially affect average and peak demand and may require additional source, treatment, storage, transmission or distribution capacity. The timing, scale and location of this potential demand are not confirmed in the information reviewed for this AMP.

Other uncertainties include population growth occurring at a different rate or location than forecast, changes in consumer water-use behaviour, variations in real water loss, seasonal demand, drought conditions, regulatory requirements and possible extensions to currently unserviced areas. Climate variability may affect both demand and source-water availability, but the current AMP does not include a quantified climate-demand allowance.

ICC and the WSBU will monitor population and connection growth, development activity, major-user requirements, water production, consumption and water loss. Where monitoring identifies a material change from the adopted assumptions, the demand forecast, hydraulic modelling, capacity assessment and associated investment requirements should be reviewed.

5.5 Demand and Water Loss Management

Demand management and water-loss reduction support the efficient use of water, improve understanding of network performance and may defer or refine future infrastructure investment.

Average consumption has generally remained below current target of 300 litres per person per day in recent years, although the result varies annually. Real water loss has increased from earlier reporting years but remains below the current target of 30% of system input volume. Detailed consumption and water loss performance results are presented in Section 3.4.3 and Section 3.4.2 respectively.

The WSBU currently manages demand and water loss through a range of operational and asset management activities, including:

- proactive leakage detection and repair;
- network renewals and rehabilitation programmes;
- monitoring of network flows and system performance;
- water restrictions during periods of high demand;
- management of large water users;
- consumer education and water conservation messaging; and
- ongoing *monitoring* of consumption trends and network performance.

Planned improvements include additional district and transmission metering, improved flow analysis and investigation of future metering options. These initiatives are intended to improve understanding of where water is used or lost, support leak identification and provide better evidence for demand forecasting and investment decisions.

Demand and water-loss information should be considered alongside levels of service, source availability, network capacity, operating costs and resilience when prioritising operational activities, renewals and network improvements

Some significant investment includes:

- Universal water metering - Phase 1 (Investigations $100k 2027 and $20M in 2036-2038)
- Sectorisation water metering - Phase 2 ($250k in 2026/27)
- Leak Detection Programme $100k annually

5.6 Implications to the Water Supply Activity

Current planning information indicates that the water supply system has sufficient source, treatment, storage, pumping and network capacity to accommodate forecast residential growth within the existing serviced area. This conclusion should be confirmed against the final demand forecast, hydraulic modelling and capacity assessment.

On this basis, forecast residential growth is not expected to be the primary driver of investment during the planning period. Investment is expected to focus principally on asset renewals, resilience, regulatory compliance, water-loss management and maintaining existing levels of service.

The most significant demand-related uncertainty is future commercial and industrial development, particularly in Bluff, Awarua and Ocean Beach. New or expanded high-volume users could increase average and peak demand and may require additional source, treatment, storage, transmission or local distribution capacity.

Potential extensions to currently unserviced areas would also require separate assessment of demand, capacity, levels of service, lifecycle costs, affordability, funding, risk and deliverability before investment decisions are made. Potential reticulation extensions are identified in Chapter 8, but their scope, timing and approval status require confirmation.

ICC will continue to monitor population and connection growth, development activity, major-user requirements, water production, consumption, water loss and network performance. Material changes from the adopted assumptions should trigger review of the demand forecast, hydraulic model, capacity assessment and associated investment requirements.

Any resulting operational or capital requirements should be reflected in future updates of the WSS, this AMP and the IDP.

SECTION 5: DRAFTING GAPS / ICC CONFIRMATION REQUIRED

- *Document forecast method, demand factors, peak demand, industrial assumptions, scenarios, uncertainty, tools, network constraints and confidence required by C11.*
- *Are there demand graphs/trends or historic consumptions graphs where you can see water restrictions, dampen demand. Example like Tasman District Council*
- *Existing demand management tools: e.g. task force, bylaws, restrictions protocol?*
- *.*

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6 Risk and Resilience

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C14
This chapter should demonstrate	Top water risks, controls, residual exposure, resilience, dependencies, emergency and business-continuity arrangements.

6.1 Risk Management Policy and Framework

ICC currently has a draft Risk Management Policy dated June 2026 which sets out ICC's mandatory requirements for effective risk management. The policy is aligned with ISO 31000:2018 Risk Management - Guidelines, and sets ICC's commitment, principles, and governance expectations.

ICC's Risk Management Framework (RMF) is currently being drafted and will operate alongside the Risk Management Policy. The RMF is aligned with ISO 31000:2018 but is intended to operate as a living document that can be refined as ICC's operating context, risk profile and risk maturity evolve. The RMF describes how risk management is applied in practice, including processes, escalation pathways, reporting rhythms, and the use of risk registers. Risk appetite and tolerance settings are maintained within the framework so they can be updated as required without triggering full policy adoption processes.

The Risk Management Policy and Framework identify the following risk types and risk categories for consequence scaling and appetite:

Risk Types

- Strategic
- Operational
- Programme/Project

Risk Categories

- Financial sustainability
- People and knowledge
- Service delivery, critical services
- Legal and regulatory compliance, privacy
- Health, safety and wellbeing
- Information management, cyber
- Environment and climate resilience
- Projects and property
- Reputation, community trust
- Achievement of strategic objectives (opportunities)

The WSBU manages water supply risks in line with the ICC organisational risk management framework. The approach considers the likelihood and consequences of events that could affect public health, service continuity, regulatory compliance, environmental outcomes and community wellbeing.

Risk management within the Water Supply activity is informed by a range of sources, including:

- Drinking Water Safety Plan (DWSP)
- Source Water Risk Management Plan
- enterprise and operational risk registers;

- asset criticality assessments;
- asset condition and performance information;
- resource-consent obligations;
- operational incidents and emergency-response information; and
- strategic and investment-planning processes.

6.2 Priority Water Supply Service Risks

The water supply activity is exposed to risks that could affect public health, continuity of supply, regulatory compliance, emergency response and community wellbeing. Many of these risks arise from reliance on critical assets with limited redundancy, including the Ōreti River source, Branxholme WTP and the transmission pipeline supplying Bluff.

Table 6-1 links each priority water supply service risk to the critical asset or dependency, existing controls, residual exposure and planned response. The associated investment projects and programme are described in Section 8 and will be confirmed through the IDP.

Residual exposure is described qualitatively because risk owners, controls effectiveness and current residual risk ratings were not confirmed against ICC's approved risk registers at the time this AMP was developed.

It links each service risk to the relevant infrastructure vulnerability, potential consequences, current controls and proposed improvement response.

The risk descriptions and controls are supported by current planning material. However, risk owners, current and residual ratings, and control effectiveness must be confirmed against ICC's approved risk registers before the AMP is finalised.

Table 6-1: Priority Water Supply Risks

Risk	Risk Type	Risk Category	Potential consequence	Current / planned control
Loss of drinking water supply due to failure of the sole source or treatment system	Strategic	Service delivery, critical services	Loss of potable water supply, reduced firefighting capability, disruption to essential services and major community impacts.	Alternative Water Supply Project, source monitoring, emergency planning, storage reserves, operational procedures and drought management measures.
Drinking water contamination or non-compliance	Operational	Legal and regulatory compliance, privacy; Health, safety and wellbeing	Public health impacts, boil water notices, supply restrictions, regulatory action and reputational impacts.	Drinking Water Safety Plan, Source Water Risk Management Plan, multiple treatment barriers, monitoring, operational procedures and compliance programmes.
Loss of supply to Bluff	Operational	Service delivery, critical services	Prolonged outage affecting Bluff consumers and major industrial users.	Reservoir storage, transmission-main maintenance, telemetry, pump redundancy and contingency planning.
Failure of critical assets and ageing infrastructure	Operational	Service delivery, critical services	Service interruptions, increased reactive	Asset inspections, renewals programme, critical asset

Risk	Risk Type	Risk Category	Potential consequence	Current / planned control
			maintenance, reduced reliability and increased renewal costs.	management, condition monitoring and operational maintenance.
Climate change, drought and source water constraints	Strategic	Environment and climate resilience	Reduced source reliability, increased restrictions, reduced resilience and higher operating costs.	Alternative Water Supply Project, source monitoring, consent management, demand management and future climate adaptation planning.
Natural hazard event (earthquake, flooding or severe weather)	Strategic	Environment and climate resilience	Widespread infrastructure damage, prolonged service disruption and extended recovery periods.	Emergency response arrangements, resilience improvements, renewals, storage capacity and business continuity planning.
Asset information and condition uncertainty	Programme	Information management, cyber	Reduced confidence in renewal forecasting, whole-of-life planning and investment prioritisation.	Condition assessment programme, asset data improvement, criticality framework development and asset management improvements.
Future industrial growth and demand uncertainty	Strategic	Achievement of strategic objectives (opportunities); Financial sustainability	Demand exceeding planning assumptions, localised capacity constraints and premature or delayed investment decisions.	Demand monitoring, hydraulic modelling, network intelligence, water metering and staged investment planning.
Programme delivery and affordability constraints	Programme	Financial sustainability	Delayed risk reduction, deferred renewals and rephasing of investment programmes.	IDP alignment, programme prioritisation, affordability assessments and delivery-capacity reviews.

6.2.1 Security of Supply and Alternative Water Supply

The primary supply risk is reliance on the Ōreti River as the sole raw water source and the Branxholme WTP as the only treatment facility serving Invercargill and Bluff. A prolonged interruption affecting the source or treatment plant could disrupt potable water supply and results in impacts on public health, essential services and/or economic activity.

The Alternative Water Supply Project is intended to reduce this dependency by developing a supplementary groundwater source within the Awarua Plains. Investigations undertaken to date indicate that the aquifer may support an emergency supply and potentially a larger alternative supply. This is still subject to further investigation, monitoring, consenting and Council decisions.

The WSBU is planning to take a staged approach to this programme:

- **Phase 1** - Emergency Supply: approximately 6 ML/day of treated water, intended to provide about 80 litres per person per day during a prolonged outage.

- **Phase 2** - Alternative Supply: potential expansion to 15 ML/day, including treatment and connections to the existing network at Tramway Road and Rockdale Road.
- **Phase 3** - Expanded Alternative Supply: potential expansion to 20 ML/day, including a secondary WTP, storage reservoir and pump station at Sky Street and further network reticulations and service connections.

The staged approach allows investigation findings, environmental effects, aquifer performance, demand requirements, affordability and consenting outcomes to inform later decisions. The approved scope, timing, cost, capacity and expected resilience benefits should be confirmed before the AMP is finalised.

6.3 Climate Change

The water supply activity will be impacted over the next 80-100 years and beyond, both by a changes in rainfall patterns and increase in severe weather events. The water supply activity is particularly exposed to drought and source water risks because the existing system relies on the Ōreti River as its sole raw-water source. Prolonged low-flow conditions may affect source availability and increase the need for water-conservation measures, while heavy rainfall and flooding may affect source-water quality, treatment requirements and access to critical infrastructure.

At the time of preparing the AMP a detailed climate risk and vulnerability assessment had not been completed for the Water Supply activity. As a result, the extent of exposure and vulnerability across individual assets and service areas is not yet fully understood. Improving this understanding is an important future strategic asset management priority.

Over the planning period, the WSBU intends to progressively improve its understanding of climate risk and incorporate climate considerations into asset management planning, risk management, lifecycle decision-making, asset renewals, and future investment prioritisation.

This includes undertaking climate risk and vulnerability assessments, developing hazard and critical asset mapping, and applying adaptive planning approaches where there is significant uncertainty regarding future conditions.

Future AMP updates should reflect relevant findings from regional climate change initiatives and any evolving national requirements relating to climate adaptation, regional spatial planning, and resource management reform to ensure long-term infrastructure planning remains resilient and fit for purpose.

6.4 Interdependencies and Resilience

Resilience is an important strategic driver for the water supply activity because the service must continue to provide safe drinking water during disruptive events. These events include water supply asset failures, natural hazards, climate-related events and source water constraints.

Delivery of water-supply services also relies on supporting infrastructure, services and resources, including:

- electricity for treatment, pumping and monitoring
- telecommunications for SCADA and operational control
- transport access for operations, maintenance and emergency response
- treatment chemicals, fuel, contractors and specialist resources; and
- continued operation of supporting equipment and systems.

These interdependencies should be recognised in risk assessments, investment planning and operational response arrangements.

Disruption to these dependencies may affect the WSBU’s ability to maintain or restore water supply, particularly during a major emergency.

6.5 Emergency Management/Business Continuity

ICC and the WSBU maintain emergency response and business continuity arrangements to support the continued delivery and restoration of essential water services during infrastructure failures, contamination events and natural hazard emergencies.

These response and recovery measures include:

- operational emergency response arrangements
- coordination with Emergency Management Southland and other lifelines partners
- incident response procedures
- standby power generation
- maintenance contractor support
- critical spares
- emergency tanker supply; and
- community water distribution arrangements.

These arrangements support response to events affecting all asset groups; raw water, treatment, pumping, storage, and water reticulation.

The available information does not confirm the capacity, coverage, testing frequency or current effectiveness of these arrangements. Before the AMP is finalised, the emergency and business-continuity content should be checked against current response plans, business-continuity plans and operational procedures.

Material lessons from emergency exercises and actual incidents should be reflected in operational procedures, risk registers, resilience improvements and future AMP and investment plan update.

6.6 Improvement Programme

Risk and resilience management is an ongoing process informed by a variety of sources such as enterprise or facility risk registers, operational incidents, maintenance inspections, condition assessments, asset performance assessments and operator observations.

Most supply risks should be captured in the Drinking Water Safety Plan and the Source Water Risk Management Plan, and these documents should be regularly reviewed and updated. Collectively risk information supports the review of operational controls, maintenance, renewals and inform future investment priorities.

Some priority risk and resilience improvements identified through the development of this AMP include:

- confirming alignment between the water supply risks and ICC's approved risk management framework and current risk registers
- reviewing and extending the Critical Asset Framework to include source, treatment, storage, pumping, electrical, telemetry and SCADA assets
- improving the identification and assessment of critical interdependencies and common failure points
- completing a water supply (or Three Waters) climate and natural hazard risk and vulnerability assessment
- confirming and documenting emergency response and business continuity arrangements, including testing and review with partner agencies
- continuing investigations and planning for the Alternative Water Supply Project; and
- improving buried asset condition information to support improved risk based renewals planning.

Asset Management Plan
6 Risk and Resilience

SECTION 6: DRAFTING GAP / ICC CONFIRMATION REQUIRED

- *Confirm the approved scope, timing and resilience outcomes of the Alternative Water Supply Project.*
- *Complete a Water Supply Climate Risk and Vulnerability Assessment.*
- *Confirm emergency response and business continuity arrangements, including testing and review processes*

7 Lifecycle Management

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C12 and C13
This chapter should demonstrate	Operations, planned / predictive / reactive maintenance, renewal need, pipe replacement and non-network asset plans.

7.1 Lifecycle Approach

The WSBU applies a whole of life approach to managing the water supply activity. The intent of this approach is to plan for asset requirements and function throughout its life from inception, operation, renewal, and disposal. This approach provides a more efficient way to manage costs of the assets in the long term. The SAMP holds the common methodology, while this AMP demonstrates how it is applied to water supply assets.

7.2 Asset Acquisition and Procurement

Asset acquisition occurs when the WSBU takes ownership of assets constructed by developers or when the WSBU constructs or upgrades its own assets.

New water supply infrastructure associated with subdivision and land development is required to comply with the current Subdivision, Land Use and Development Code of Practice 2023. The Code, jointly used by ICC and Southland District Council, specifies minimum standards and requirements for infrastructure accepted into WSBU networks and privately owned infrastructure that connects to those networks. As part of the subdivision assessments, the WSBU considers capacity of the existing network serving the development and identifies any upgrades required. Following construction as-builts information is submitted to the WSBU and relevant asset data is entered into the asset database.

ICC, the WSBU and Southland District Council use a joint ***Subdivision, Land Use, and Development Code of Practice 2023***. The Code specifies minimum standards and guidance for infrastructure accepted into Council networks and privately owned infrastructure that connects to those networks. It is aligned with NZS 4404 and includes requirements relevant to the design, construction, operation and maintenance of accepted assets.

Assets are acquired through:

- assets constructed as part of sub-division development and vested to the WSBU
- extensions constructed by the WSBU to service new areas
- upgrades constructed by the WSBU to address capacity or provide for growth.

7.3 Operations and Maintenance

The WSBU undertakes operational and maintenance activities to support the ongoing performance, reliability and compliance of the water supply system. These include operational monitoring, planned and reactive maintenance, condition assessments, treatment plant and pump station inspections, specialist reservoir inspections, SCADA monitoring and network fault response.

7.3.1 Planned Maintenance

Planned maintenance aims to reduce the risk of asset failure, maintain performance and extend asset life. Activities include servicing treatment plant equipment, pumps and motors; inspecting and cleaning reservoirs; calibrating instrumentation; maintaining telemetry; inspecting hydrants; exercising and maintaining valves; and managing vegetation, drainage and general site condition.

Annual facility inspections and specialist reservoir assessments identify maintenance, safety, operational and renewal requirements. Recent inspections identified routine work, including vegetation control, gutter cleaning, drainage clearance, minor leak repairs and maintaining site access. They also

identified higher consequence issues requiring further specialist investigation, including reservoir structural integrity condition, internal access ladder safety issues, corrosion issues, and failed or obsolete monitoring and control equipment.

To improve lifecycle traceability, the WSBU should assign each inspection recommendation a work order or project reference, risk priority, responsible owner, target completion date and closure status. Significant unresolved findings should link directly to the most appropriate relevant risk register, renewal programme and eventually be identified in the IDP.

7.3.2 Reactive Maintenance

The WSBU undertakes reactive maintenance in response to asset failures, service interruptions, leaks, equipment faults and customer requests. It uses information from these activities to identify recurring failure trends, improve asset knowledge and inform maintenance and renewal priorities.

7.4 Renewals

Renewal planning aims to maintain required levels of service while minimising whole of life costs and the risk of service disruption. The WSBU uses asset age, condition, performance, fault and failure history, criticality and operational risk to inform renewal decisions. Assets are not automatically renewed when they reach the end of their theoretical life. Instead, the WSBU uses available evidence and risk based decision making to determine the appropriate intervention and timing. This directs available funding towards assets that present the greatest overall service risk, rather than simply the oldest assets.

The approach distinguishes between critical and non-critical assets and links condition and performance information with criticality and service risk. This supports a more targeted and defensible renewal programme.

7.4.1 Buried Assets

Direct condition information for buried water assets remains limited. The WSBU therefore uses asset age, material, fault and failure history, leakage, operational performance, criticality and the consequences of failure to inform renewal decisions. Improving condition knowledge for buried assets remains a priority. Better evidence will increase confidence in renewal timing, support risk based prioritisation and strengthen long term expenditure forecast.

7.4.2 Above Ground Assets

Compared to buried assets, the WSBU has greater confidence in the condition of above ground assets due to annual facility inspections, specialist reservoir assessments and operational monitoring. These activities identify renewal needs and inform risk assessments, business cases and capital investment priorities.

Recent inspections identified potential renewal requirements for reservoir structures, access systems, corrosion protection, control systems and monitoring equipment. The WSBU will continue to investigate these requirements further and prioritise investment based on condition, criticality, service risk while balancing affordability constraints.

7.4.3 Renewal Programme Deliverability

The WSBU balances renewal programme delivery against organisational capacity, contractor availability, market conditions and affordability. A review of the capital programme found that parts of the renewal programme required rephasing to better reflect historical delivery capacity. Year-one capital expenditure remains above previous delivery levels and should be reconciled with the final IDP.

The WSBU will continue to review programme timing and priorities to keep the renewal programme achievable while maintaining acceptable levels of service and risk.

The asset register records previous pipe replacement and rehabilitation work, including links between abandoned and replacement assets, project descriptions and rehabilitation dates. Records show the progressive replacement of older pipe materials with polyethylene and PVC across Invercargill, Bluff and strategic supply-main projects. Future renewal forecasts should use asset cohorts based on

installation date, material, theoretical remaining life, failure history, hydraulic importance, criticality and consequence of failure.

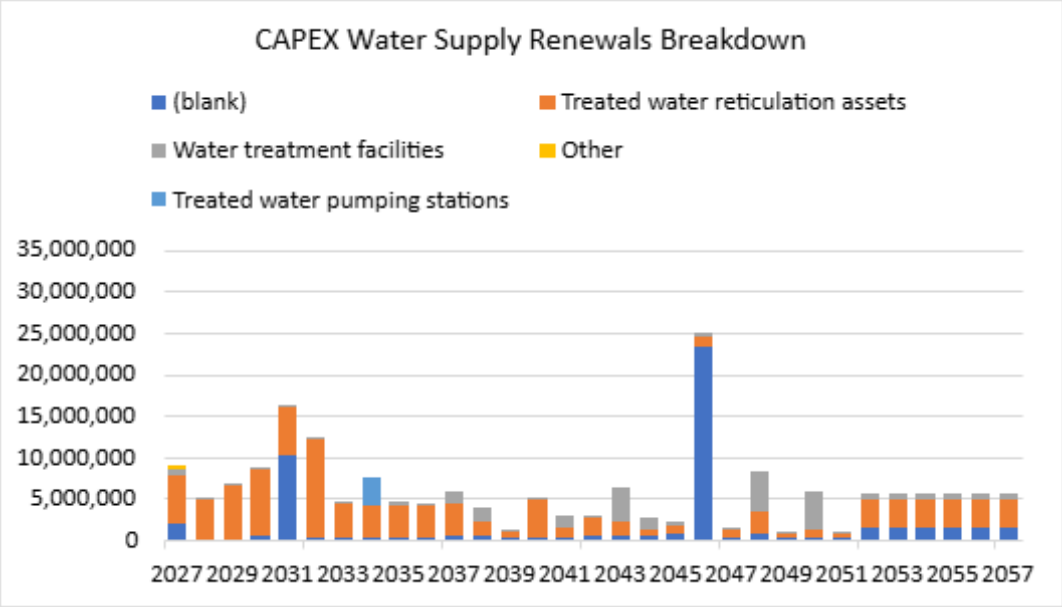


Figure 7-1: Water Supply Renewals CAPEX Breakdown

7.5 Disposal of Assets

Water supply assets are intended to operate in perpetuity to provide a continuing water supply to the serviced areas of the city. It is intended that individual assets will only be disposed of at the end of their service life, at which time they will be replaced with new assets or become obsolete. In general, where assets are in the same location, the old asset will be removed as part of the renewal project.

Because assets will usually be at the end of useful life at disposal, they are expected to have zero residual value. Specific funding is therefore not allocated to disposal of assets, but where costs are incurred in their removal, these are included in development and renewal project costs.

7.6 Lifecycle Risks and Improvement Opportunities

The following challenges to asset lifecycle management, their associated impacts and improvement responses have been identified for this AMP.

Table 7-1: Lifecycle Management Challenges, Impacts and Improvement Reponses

Lifecycle Challenge	Current Impact	Improvement Response
Limited buried asset condition data	Reduced confidence in renewal timing	Develop pipe condition programme
Incomplete criticality coverage	Above-ground assets not fully assessed	Extend criticality framework
Asset data inconsistencies	Reduced confidence in forecasting	Asset register and GIS reconciliation
Climate uncertainty	Potential future changes to asset performance	Climate risk assessment

Lifecycle Challenge	Current Impact	Improvement Response
Asset management maturity	Reduced confidence in investment decisions and forecasting	Asset maturity assessment and EAM implementation
Information quality	Reduced confidence in condition, criticality and renewal forecasting	Asset register improvement and data confidence review

DRAFTING GAP / ICC CONFIRMATION REQUIRED
Populate maintenance standards, planned and reactive programmes, annual pipe replacement kilometres, renewal backlog, funded / unfunded need and evidence confidence.

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8 Asset Improvements and Enhancement Programme

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(2)-(4)
This chapter should demonstrate	Every material asset improvement, drivers, outcomes, options, trade-offs and IDP linkage.

8.1 Introduction and Investment Drivers

The Asset Improvements and Enhancement Programme identifies the capital investment required to maintain and improve the water supply activity over the planning period. It links the asset, service and risk needs identified in this AMP with the prioritised programme developed through the IDP.

Investment is guided by the Asset Management Objectives established in the SAMP, as summarised in Table 8-1.

Table 8-1: Investment Drivers' Descriptions

AM Objective	Description
Maintain safe, compliant and efficient water services	Ensure water, wastewater, and stormwater assets constantly meet public health, environmental, and regulatory requirements.
Manage affordability while investing for the future	Balance renewal, resilience investment, and debt to manage affordability for current and future ratepayers.
Sustain core infrastructure over the long term	Maintain and renew the existing asset base so that assets remain fit for purpose.
Reduce risk from ageing and critical assets	Systematically reduce service and compliance risk arising from ageing infrastructure and single points of failure.
Improve resilience to climate and natural hazards	Increase the resilience of water assets to flooding, drought, seismic events, and sea level rise.
Lift asset management maturity	Progress asset management practices across all three waters
Enable planned succession of assets	Ensure clear asset succession pathways by aligning investment prioritisation, renewal timing, and funding decisions to manage risk, optimise value, and promote efficient spending.

8.2 Investment Categories

The WSBU classifies capital expenditure using the applicable Commerce Commission network and non-network asset investment categories. Projects are assigned to the category that best reflects their primary investment driver.

8.2.1 Network Asset Investment Categories

8.2.1.1 Levels of service

Investment maintains or improves service performance, compliance and resilience. Key initiatives include the Awarua Alternative Water Supply Programme, duplication of critical Branxholme infrastructure, metering and network intelligence, leak detection, and improvements to critical assets.

8.2.1.2 Growth

Growth investment is driven by capacity constraints and the need to extend water services to support development. Proposed investment involves extending the water supply network to currently unserved communities, including Otatara and Makarewa. This investment will accommodate planned residential growth and will be subject to community consultation.

8.2.1.3 Renewals

Renewal investment replaces or rehabilitates existing assets to maintain reliability and manage failure risk. Priorities are informed by condition, performance, failure history, criticality and consequence of failure.

8.2.2 Non-Network Asset Investment Categories

8.2.2.1 Property

Property investment covers buildings and land supporting the water supply activity. The programme includes seismic strengthening of the Water Tower and installation of associated equipment, after which the structure is proposed to transfer to the Buildings Department for management as a heritage asset.

8.2.2.2 Vehicles

Vehicle funding is provided through the shared three-waters vehicle programme.

8.2.2.3 Consents

Proposed consent investment of $426,000 supports the investigations, applications, and technical work required to obtain or renew statutory authorisations. This includes treatment infrastructure development at Awarua, seismic resilience upgrades to pump stations, and renewal of the Branxholme Water Treatment Plant filter backwash to land (AUTH-94556-V1) and Oreti River abstraction (AUTH-99139-V1) resource consents.

8.2.2.4 Digital

IT and digital investment support the systems, tools, and implementation activities required for network planning, performance analysis and operational decision making. Funding is focused on the implementation and calibration of hydraulic network models.

8.3 Overview of Planned Investment

Error! Reference source not found. and **Error! Reference source not found.** show the forecast capital investment programme for the Water Supply activity over the 30-year planning horizon. The programme totals over $330 million of which nearly $150 million is programmed in the first 10 years. Renewals and levels of service investment make up most of this programme.

Figure 8-1: Total CAPEX for the Water Supply Activity shows the total annual capital expenditure for the water supply activity over the 30-year planning horizon. Investment peaks in 2029 at $36.27 million, driven by the Alternative Water Supply Programme and its associated Awarua treatment, trunk main, reservoir and pumping infrastructure. Other notable peaks occur in 2030 and 2046, with the latter peak associated with water pump station renewals.

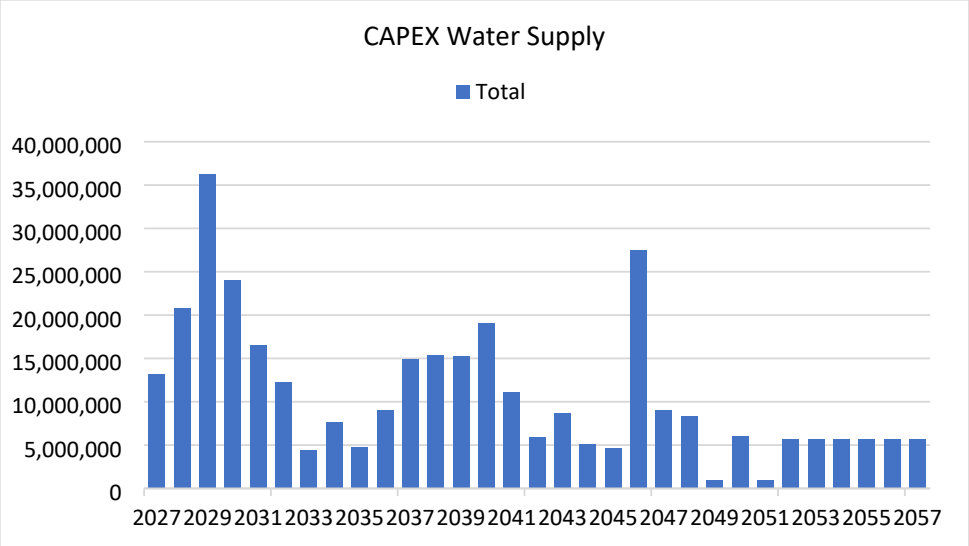


Figure 8-1: Total CAPEX for the Water Supply Activity

Figure 10 shows the capital programme by investment category. Renewals account for $185 million, levels of service for $126 million, growth for nearly $25 million. Investment in consents and IT account for $426,000 and $200,000 respectively.

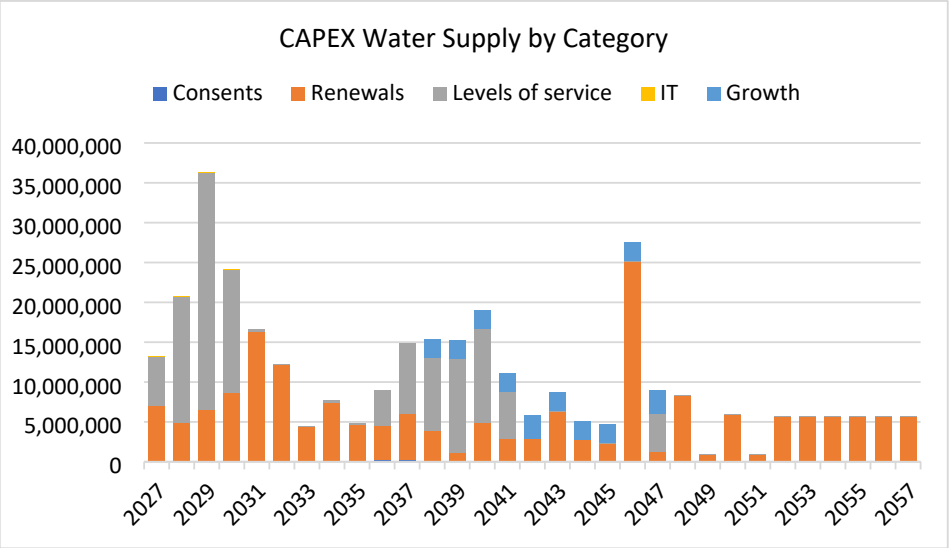


Figure 8-2: CAPEX by Investment Category

Figure 11 shows renewal investment by asset category. Treated water reticulation accounts for the largest share of renewals over the planning period. The main renewal peak occurs in 2046 and is driven by programmed investment in water pump stations.

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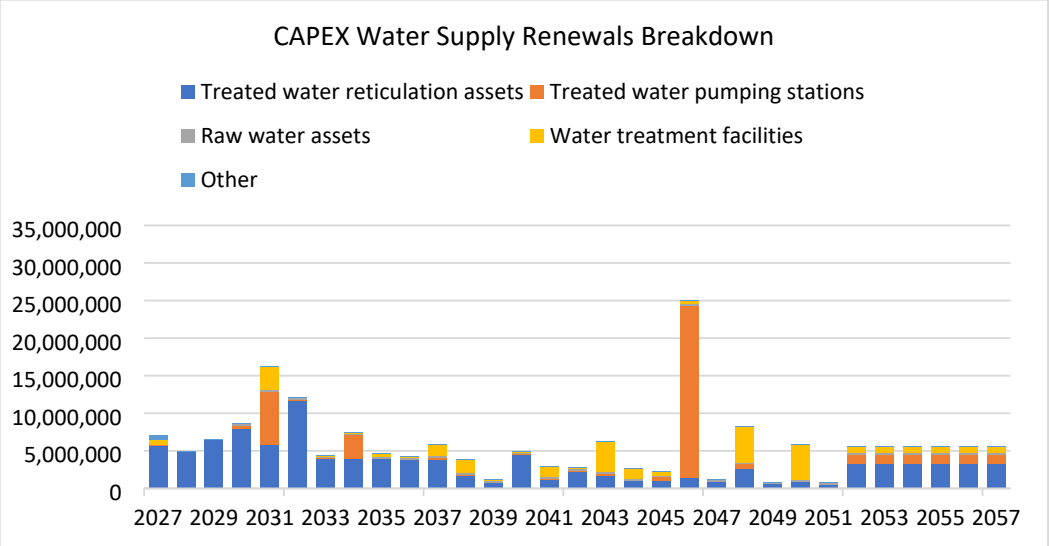


Figure 8-3: Water Supply CAPEX Renewals by categories

Figure 12 shows levels of service investment by subcategory. The high expenditure from 2027 to 2030 is associated with the Alternative Water Supply Programme and related Awarua treatment, trunk main, reservoir and pumping infrastructure. Later investment includes universal water metering from 2036 to 2038, capacity improvements to Bluff from 2038 to 2041, and the Airport Water Main in 2047.

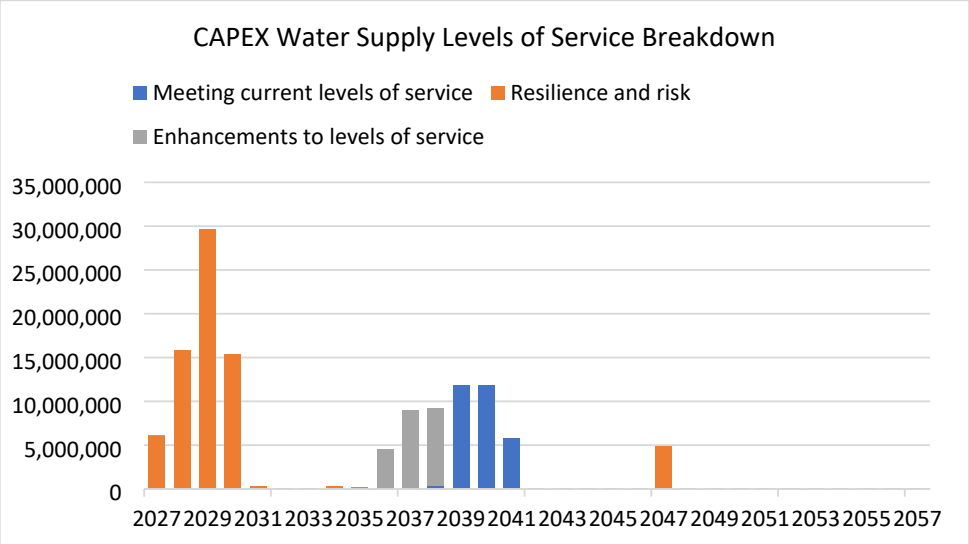


Figure 8-4: Water Supply CAPEX broken down by LoS categories

8.4 Critical Asset Resilience Improvements

The WSBU's primary resilience investment is the Alternative Water Supply Programme, including the Awarua treatment, trunk main, reservoir and pumping infrastructure. Other resilience investment includes duplication of the Branxholme manifold and pump station, seismic improvements to pump stations, the Airport Water Main and communications infrastructure supporting SCADA. Universal water metering and leak detection provide supporting information for demand and network management.

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8.5 Summary of Key Projects

Table 20 summarises the key projects included in the 30-year capital programme for the water supply activity. It identifies each project investment category, primary driver and intended outcome.

Table 8-2: Key Water Supply Projects

Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
Levels of service	Awarua Alternative Water Supply Programme	Improve resilience to climate and natural hazards	Development of an alternative water source and associated treatment, trunk main, reservoir and pumping infrastructure.	Improved security of supply, emergency capacity and resilience to disruption of the existing source.
Levels of service	Branxholme Duplication Manifold and Pump Station	Reduce risk from ageing and critical assets	Duplication of critical pumping infrastructure to improve redundancy and operational resilience.	Reduced single-point-of-failure risk and improved continuity of supply.
Levels of service	Universal Water Metering Programme	Maintain safe, compliant and efficient water services	Implementation of universal water metering to improve demand information, water-loss management and conservation.	Improved demand management, network-loss identification and equitable charging capability.
Levels of service	Leak Detection Programme	Maintain safe, compliant and efficient water services	Ongoing programme to identify water losses within the distribution network.	Reduced water loss, improved network efficiency and more effective targeting of repairs and renewals.
Levels of service	Airport Water Main	Improve resilience to climate and natural hazards	Seismic resilience improvements to critical water supply infrastructure.	Improved network robustness and continuity of supply following seismic events.
Levels of service	Capacity to Bluff	Manage affordability while investing for the future	Network investment to address capacity constraints and support future water demand.	Adequate capacity to support future industrial and economic development in Bluff.
Growth	Reticulation Extension to Surrounding Communities	Manage affordability while investing for the future	Extension of water supply reticulation to communities including Ōtātara and Makarewa, subject to community consultation.	Capacity for future residential growth and additional water supply connections.
Renewals	Water Pipe Network Renewals	Sustain core infrastructure over the long term	Ongoing renewal of water supply reticulation based on asset	Maintained service reliability and reduced risk of unplanned asset

Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
			condition, age, performance and risk.	failure.
Renewals	Water Pump Station Renewals and Seismic Improvements	Reduce risk from ageing and critical assets	Renewal and seismic strengthening of water supply pump station infrastructure.	Improved asset reliability and continued service delivery following seismic events.
Renewals	Branxholme Sludge Processing	Maintain safe, compliant and efficient water services	Investment in sludge processing infrastructure at the Branxholme Water Treatment Plant.	Improved biosolids management, operational efficiency and environmental compliance.
Renewals	Backflow Protection Programme	Maintain safe, compliant and efficient water services	Continuing installation of backflow prevention devices on Council-controlled assets.	Protection of drinking water quality and reduced public health risk.
Consents	Branxholme Resource Consent Renewals	Maintain safe, compliant and efficient water services	Renewal of the Branxholme filter backwash discharge consent (AUTH-94556-V1) and Ōreti River abstraction consent (AUTH-99139-V1).	Continued lawful abstraction and treatment operations.
IT	Water Supply Hydraulic Model Calibration	Enable planned succession of assets	Implementation and calibration of the water supply hydraulic network model.	Improved network planning, performance analysis and investment decision-making.

Project scope, timing and cost reflect the information available when this AMP was prepared. Projects subject to further investigation, consultation, consenting or Council/WSBU approval will be refined through the IDP.

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9 How we Manage the Activity

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C9
This chapter should demonstrate	Governance, capability, asset-information lifecycle, systems, integration, confidence, monitoring and review.

9.1 Governance and Accountability

ICC retains responsibility for the governance and delivery of the water supply activity through an in house WSBU. The WSBU provides organisational separation, financial ring fencing and dedicated leadership for water services while remaining part of Council.

A dedicated Water Committee, comprising elected members and an independent member, provides governance oversight of water services. The Committee oversees service performance, regulatory compliance, risk and delivery of the investment programme within its delegations. Council approves the strategic direction, funding, risk settings and significant investment decisions for the Water Supply activity.

Executive and Water Services leadership implement ICC's direction by establishing organisational priorities, accountabilities, resources and management controls. The WSBU leadership team is responsible for operational performance, regulatory compliance, asset management, risk management and programme delivery within approved delegations.

The WSBU implements approved programmes and provide the asset, cost, condition, risk and performance information required for planning and decision-making. ICC's corporate functions provide supporting financial, digital, risk, customer, procurement, workforce, legal and communications services. Contractors and specialist advisers provide delivery capacity and technical expertise where required.

Risk accountability follows ICC's risk-management framework. Managers and team leaders own and manage risks within their areas, maintain the relevant risk registers, implement treatments and escalate risks when delegated authority or risk thresholds are exceeded. Executive leadership oversees significant risks, while the Risk and Assurance Committee provides governance oversight and assurance.

9.2 Service Delivery Model

The WSBU delivers the water supply activity through a combination of WSBU staff, contractors and consultants. ICC retains accountability for service performance, regulatory compliance, asset management, investment planning and risk management. Service-delivery responsibilities and performance requirements are defined through organisational accountabilities, contracts, service agreements and operating procedures.

WSBU staff operate and manage the raw water assets and treatment facility, and monitor water quality and network operational performance. Network maintenance (treated water reticulation and pump stations) and fault response are led and coordinated by the WSBU and delivered through contracted services.

Asset management and investment planning is also led by the WSBU. Contractors and specialist consultants provide additional capacity and expertise for condition assessment, hydraulic modelling, engineering investigations, design, construction and capital works delivery.

A summary of the delivery approach for water supply activities is presented in Table 9-1.

Table 9-1: Summary of Current Service Delivery Responsibilities

Activity / Function	Delivery Approach
Raw (source) water management and water treatment	Delivered by WSBU staff, including operation and monitoring of the water source, treatment plant and associated facilities. Assisted by O&M contractor(s) as required.
Network operations, maintenance and fault response (treated water reticulation and pump stations)	Led and coordinated by the WSBU, with reticulation services delivered by maintenance contractor (Downer) and specialist electrical and mechanical contractor (Wallace Murray Ltd).
Asset management and investment planning	Led by the WSBU (asset information management, performance and risk assessment, lifecycle planning, renewal prioritisation and investment programme development). Specialist support is used where required.
Engineering services, investigations and design (including drafting, CAD, hydraulic and network modelling)	Delivered by the WSBU, supported by specialist consultants and contractors where required.
Service locating	Delivered by the WSBU and contractors.
Pressure pipeline condition assessment	Led by the WSBU, using specialist contractor
Capital works delivery	Led by the WSBU and delivered with contractors and specialist consultants.
Specialist investigations	Delivered by the WSBU, specialist consultants and contractors, including ground survey, LiDAR, imaging and CCTV investigations.
Customer request and response	Delivered by WSBU staff, ICC call centre and the maintenance contractor.
Emergency response and recovery	Delivered through the WSBU operational arrangements, maintenance contractors, Environment Southland and the Emergency Management Southland Group.
Laboratory services	Delivered by ICC's IANZ accredited laboratory for water supply (and wastewater and stormwater activities).
Drinking water compliance information and reporting	Led by the WSBU and supported by specialist consultant (Lutra through the Water Outlook service agreement).

Activity / Function	Delivery Approach
SCADA System Support	Specialist contractor (AFI) provides software monitoring, problem resolution, application changes, new installations and after hours call out support.

9.3 Asset Information and Systems

Reliable asset information is fundamental to effective asset management and to support decision-making across the asset lifecycle. Asset information is generated and used across a range of systems. The WSBU uses asset, spatial, financial, operational, compliance, customer and document-management information to understand asset location and characteristics, monitor service and asset performance, manage work, assess risk, forecast lifecycle needs and support investment decisions.

Error! Reference source not found.Error! Reference source not found. provides a schematic of the WSBU's wider telemetry and communications environment, including the links supporting Branxholme WTP, water reservoirs and pump stations. The diagram also includes wastewater facilities because elements of the communications network support multiple water services. As information is shared between assets, systems and users, effective information management, integration and consistent data standards become increasingly important.

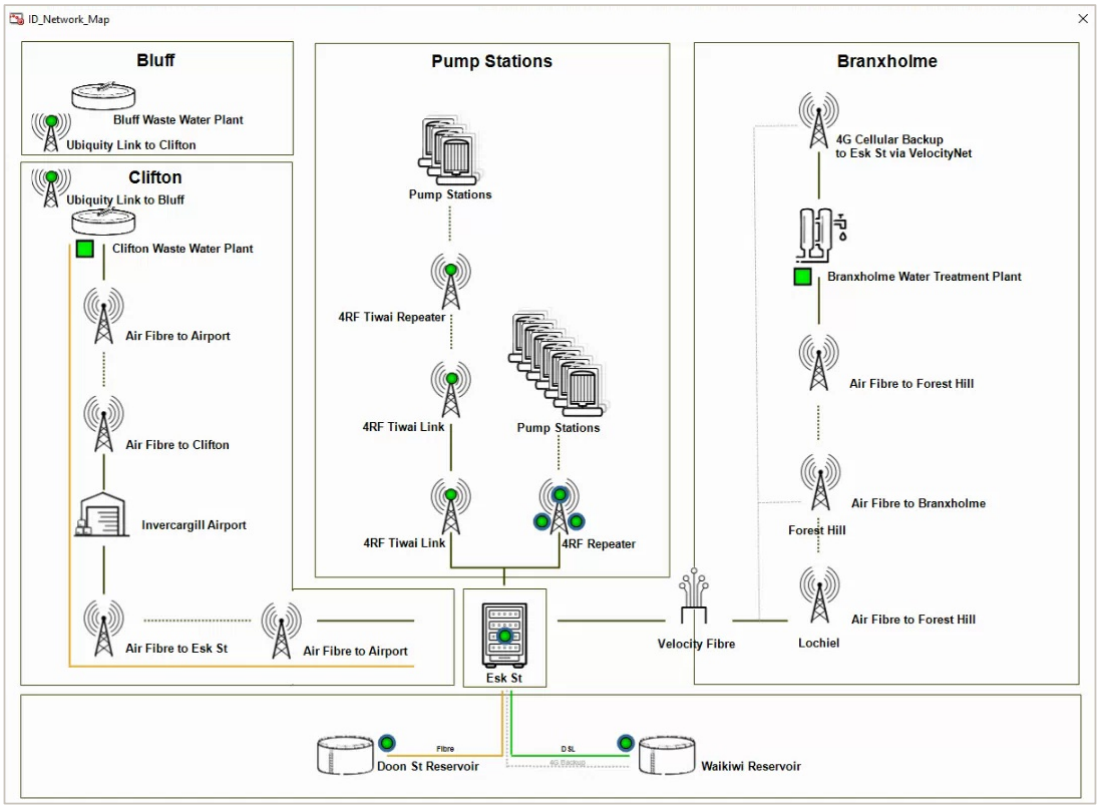


Figure 9-1: Schematic of the Water Supply Operational Environment

9.3.1 Asset Information Systems and Tools

Asset information is collected and updated throughout the asset lifecycle using various information management systems and tools. Information is recorded and maintained across the WSBU's document management systems.

Asset information systems are supported through ICC's ICT environment, which manages system infrastructure, user access controls and operational system support arrangements. Access to systems is managed through individual user accounts and permissions

The principal systems and tools, along with their primary use are summarised in Table 9-2.

Table 9-2: Asset Information Systems and Tools

Information System/Tool	Primary Purpose
TechOne (Enterprise Asset Management)	Asset register, work management, inspections, maintenance history and asset-data capture. IPS is being replaced by TechOne EAM.
Infor Public Sector (IPS)	Asset inventory and job management information used to support maintenance and asset planning.
TechOne Enterprise	Financial and asset valuation information used for asset accounting, financial reporting and investment planning.
ESRI - ArcGIS	Spatial asset information used to map, locate, publicly display and analyse the water supply network.
AVEVA Plant SCADA, supplied via Schneider Electric Plus reticulation, pressure and flow monitoring	Provides operational monitoring and control across treatment facilities, pump stations and water reticulation monitoring sites. The three-waters system monitors or controls 67 of 75 sites, with communications provided through fibre, radio or cellular networks. Provides operational monitoring of key water quality and treatment parameters, including coagulant dosing (PACL), chlorine residual, fluoride, lime dosing, hydrogen peroxide, pH, temperature, and turbidity.
InfoWorks WS Pro	Network information used to assess capacity, pressure, flow and the effects of proposed infrastructure changes.
TechOne Document Management	Management of plans, drawings, inspection records, reports and supporting asset documentation.
Water Outlook	Management and reporting of drinking water operational and technical compliance information.
Microsoft database	Rainfall data administered by the WSBU and provided by Environment Southland.
Environment Southland website	River flow and turbidity information from the Wallacetown Bridge monitoring station. Water Treatment Plant operators record daily flows to monitor source conditions and confirm sufficient storage and network capacity. The information also supports resource consent management and informs water restriction decisions.
Pathway	Customer service requests, faults and complaints used to support operational response and performance reporting.
Ostendo	Asset management system currently used for maintenance scheduling and management of plant assets. The intent is to transition these functions to

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Information System/Tool	Primary Purpose
	TechOne Enterprise Asset Management, subject to future system implementation decisions.

9.3.2 System integration and decision support

Information from the WSBU's information management systems is used collectively to support:

- operational monitoring, control and fault response
- regulatory (Taumata Arowai and Commerce Commission) and DIA levels of service reporting
- condition, performance and criticality assessment
- maintenance and renewal planning
- network capacity and demand assessments
- asset valuation, depreciation and expenditure forecasting
- risk assessment and investment planning.

Information is exchanged between systems through a combination of system interfaces, established business processes and staff-led verification and reconciliation. This enables information from various systems to be considered together when planning and prioritising work.

However, there are no processes in place to link all available asset data from the various sources, and some data can only be assessed through specific software. This can restrict visibility of the necessary information to make holistic decisions regarding the water supply activity.

9.3.3 Data standards

Consistent data standards support informed decision-making throughout the asset lifecycle. Reliable and well-structured asset data improves confidence in operational, maintenance, renewal and investment decisions, supports regulatory reporting, and enables information to be shared effectively between systems and business processes.

The Three Waters Asset Data Standard (3W ADS) is currently under development, with version 4.0 published by Water New Zealand in January 2026. The standard provides a nationally consistent framework for classifying and describing water supply, wastewater and stormwater assets. The standard includes common asset classes, attributes and data structures intended to improve interoperability, reporting, and asset management practices across the New Zealand water sector.

The WSBU intends to progressively align its water supply asset information with the 3W ADS requirements. The current extent of alignment has not yet been formally assessed. Implementation will need to consider:

- Asset classification and hierarchy structures
- Alignment between the asset register and GIS
- Common asset identifiers across multiple systems
- Information requirements for new, renewed and vested assets
- Management of legacy, incomplete, and non-standard records
- Data quality, validation, and migration processes
- Information required to support operational, financial, regulatory and asset management reporting.

The scope, timing and priority of any future alignment activities remain subject to further review and organisational priorities.

Taumata Arowai, the Water Services Authority, is developing National Engineering Design Standards (NEDS) to promote greater consistency in the planning, design and delivery of water infrastructure across New Zealand. The proposed standards are intended to apply to water supply, wastewater and stormwater infrastructure managed by councils and water organisations, including new infrastructure that connects to or becomes part of those networks. The WSBU will continue to monitor the development of NEDS and any associated national guidance, codes of practice or asset information requirements. All relevant requirements will be considered as part of future updates to engineering standards, asset information processes and systems.

Alignment will be implemented progressively and coordinated with the transition to TechOne Enterprise Asset Management. Existing asset information will be mapped and validated before migration to minimise the risk of losing or maintaining incorrect information.

9.3.4 Appropriateness of Asset Information and Systems

The WSBU's asset information and systems are assessed as partially appropriate. There are limitations in data completeness and visibility across multiple software systems, resulting in varying data confidence across the water supply asset portfolio. The main gaps are limited condition information for buried pipes, incomplete component-level information for above-ground assets, uncertainty in some installation dates and remaining lives, and incomplete reconciliation of asset records.

The implementation and commissioning of TechOne Enterprise Asset Management represents the first step in a change in the WSBU's asset information capability. The transition provides an opportunity to establish a more standardised asset data system, and stronger links between the various sources of information.

Current improvement priorities are to:

- Complete asset data migrations, validation and confidence
- Complete the implementation and commissioning of TechOne EAM and components;
- Validate and reconcile migrated asset, spatial and valuation information;
- Improve buried and above ground assets (including component level condition data);
- Document information custodian, system interfaces, validation controls and decision traceability.

9.3.5 Cyber and Access Security

ICC's IT Services team manages the servers supporting water supply information systems. System access and changes are controlled through individual user credentials. The policies, procedures, functional descriptions, and service agreements governing SCADA access and cybersecurity require confirmation. SCADA alarm priorities are operational controls and are documented separately to this AMP.

There is a growing risk of ransomware attacks on government infrastructure and the potential for the WSBU to be locked out of the SCADA systems losing automatic control of various pump stations and treatment processes, which would then have to be manually operated. A Cyber Security Risk Assessment is included in the improvement plan to better understand these risks.

9.4 Asset Information Lifecycle

Asset information is created, maintained and used throughout the asset lifecycle. The lifecycle comprises the following stages:

- create or acquire
- capture and validate
- operate and maintain
- monitor performance
- assess risk

- plan investment; and
- renew, enhance, reuse or retire.

Information generated at each stage is used in subsequent decisions, creating a continuous cycle of information capture, review and improvement. Figure 9-2 below shows how information is created, maintained and reused throughout the asset lifecycle to support evidence-based decisions.



Figure 9-2: Asset Information Lifecycle

9.4.1 Create or Acquire Assets

Asset information is created when assets are constructed, renewed, modified or vested in the WSBU. Information is obtained through design, consenting, construction, inspection, testing, commissioning and project handover.

For subdivision and land development works, the WSBU reviews engineering information and proposed infrastructure through the consent and technical approval process. The survey plan is certified under section 223 of the Resource Management Act 1991 when it conforms with the approved subdivision consent. Certification under section 224(c) confirms that the subdivision consent conditions have been met to the satisfaction of the WSBU or otherwise addressed through an applicable statutory mechanism.

Before new infrastructure is vested or accepted by the WSBU, the required inspections, testing, commissioning and handover information are completed in accordance with the consent conditions and the Code of Practice. Handover information includes where applicable:

- approved and as-built drawings
- asset location, configuration and attributes
- inspection and test results
- commissioning and compliance records
- operating and maintenance documentation
- ownership and asset status
- capital cost and valuation information

Accepted information is provided to the relevant WSBU teams so that the asset, GIS, document and valuation records can be created or updated.

9.4.2 Operate and Maintain

Operational and maintenance activities generate information about asset condition and performance. Information is obtained through a variety of sources including operational monitoring, inspections, planned and reactive maintenance, faults, investigations, customer requests and renewal activities. For example:

- SCADA and telemetry provide operational information and alarms for the treatment, storage, pumping and other monitored assets.
- Work orders, inspection records and supporting documents capture maintenance activities. This includes faults, repairs, investigations and changes to asset condition or performance.
- Customer requests and fault reporting provide additional information on water quality, pressure, flow and continuity of water supply.

Asset information and attribute data is updated when activities result in a material change to an asset, including:

- maintenance or repair
- replacement of an asset or component
- changes to condition or operating status
- changes to asset configuration or function
- identification of a fault or recurring failure
- new inspection, testing or investigation results.

Relevant changes are reflected in the asset register, GIS, document management and valuation records, where applicable.

9.4.3 Monitor Performance and Assess Risk

Asset performance is monitored using all available sources of data. This information is reviewed to identify and monitor:

- changes in asset condition or performance
- recurring faults and failure trends
- capacity or service constraints
- compliance issues
- changes in asset criticality or risk
- emerging maintenance, renewal or improvement needs.

Material findings are recorded in the relevant asset, work-management, risk and planning records. Where an assessment identifies missing or uncertain information, the limitation is recorded and may result in further inspection, investigation, monitoring or data improvement.

9.4.4 Plan Investment

Asset information is used to identify maintenance, renewal and improvement needs. These needs are assessed and prioritised through the WSBU's planning processes and inform:

- maintenance and renewal programmes
- this Asset Management Plan
- the Investment and Delivery Plan

- business cases and option assessments
- capital and operational budgets
- expenditure and valuation forecasts.

The quality and completeness of the underlying information affect confidence in the scope, timing and cost of proposed investment. Assumptions, data limitations and forecast confidence are recorded where they affect investment decisions.

Investment priorities and improvements are described in Section 8 and IDP. The prioritisation framework and lifecycle decision-making methodology are established in the SAMP.

9.4.5 Asset Retirement/Reuse

Assets may be retired when they are no longer required to support the agreed level of service. The retirement approach considers the asset's condition, material, location, residual function, safety and environmental risks, potential for reuse, and the cost and practicability of removal.

When an asset is retired, its operational status and any continuing function are recorded in the asset register and spatial records. Relevant valuation and supporting document records are also updated. Project managers and maintenance contractors provide the information required to update these records following renewal, replacement, modification or decommissioning work. This maintains traceability between the retired asset and any replacement asset.

Retired above ground plant and equipment is removed or disposed of where practicable. Equipment with a residual market value may be sold, while other items may be recycled or disposed of as scrap. Significant civil assets may be demolished, retained or replaced depending on the future requirements of the site. Historically, income from water supply asset disposals has been considered insignificant.

Disused pipes may be:

- removed as part of renewal or other construction work
- disconnected, sealed and left in place
- abandoned and filled (or otherwise stabilised) where required to manage structural or ground subsidence risks
- retained for possible future recommissioning or rehabilitation
- repurposed where appropriate.

Where a pipe remains in the ground, its status, material, location, and residual function remain identifiable in the asset register and GIS. If an asset is reused or its function changes, the asset record is to be updated so its history and relationship to the network remain traceable.

Particular care is required for abandoned asbestos-cement pipes because future removal can be a health and safety risk, and costly to dispose of. The WSBU's earlier planning documents identify pipe disposal as an unresolved issue and note that disused pipes have historically been disconnected and left in the ground. They also identify filling with a low-strength material or removal to an approved landfill as possible treatments

9.5 Service and Asset Monitoring

The WSBU monitors the water supply activity to confirm that levels of service are being achieved, that assets and systems are performing as intended, and identify emerging operational, maintenance, and investment needs. The following services and asset activities are monitored:

- drinking water quality and compliance
- treatment, storage, pumping and network performance
- SCADA and telemetry alarms
- demand, consumption and water-loss trends
- customer requests and complaints

- asset faults, failures and service interruptions
- inspection and maintenance outcomes
- asset condition and performance

Water quality compliance is demonstrated through a combination of continuous online monitoring and routine grab sampling and laboratory analysis. Online systems monitor key treatment and operational parameters, including turbidity, chlorine residual, pH and fluoride, while routine sampling and laboratory analysis provide compliance verification at the source, treatment plant and across the distribution network. Details of the water quality monitoring requirements are maintained within the Drinking Water Safety Plan, sampling plans and associated operational procedures. Monitoring results are recorded through the WSBU's operational and compliance systems and used to support operational decision-making and regulatory reporting.

SCADA and telemetry provide real-time operational monitoring and alarms for the treatment plant, reservoirs, pump stations and other monitored assets. Operational monitoring supports fault response, investigation of abnormal conditions and ongoing assessment of asset and system performance.

Monitoring information is recorded within asset information systems and is used to:

- respond to faults and abnormal operating conditions
- identify recurring failures and deteriorating performance
- initiate inspections, investigations and maintenance
- update condition and risk assessments
- assess achievement of levels of service
- support renewal planning
- inform future investment decisions.

9.6 Asset Management Capability

Effective management of the water supply activity depends on having sufficient people with the appropriate skills, knowledge, systems and authority to operate assets, maintain regulatory compliance, manage risk, plan investment and deliver improvement programmes.

The WSBU delivers these functions through a combination of WSBU staff, other ICC teams, contractors and specialist advisers. Current capability includes water treatment operations, network operations and maintenance, engineering, asset management, compliance monitoring, customer response and capital delivery. External providers supplement internal capability for specialist investigations, condition assessment, hydraulic modelling, design, construction and technical support.

Operational capability is supported by experienced staff and established contractor arrangements. WSBU staff operate the raw water assets and treatment facilities, while network (water reticulation, pump stations and storage) maintenance and fault response are led and coordinated by WSBU with contracted support. Specialist providers also support pressure-pipeline assessment, SCADA, drinking-water compliance information, laboratory services and other technical functions.

Asset management capability is continuing to develop. Current limitations include reliance on the knowledge of key individuals, incomplete asset and condition information, and limited system integration. The transition to TechOne provides an opportunity to improve asset information governance, data consistency, work and inspection records, and decision traceability.

The WSBU's approach is to progressively strengthen internal capability while continuing to use external expertise where specialist skills or additional delivery capacity are required. Improved systems, documented processes, defined responsibilities and knowledge-management practices will also help reduce reliance on individual staff knowledge and support more consistent, evidence-based decisions.

Asset Management Plan
9 How we Manage the Activity

SECTION 9: DRAFTING GAP / ICC CONFIRMATION REQUIRED

- *Insert current governance, roles, contracts, system architecture, data lifecycle, asset-data standards, integration controls, reporting and review arrangements*

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10 Continuous Improvement

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C15)
This chapter should demonstrate	Current / target maturity, assessment results, detailed improvement plan, innovation and next assessment.

10.1 Improvement Basis

ICC's asset management maturity objective is to achieve and maintain an Intermediate level of asset management practice across the WSBU. This reflects the complexity of water service assets, increasing regulatory expectations and the need for evidence based decision-making to support service delivery, risk management and long term investment planning.

Continuous improvement is based on identifying and transparently acknowledging gaps in asset management practice, information and capability, and addressing these through a structured improvement programme. Improvement actions should identify the intended benefit, responsibility, priority, timeframe and evidence required to demonstrate progress.

10.2 Asset Management Maturity Assessment

The most recent formal asset management maturity assessment was undertaken in 2017 using the Infrastructure Management Manual (IIMM) Asset Management Maturity Framework. The assessment was completed internally and evaluated key elements of asset management practice including service planning, lifecycle management, risk management, financial planning and continuous improvement. The results are illustrated in Figure 10-1.

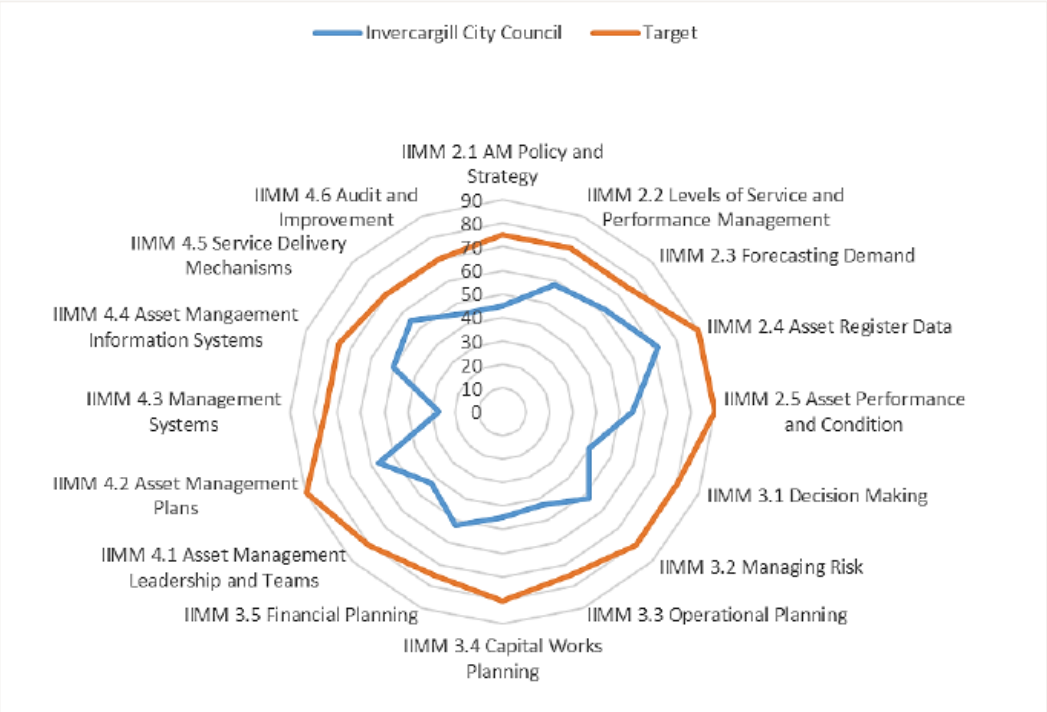


Figure 10-1: Asset Management Maturity Assessment Results (2017)

The assessment indicated that ICC's three waters activities were generally operating at an Intermediate level of maturity. An independent review of the 2020 Water Supply WMP reached a similar conclusion and identified several opportunities to strengthen asset information, condition knowledge, decision traceability and continuous improvement practices.

A comprehensive baseline maturity assessment, including recommendations and an improvement roadmap, is planned for early 2027 to establish a current view of asset management performance and capability. The assessment will establish a current view of asset management performance, identify priority improvement opportunities and support future updates of the WSS, SAMP, AMPs and IDP

10.3 Asset Management Improvement Plan

The Asset Management Improvement Plan provides a structured approach for continually improving the WSBU's asset management practices, information, systems and decision-making processes. Improvement actions have been identified through development of this AMP, previous asset management maturity assessments, Commerce Commission Information Disclosure requirements, risk and resilience assessments, asset information reviews, condition assessments and operational experience.

Improvement actions are prioritised based on their contribution to service delivery, risk reduction, regulatory compliance, information quality, asset management maturity and investment decision-making. The WSBU recognises that not all improvements can be delivered simultaneously and will progressively implement improvements having regard to organisational capacity, affordability and deliverability.

Future obligations arising from the Local Government (Water Services) Act 2025 are expected to influence asset management practices during the planning period. These include requirements relating to network information, service assessments, planning and performance reporting. As regulatory guidance and implementation requirements continue to evolve, the WSBU will monitor emerging obligations and incorporate them into future asset management processes, information systems and improvement programmes.

For the water supply activity, priority improvement areas include:

- Asset Information and Systems
- Condition and Lifecycle Knowledge
- Risk and Resilience
- Asset Management Capability
- Planning and Investment Confidence

Improvement items have been identified through various sources, including:

- Maturity Assessment recommendations,
- Asset Management Objectives,
- Commerce Commission Information Disclosure requirements,
- Internal interviews done for information gathering for AMPs and SAMP drafting,
- Risk registers and criticality assessment,
- Condition assessments and asset inspections,
- Level of Service performance,
- Data quality and system reviews,
- Incidents, faults and lessons learned,
- Future expected regulatory, organisational growth or Level of Service drivers,
- Wider industry learning and knowledge sharing.

Asset Management Plan
10 Continuous Improvement

Table 10-1: Summary of Asset Management Improvement Items

Improvement	Description	Asset Management Objective	Benefit	Timeframe
Asset Management Maturity Assessment	Undertake a formal asset management maturity assessment and develop an improvement roadmap aligned with the Strategic Asset Management Plan.	Lift asset management maturity	Targeted improvement and governance of water services.	
Validate Existing Data	Register includes active, abandoned, removed, duplicate, hazard, private and proposed records	Lift asset management maturity	Build a defensible portfolio of statistics and forecasts for waters infrastructure.	
Critical Asset Framework	The 2017 Project Max criticality framework is focused mainly on pipes and does not provide a complete view of critical water supply assets. Expand criticality framework/register to include source, treatment, storage, pumping and SCADA assets. Ensure it is aligned with ICC's Risk Management Framework	Reduce risk from ageing and critical assets	Focuses investment on assets with the greatest service, health and compliance risks.	
Develop a Buried Asset Condition Assessment Programme	Limited buried asset condition information requires the development of a structured condition assessment programme for water reticulation assets, including targeted investigations, inspections and condition grading.	Enable planned succession of assets	Improves confidence in renewal timing and reduces the risk of unexpected failures.	
Develop a Risk Based Renewal Approach and Plan	Integrate asset condition data, criticality, performance and risk information into renewal programme prioritisation.	Reduce risk from ageing and critical assets	Directs investment towards assets with the highest risk and service consequences.	
Continue investigations to progress refining the Alternative Water Supply Programme	Continue planning and investigation of an alternative water supply source and associated infrastructure to reduce dependence on the Oreti River.	Improve resilience to climate and natural hazards	Reduces single source supply risk and improves emergency water supply resilience.	
Asset Management Capability Development	Strengthen asset management knowledge and practices across the WSBU by embedding whole of life asset costs,, risk-based decision making and continuous improvement into O&M and planning.	Lift asset management maturity	Builds asset management capability and ownership, improving consistency and confidence in decision making.	
Water Service Performance Framework	Review and refine levels of service, performance measures and reporting processes to align with Water Services Strategy and Information Disclosure requirements.	Maintain safe, compliant and efficient water services	Improves transparency and provides clearer links between service outcomes, performance and investment.	
Fault and failure data analysis	Analyse three waters network asset data including condition information, customer requests and maintenance records to identify failure trends, high-risk assets and renewal priorities. Integrate findings into risk assessments and renewal planning.	Maintain safe, compliant and efficient water services	Improves understanding of network performance, supports evidence based renewal planning and reduces reliance on age and material based assumptions.	
Climate Risk Assessment and Adaptation Planning	No detailed climate risk assessment has been completed for any of the three waters activities. Therefore consequence of failure, exposure and vulnerabilities are not well understood. Assess the vulnerability of the various three water supply assets to drought, flooding, storm events, earthquake and climate change impacts. Use findings to prioritise resilience improvements and future investment planning.	Improve resilience to climate and natural hazards	Improves understanding of asset and service vulnerabilities, supports targeted resilience investment and strengthens longer term security of supply to communities. Outputs will feed into WW and SW Network Risk Management Plans.	
Asset Information Standards Alignment	Implement a staged approach to aligning asset data, hierarchies (parent, child and component assets), classifications and attributes with the 3WADS,	Lift asset management maturity	Improves data quality, consistency and traceability for reporting, planning and investment decisions.	

Asset Management Plan
10 Continuous Improvement

Improvement	Description	Asset Management Objective	Benefit	Timeframe
	.			
Asset Class/Cohort Planning	Parent/child relationship. Complex assets include pump stations and treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, plant and equipment or telemetry equipment etc. and some component-level assets are missing from the asset data. It is intended to improve the data capture and links between these assets as part of the move to the new TechOne data system.	Lift asset management maturity	Improving asset data quality and visibility or these assets will provide operators better information to manage the existing system and will improve the ability to make appropriate planning decisions for these assets.	
Lifecycle Planning Improvement	Develop improved deterioration modelling, intervention strategies and renewal forecasting methodologies across major asset classes.	Sustain core infrastructure over the long term	Supports long-term stewardship of assets and improves confidence in lifecycle investment forecasts.	

10.4 Innovation

The WSBU team attend conferences and keep up with industry good practice. There are no specific innovations in place for the water supply activity.

10.5 Review and Continuous Improvement

The WSBU will review this Water Supply AMP annually to keep it aligned with current service performance, asset risks, regulatory requirements and investment priorities. Regular data-quality reviews and continued condition-assessment programmes will improve confidence in asset information, particularly for buried pipes and other assets where condition evidence is limited. Review findings will be used to update asset records, risk assessments, renewal priorities and future AMP content.

Progress against the Water Supply Priority Improvement Programme will also be monitored through the annual review process. Improvement actions will be updated as better information becomes available and will be informed by the planned 2027 asset management maturity assessment and improvement roadmap. This will support the progressive improvement of asset management capability, decision traceability, resilience planning and regulatory readiness across the water supply activity.

SECTION 10: DRAFTING GAP / WSBU CONFIRMATION REQUIRED
Add owner, date identified, target date, cost, resources, capability requirements and progress evidence for each action.
Identify any innovations in the water supply activity

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Appendices

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Appendix A Schedule C Compliance Map

Clause	Schedule C Requirement	Primary AMP Location	Supporting location(s)
C6	Asset management plan: general requirements	Chapter 1: Introduction and Plan Context	Chapter 2: Strategic and Regulatory Context
C7	Consumers	Chapter 3: Consumer Groups and Levels of Service	Chapter 5: Future Demand and Impact of Drivers; Section 7.2: Asset Acquisition and Procurement
C8	Networks, assets and critical assets	Chapter 4: Asset Portfolio, Condition and Performance	Chapter 6: Risk and Resilience; Chapter 9: How We Manage the Activity
C9	Information management	Sections 9.3–9.5: Asset Information and Systems, Asset Information Lifecycle, and Service and Asset Monitoring	Sections 4.3–4.5: age, condition and performance information
C10	Performance indicators	Sections 3.3–3.5: Levels of Service Framework, Current Performance, and Future Levels of Service	Section 3.7: Links to the Investment Delivery Plan; Chapter 8
C11	Asset enhancements and improvements	Chapter 5: Future Demand and Impact of Drivers for C11(1); Chapter 8: Asset Improvements and Enhancement Programme for C11(2)–(4)	Chapter 3: service-level drivers; Chapter 4: capacity; Chapter 6: risk; Chapter 7: lifecycle needs
C12	Network asset maintenance and renewals	Chapter 7: Lifecycle Management	Chapter 4: condition and performance; Chapter 6: risk; Chapter 8: investment response
C13	Non-network assets	Section 4.2.7: Non-Network Assets	Chapter 7: Lifecycle Management; Chapter 8 where material investment is identified
C14	Risk and resilience	Chapter 6: Risk and Resilience	Section 4.7: Critical Assets; Chapter 8: improvement responses; Chapter 9: monitoring and information
C15	Asset management maturity, continuous improvement and innovation	Chapter 10: Continuous Improvement	Improvement actions identified throughout Chapters 4–9

Wastewater Asset Management Plan

Invercargill City Council

In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
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Date:
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Prepared by:
Stantec New Zealand

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01	15 September 2026	Wastewater AMP	Working draft for ICC comment
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Drafting conventions

Commerce Commission Information Disclosure references are included in the Section tables throughout the document to identify relevant clauses and demonstrate alignment with Schedule C requirements.

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity-specific strategic, regulatory, policy, sustainability and climate drivers.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN

Callouts at the end of each section identify:
- information gaps or missing evidence;
- matters requiring WSBU confirmation or professional judgement; and/or
- actions required to improve AMP maturity and support future updates.

For example:

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Confirm current No. residential and commercial wastewater connections.
Acquire latest wastewater reticulation area map from ICC.



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Appendix A Schedule C Working Compliance Map
A.1 Gaps/Assumptions

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Executive Summary

The Wastewater Asset Management Plan sets out how Invercargill City Council and their in-house Water Services Business Unit will manage its stormwater activity over the next 30 years. The network is currently meeting its service targets and forecast growth can generally be accommodated, but changing regulation, climate effects and incomplete asset information will place increasing pressure on future performance and investment.

The WSBU owns and maintains assets on behalf of the community, providing a wastewater collection and disposal service for properties in Invercargill, Bluff, Otatara, Ōmāui and Kennington residential areas. Treated effluent is discharged from the Clifton Wastewater Treatment Plant (WWTP) to the New River Estuary, from the Bluff WWTP to Foveaux Strait, and from the Ōmāui Oxidation Pond to irrigation land adjacent to the community. ICC holds consents issued by Environment Southland for these discharges.

Planned investment will maintain existing services while addressing renewals for aging infrastructure, upgrading treatment facilities and outfalls to meet upcoming consenting requirements, and improving network resilience for key assets. The priority wastewater improvements identified for the WSBU focus on the following themes:

- Improve network understanding through hydraulic modelling calibration and flow monitoring improvements
- Increasing confidence in asset condition through CCTV investigations
- Update asset documentation and improve component level data for complex assets

Delivery will need to remain affordable and realistic, supported by stronger asset data, clearer governance and improved programme oversight. Clear ownership, timeframes and regular progress reviews will support delivery and inform future updates of the AMP and Investment Delivery Plan.

1 Introduction and Plan Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C6 (1b)(1c)(1d)
This chapter should demonstrate	Approval, assumptions, summary and planning-document alignment.

1.1 Purpose and Scope

This Asset Management Plan (AMP) provides the tactical planning framework for Invercargill City Council's (ICC) in-house Water Services Business Unit (WSBU) wastewater activity. It describes how the wastewater activity will be managed including the strategic direction established in the Water Services Strategy (WSS) and the asset management principles defined in the Strategic Asset Management Plan (SAMP). The wastewater activity is one of the core infrastructure activities addressed in the ICC Long Term Plan (LTP).

The purpose of this AMP is to outline ICC's planning and management practices for the wastewater activity. The wastewater networks in Invercargill, Bluff, Ōmāui, Otatara and Kennington are considered to be strategic assets and are significant in ensuring the needs of their communities are met. This AMP describes the management of the assets on behalf of customers and stakeholders and assists with the achievement of strategic goals and statutory compliance. The AMP combines management, financial, engineering and technical practices to ensure that the level of service required by the customers is provided and is delivered in a sustainable and efficient manner. This AMP is based on existing levels of service, currently available information, and existing knowledge and judgement of ICC staff.

A programme of Asset Management improvements is planned to improve the quality of decision making and to improve the knowledge of Council's assets and customer expectations. These future enhancements will enable ICC to optimise life cycle asset management activities and provide a greater degree of confidence in financial forecasts.

This AMP is structured to align with the Commerce Commission Water Services Information Disclosure requirements and follows the asset management planning framework established by the WSBU. The document addresses consumer requirements, levels of service, asset performance, demand, risk, lifecycle management, investment planning and continuous improvement.

1.2 Planning Horizon

This AMP adopts a 30-year planning horizon to support long-term infrastructure development and investment decision-making. Detailed service levels, expenditure forecasts and performance targets are generally presented for the first ten years, aligned with the WSS, Investment Delivery Plan (IDP) and Council's LTP. Planning assumptions, demand forecasts and investment priorities are reviewed periodically to ensure they remain appropriate and reflect changing community expectations, regulatory requirements and operating conditions.

1.3 Relationships with other ICC Documents

Council's wastewater activity operates within a wider planning framework that includes statutory planning documents, asset management strategies, infrastructure planning, bylaws and regulatory obligations.

Council operates under a District Plan. This Plan is derived through the Resource Management Act 1991. It gives effect to national policy statements on a variety of environmental issues, and is about managing the use, development and protection of natural and physical resources in a way that enables the community to provide for their holistic wellbeing.

The Local Government Act 2002, Schedule 10 requires the development of a 10 year Long Term Plan (LTP). The LTP confirms maintenance and capital works budgets that are approved by Council to meet community outcomes. The AMP underpins the activities in the LTP and is implemented through

expenditure programmes in asset areas. Adoption of the budgets for these programmes is carried out through the LTP process. Changes to budgets for programmes may occur during the consultation process and adoption of LTP budgets.

In 2014, an amendment to the Local Government Act 2002 inserted a statement that Asset Management Planning should be a fundamental part of Council's prudent stewardship of community resources over the long term, a requirement to produce a 30 year infrastructure strategy for core assets.

The relationship between the principal water planning documents is shown in Figure 1-1.

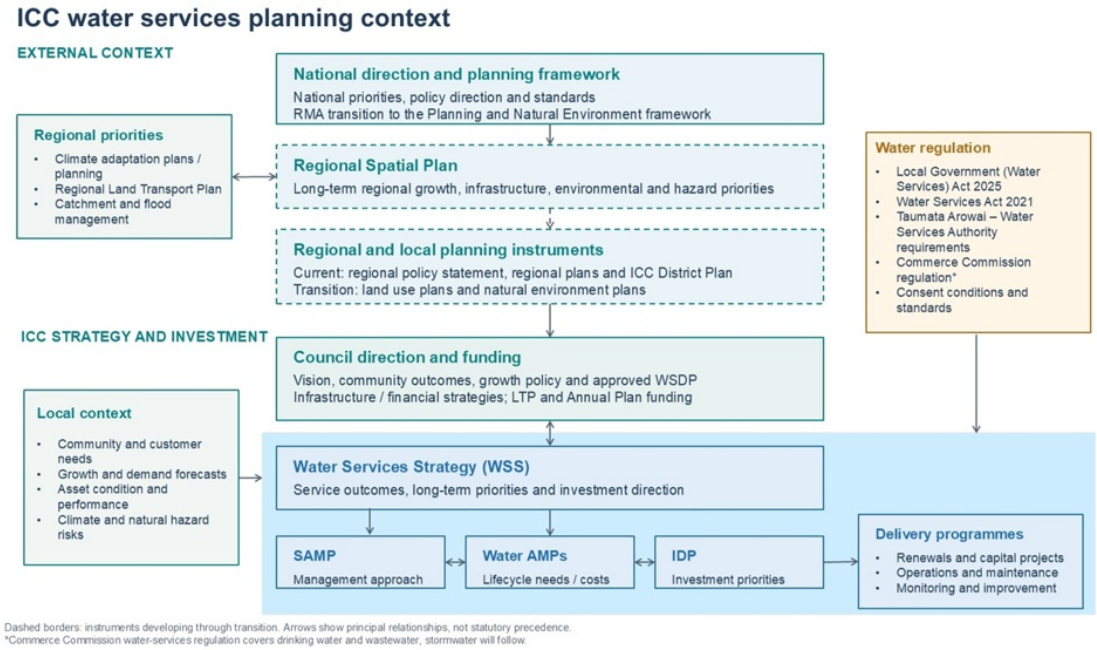


Figure 1-1: ICC Water Services Planning Context

1.4 Relationships with other Commerce Commission Documents

The Wastewater AMP forms part of ICCs integrated planning framework. The relationship between the key planning documents is shown in Table 1-1.

Table 1-1: Key Planning Documents

Document	Role	How this AMP Links
Water Services Strategy (WSS)	Sets long term outcomes, service expectations, strategic direction, and key investment priorities for water services. Provides transparency regarding how water services will be delivered over the planning period.	Defines what ICC is seeking to achieve for customers, communities, public health, environmental outcomes and service resilience. The AMP translates these strategic outcomes into levels of service, lifecycle management strategies, risk responses, renewal needs and investment requirements.
Strategic Asset Management Plan (SAMP)	Translates strategy into asset management objectives, principles, and decision-making frameworks	Provides the asset management methodologies, lifecycle planning approach, risk framework, and decision-making processes applied within this AMP.

Document	Role	How this AMP Links
Asset Management Plan (AMP)	Provides activity-specific asset planning for each three waters service, Water Supply, Wastewater, and Stormwater	Applies the strategic direction and asset management framework to the wastewater activity, including levels of service, demand, risk, lifecycle management and improvement planning.
Investment Delivery Plan (IDP)	Develops prioritised, staged and fundable programmes.	Uses the needs, risks, service level gaps, and investment priorities identified in this AMP to develop delivery programmes and expenditure forecasts.

Together, the WSS, SAMP, AMP and IDP provide a connected planning framework. The WSS establishes long-term outcomes and expectations, the SAMP defines how asset management decisions will be made, the AMP identifies service risks, lifecycle needs and required interventions, and the IDP converts those needs into prioritised, staged and deliverable investment programmes. This provides a clear line of sight from strategic objectives through to operational delivery and investment decision making.

1.5 Activity Overview

The WSBU owns and maintains assets on behalf of the community, providing a wastewater collection and disposal service for properties in Invercargill, Bluff, Otatara, Ōmāui and Kennington residential areas. Treated effluent is discharged from the Clifton Wastewater Treatment Plant (WWTP) to the New River Estuary, from the Bluff WWTP to Foveaux Strait, and from the Ōmāui Oxidation Pond to irrigation land adjacent to the community. ICC holds consents issued by Environment Southland for these discharges.

The removal of wastewater from residential, industrial and commercial properties protects public health, supports city growth, and contributes to the general wellbeing of the community. In urban areas, wastewater disposal is most effectively achieved by means of reticulated (piped) wastewater systems. This allows the costs associated with maintaining high standards and efficient infrastructure to be spread over the community.

The objectives of the wastewater activity are:

- To safeguard public health and the environment
- To support economic growth and community wellbeing
- To provide a cost effective wastewater collection service
- To provide a service meeting the requirements of the Local Government Act 2002, and maintain its capacity to do so
- To meet the requirements of the Health Act 1956 which requires the Council to improve, promote and protect public health within the district

Figure 1-2 below shows an overview of the wastewater reticulation area.

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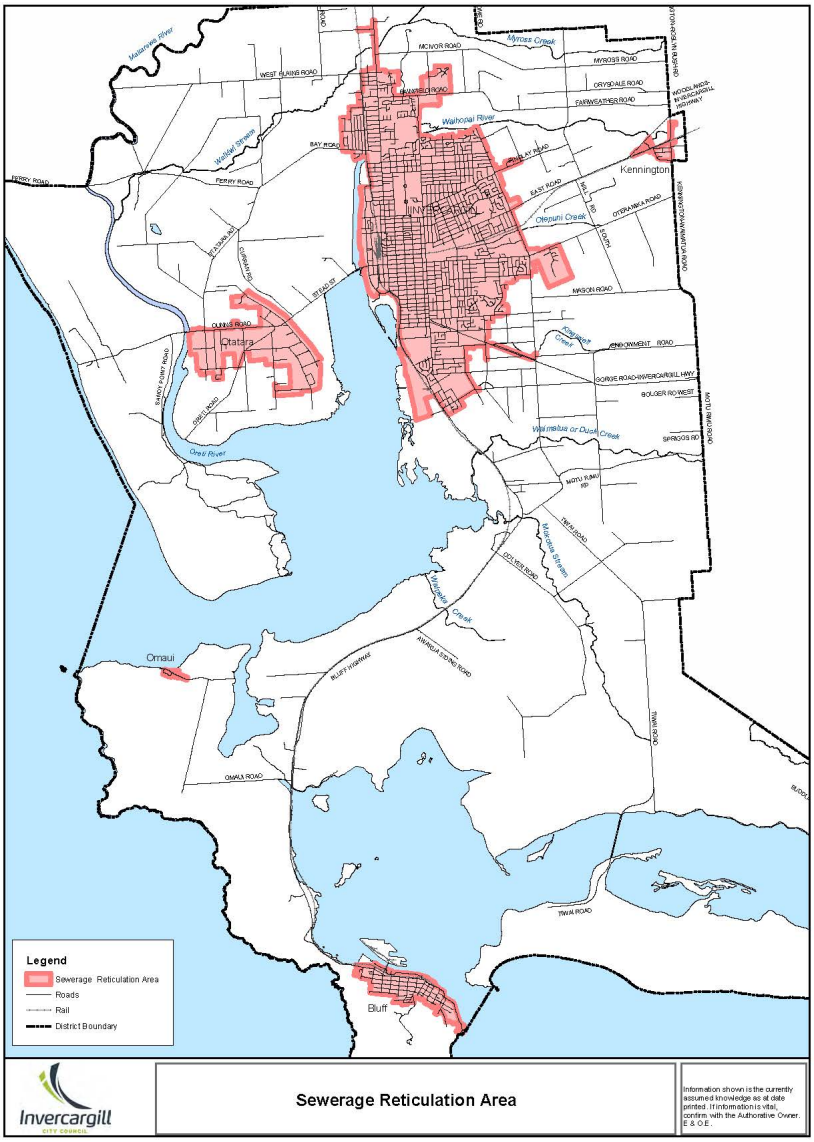


Figure 1-2: Wastewater Reticulation Area

1.6 Significant Assumptions

This AMP identifies the key assumptions that influence service levels, risk, lifecycle planning, resilience and investment decisions. These assumptions represent the best information available at the time of preparing this AMP and will be reviewed and updated as new information becomes available.Table 1-2 presents assumptions that will influence this AMP.

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Table 1-2 Wastewater AMP Significant Assumptions

Assumption	Qualification	Reason for Significance
Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Asset condition information is sufficient to support current planning decisions.	Current asset condition data is incomplete and of variable confidence, and actual condition may be worse than assumed.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Current discharge consents will be renewed or transitioned gradually the meet the WEPS.	Discharge consents may be renewed with different conditions.	Compliance is a primary driver of investment. Changes may change capital and operational costs and affect affordability.
Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.
Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery.	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Asset data quality and asset management system capability will improve over the planning period.	Improvements are dependent on continued investment in systems, data collection and organisational capability.	Asset information underpins decision-making, forecasting confidence and compliance with information disclosure requirements.
Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.

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Asset Management Plan
Introduction and Plan Context

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Confirm current No. residential and commercial wastewater connections.
Acquire latest wastewater reticulation area map from ICC.
Confirm assumptions are appropriate and there are no gaps.

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2 Strategic and Regulatory Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity-specific strategic, regulatory, policy, sustainability and climate drivers.

2.1 Strategic Context

2.1.1 Purpose of the Activity

The purpose of local government (Section 10 of Local Government Act) is meeting the current and future needs of communities for local infrastructure, public services, and regulatory functions. The Wastewater Activity contributes to the purpose of local government through the provision of infrastructure under section 10 of the Local Government Act 2002 and is identified as a core service under section 11A(1)(a).

The activity contributes to the community outcomes identified in Table 2-1 below:

Table 2-1 Alignment of the Wastewater Activity with Community Outcomes

Community Outcome	How the Wastewater Activity Contributes
Nobody is Left Behind – Our youth, older people, different neighbourhoods and communities basic needs are met through cost effective investment, and they feel valued and proud to live here.	The wastewater activity protects public health by the safe collection of wastewater.
A vibrant, safe city which meets our people's diverse cultural needs.	The wastewater activity protects public health by the safe collection of wastewater.
A future focused economy delivered through innovation and partnership and supported by appropriate infrastructure.	The wastewater activity protects public health by the safe collection of wastewater.
A healthy, resilient environment supporting a healthy, resilient community.	The wastewater activity protects environment by the safe collection of wastewater.

The removal of wastewater from residential, industrial and commercial properties protects public health, supports city growth, and contributes to the general wellbeing of the community. In urban areas, wastewater disposal is most effectively achieved by means of reticulated (piped) wastewater systems. This allows the costs associated with maintaining high standards and efficient infrastructure to be spread over the community.

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The objectives of the wastewater activity are:

- To safeguard public health and the environment
- To support economic development and business continuity
- To provide a cost effective wastewater collection service
- To provide a wastewater service that meets the legislative requirements of the applicable regulations, see Table 2-2

Delivery of these objectives requires the WSBU to balance service performance, resilience, environmental outcomes, regulatory compliance, and affordability when making long-term investment decisions. These outcomes are reflected through the WSS, Level of Service (LoS) framework, risk management processes, and investment planning described throughout this AMP.

The 2024/25 Residents Survey identified wastewater services as one of the WSBU's highest-priority services, alongside sewerage, water supply, roading, solid waste management and parks and reserves. This reinforces the importance consumers place on the wastewater activity.

2.2 Strategic Issues

The key strategic issues and challenges facing the ICC are:

- Meeting the changing needs of our rangatahi as part of our wider community.
- Meeting and preparing for the changing needs of our wider community that is growing older and more diverse.
- Delivering financially sustainable and affordable investment in the core infrastructure the city needs to thrive, innovate and grow.
- Building resilience and preparedness as we navigate through increasingly complex environmental challenges including climate change, land contamination and earthquake risks and other natural hazards.
- Investing in partnerships and new ways of working to achieve more together.
- Ensuring Council leadership and delivery is credible and effective, building community trust and engagement and effectively navigating regulatory change.

There are several strategic issues specific to the wastewater activity. These challenges are described in the following sections.

2.2.1 New Discharge Consents Conditions

The discharge consents for the Clifton and Bluff WWTPs will expire in the next few years. The Bluff WWTP consent was originally scheduled to expire at the end of 2026 but has since been extended to now expire in August 2028. The Clifton's WWTP discharge and odour consents are scheduled to expire in 2029.

It is currently uncertain whether new consents will require improved discharge quality under the Wastewater Environmental Performance Standards (WEPS). If this is the case the WWTPs may need process upgrades or a change in discharge to meet the new requirements.

The Clifton WWTP currently discharges treated effluent at high tide to the New River estuary. However, a new consent is expected to require an alternative discharge location and treatment process upgrades. This could include a discharge further into the New River estuary, Oreti Beach, Steep Head, or to a discharge to land rather than water. A treatment process upgrade will be required in conjunction with the new discharge location and will be a significant upcoming project.

The Ōmāui Oxidation Pond facility's discharge consent is also scheduled to expire in 2029 but is expected to be a consent renewal without requiring any changes or upgrades to the existing treatment or discharge system.

Council are currently investigating potential compliance options that would be needed for the Bluff WWTP to acquire a new discharge consent. Like with the Clifton WWTP, this will include potential upgrades to the treatment process and treated effluent discharge location.

2.2.2 Aging infrastructure

Based on asset data accessed on 27 July 2026, the average age of the Council pipe network is 60 years, and the average remaining pipe life is 36 years. The average network age has been slowly increasing over the past decade; in 2016 the average network age was 55 years. Pipe assets at or past their expected useful life are much more likely to experience faults. As parts of the network reach the end of their useful life, investment in maintenance and renewal programmes will be needed so that the network can continue to achieve the needed levels of service.

2.2.3 Inflow and Infiltration

Flow monitoring surveys have revealed high levels of stormwater inflow and infiltration (I&I) in some areas. There is a risk that climate change driven increases in rainfall intensity lead to the possibility of greater I&I into the wastewater network. Increasing I&I rates will increase the risk of network overflows during wet weather. As the risk of I&I increases, renewal work will need to focus on these areas to address the incidence of wastewater overflows.

2.2.4 Limited Resilience and Redundancy

The WSBU has a key dependency on two treatment facilities, the Clifton WWTP and Bluff WWTP. There is a risk that key rising mains to these treatment facilities could fail without redundancy, resulting in spillage occurring over a longer period. Additionally, should pump stations be exposed to a significant event such as fire or long term electricity loss, they could be rendered unusable if there are no redundancy options in place. The risk to these assets is partially mitigated by the presence of emergency generators.

2.2.5 Asset Condition and Renewals

The WSBU commenced programmed CCTV (Closed Circuit Television) inspection of its wastewater network focusing on aging and problem areas of the network. 24% percent of the pipe network has been CCTV inspected and condition rated in accordance with the New Zealand Gravity Pipe Inspection Manual 4th Edition.

The WSBU has not CCTV inspected enough of the network to determine the overall network condition rating. Development of an ongoing CCTV inspected programme for network condition rating purposes is planned as part of the WSBU's improving asset management maturity.

Network condition assessments are currently based on a desktop exercise using experienced engineering knowledge of the networks performance and maintenance history. That assessment recorded a value of 25% of the network being less than average condition. Currently the work done by the CCTV inspection programme indicates 31% of the network being less than average condition which does not reflect the assessment above. The difference is partly because the CCTV programme prioritises aging and problem areas of the network so would produce conservative results. Continuation of the CCTV programme will provide longer term validation of results.

The lack of pipe condition knowledge reduces confidence in renewal timing, remaining useful life estimates and long-term expenditure forecasting. Improving the quality and coverage of asset condition information remains a significant asset management priority.

2.2.6 Growth and Demand

The existing network and treatment capacity is generally sufficient to accommodate forecast residential growth. However, future demand remains uncertain and may be influenced by industrial development, climate conditions, consumer behaviour, I&I , and future demand management initiatives. Ongoing monitoring of demand trends and strategic growth assumptions will therefore remain important.

2.2.7 Service Coverage and Community Expectations

The reticulated wastewater system services communities in Invercargill, Bluff, and Ōmāui, while the Makarewa community uses septic tanks. Future decisions regarding service expansion will need to

balance customer expectations, affordability, public health outcomes, the environment, growth demand and long-term sustainability considerations.

2.2.8 Financial Sustainability and Affordability

The wastewater activity faces increasing investment requirements associated with resilience improvements, renewals, regulatory compliance, and service expectations. At the same time, delivery of capital programmes is influenced by funding constraints, contractor availability, market capacity, and organisational capability.

Recent programme reviews have identified the need to align investment profiles with realistic delivery capacity. There is a risk that the infrastructure construction industry will not be able to meet local government demand in the coming year. Continued balancing of affordability, deliverability, risk reduction, and service outcomes will remain a key strategic consideration.

2.2.9 Compliance and Environment

The water sector is undergoing significant reform, including changes to wastewater regulations, economic regulation, water services planning requirements, local government reform, resource management reform, and climate change adaptation and resilience expectations. These reforms are increasing the focus on public health, environmental outcomes, financial sustainability, transparency, resilience, and long-term asset stewardship. Continued compliance with evolving legislative and regulatory requirements will remain a key driver of operational activities, service delivery, asset management practices, and capital investment.

2.2.10 Climate Change and Resilience

Climate variability and increasing frequency of extreme weather events may affect the frequency of wet weather overflows, treatment operations, network performance, asset deterioration, and emergency response requirements. While no specific wastewater climate risk assessment has yet been completed, climate-related risks are expected to influence future resilience planning, asset management decisions, and investment priorities. Areas of potential risk include sea level rise threatening assets, in particular Clifton WWTP, storm induced flood exposure of treatment and pumped infrastructure, network resilience, and increasing wet weather overflow events.

2.3 Regulatory and Legislative Context

The WSBU operates under a number of legislative frameworks. The Local Government Act 2002 and Health and Safety at Work Act 2015 are the most prevalent to Council's core business. The Local Government Act is the overarching framework that regulates what Council's scope is, as well as their ability to conduct day-to-day business. The Health and Safety at Work Act ensures that as an employer the council meets all requirements to always care for their employees in a safe manner.

The wastewater activity is subject to oversight from a number of national and regional regulatory agencies, including:

- **Taumata Arowai/Water Service Authority** - responsible for regulating environmental performance, compliance, and risk management.
- **Commerce Commission** - responsible for the economic regulation of water services, including Information Disclosure (ID) requirements and performance transparency.
- **Environment Southland** - responsible for regulating environmental effects through resource consents, including discharge authorisations.

These obligations directly influence service levels, operating practices, risk management processes, asset management strategies, and investment decisions. Compliance is supported through a range of planning, operations, and assurance processes.

The principal legislative and regulatory requirements applicable to the wastewater activity are summarised in Table 2-2.

Table 2-2: Legislation and Regulations affecting the Wastewater Activity

Legislation / Regulation	Relevance to Wastewater
Local Government Act 2002	Requires infrastructure strategy development, asset management planning, levels of service, lifecycle management, demand forecasting, long-term funding, performance reporting, and periodic review of service delivery arrangements.
Taumata Arowai Act 2020	Provides national oversight of network performance, risk management planning, monitoring, compliance, enforcement, and environmental impacts.
Local Government (Water Services) Act 2025	Establishes Local Water Done Well requirements, including Water Services Strategies, Water Services Delivery Plans, governance arrangements, performance monitoring, and long-term financial sustainability requirements.
Commerce Act 1986 *(Water Services Information Disclosure Determination 2026)*	Establishes the economic regulation framework for water services and requires disclosure of financial, asset management, operational, investment, risk, and service performance information to improve transparency, accountability, and regulatory oversight.
Health and Safety at Work Act 2015	Requires management of risks to workers, contractors, visitors, and the public arising from the operation, maintenance, and construction of wastewater infrastructure.
Civil Defence Emergency Management Act 2002	Requires emergency preparedness, business continuity planning, and resilience measures to support continued delivery and restoration of essential water services during emergencies.
Resource Management Act 1991 and successor legislation	Regulates discharges, environmental effects, land use, and consenting requirements for wastewater infrastructure. Requires protection of water resources, management of environmental effects and natural hazards, and compliance with planning and environmental requirements.
Wastewater Environmental Performance Standards (WEPs)	Sets out the required minimum treatment standards for wastewater that must be met to obtain a resource consent.
Hazardous Substances and New Organisms Act 1996	Requires Council to ensure that hazardous materials are stored, transported, and disposed of in a compliant manner. Within the wastewater activity, Council controls discharges of hazardous substances to the wastewater system through the Trade Waste bylaw.
Proposed Southland Land and Water Plan (Operative in Part)	Regional regulations to manage activities that affect receiving water environments.

Collectively, these legislative and regulatory requirements influence levels of service, operational practices, asset management decisions, risk management activities and investment priorities. This AMP describes how Council intends to manage these obligations over the planning period.

2.4 Resource Consents and Compliance Obligations

The delivery of wastewater services is dependent on resource consents that regulate treatment plant discharge activities. These consents establish operational limits, environmental performance requirements and compliance obligations, service reliability, environmental outcomes and Council's ability to accommodate future growth while maintaining agreed levels of service. Environmental monitoring compliance with discharge consents is provided by Lutra who report breaches to the WSBU.

Table 2-3 below summaries key consents associated with the wastewater activity.

Table 2-3: Wastewater Resource Consents

Consent	Description	Expiry
AUTH- 200749	To discharge up to 90,000 cubic metres of treated wastewater to the New River Estuary via a discharge channel from the Clifton Wastewater treatment plant	2029-06-30
AUTH- 200750	To sporadically discharge screened wastewater to the New River Estuary when compliance with Resource Consent 200749 cannot be achieved due to plant mechanical failure or extreme weather events	2029-06-30
AUTH- 200752	To discharge contaminants to land from the Clifton wastewater treatment plant, via seepage from waste treatment processes	2029-06-30
AUTH-20136275-V2	To discharge stormwater and leachate to land, in circumstances where it may enter water, at Station Road, Invercargill, from the processing of sludge from wastewater treatment plants	2029-06-30
AUTH-20136298-01	To discharge contaminants including odour to air from wastewater treatment, including the emission of odour masking agents and emissions from biosolids processing	2029-06-30
AUTH-20202120-01	To construct two new wastewater pipelines under the beds of the Mokotua Stream and Waimatua Creek and occupy that space within the coastal marine area.	2055-10-06
AUTH- 202189	To discharge oxidation pond treated effluent to land at Mokomoko Road, Ōmāui	2029-02-26
AUTH-302764-01	To discharge biosolids to land at Christies Road, Sandy Point, Invercargill, from the Clifton wastewater treatment plant	2034-12-18
AUTH-302764-02	To discharge dust and odour to air when putting biosolids into windrows at Christies Road, Sandy Point, from the Clifton wastewater treatment plant	2034-12-18
AUTH-94556-V1	To discharge up to 2,200 cubic metres per day of filter backwash water into the Oreti River and into the ground via the base of the settling pond	2038-05-09
AUTH- 99062	To occupy the coastal marine area with a sewage outfall pipeline at Ocean Beach Bluff	2027-08-27
AUTH- 98236	To discharge treated sewage and wastewater into the coastal and marine area for the purpose of wastewater disposal in Foveaux Strait, Bluff (Restricted Coastal Activity)	2027-08-27

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Confirm approach for extended discharge resource consents

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3 Consumers and Levels of Service

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C7 and C10
This chapter should demonstrate	Consumer groups and impacts, expectations, satisfaction, complaints, connection practices, indicators and ten-year targets.

3.1 Consumer and Service Baseline

The WSBU provides wastewater services to consumers within Clifton WWTP, Bluff WWTP, and Ōmāui Treatment Facility wastewater catchments. The 2025 Water Services Delivery Plan (WSDP) records 22,582 residential connections in Clifton, 1,333 residential connections in Bluff, and 56 residential connections in Ōmāui. It also records 1,380 non-residential connections in Clifton and 187 non-residential connections in Bluff. These figures are shown in Table 3-1 below. The key consumer groups and services they require are outlined in Table 3-2.

The serviced population estimate uses census data and density applied to the connected catchment. The number of connections is currently recorded in IPS and the serviced catchment assumes any property within 60 m of the network has a full connection. The WSBU have used the total recorded connections by approximately 2.35 people per connection to get a "population" with the assumption that a non-residential connection is equivalent in discharge / usage as a residential property.

A reticulated wastewater system is not currently provided to Makarewa, which has unserved population of 1,134. Growth is expected to remain relatively low density over the planning period.

Table 3-1 Current and Forecast Wastewater Consumers

Measure	FY2026/27	FY2036/37	Change
Serviced population Equivalent*	53,335	56,063	+2,728
Residential Properties	22,628	23,786	+1,158
Non-residential Properties	1,583	1,664	+81

Table 3-2 Consumer Groups and Service Requirements

Consumer Group	Service Requirement
Residential customers	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health
Commercial and industrial customers	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health
Critical customers (hospital, schools, emergency services etc.)	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health

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Consumer Group	Service Requirement
Future customers	Capacity available to accommodate growth
Mana whenua and community stakeholders	Sustainable management of water resources and protecting environmental health from wastewater discharges
Environmental regulators	Discharge compliance, monitoring, and treatment controls.

Some industrial operations like South Pacific Meats and Open Country Dairy rely directly on dedicated pipeline infrastructure to discharge their industrial wastewater back into the Clifton WWTP.

3.2 Customer Expectations and Engagement

The WSBU uses a combination of resident surveys, customer requests, complaints monitoring, Long Term Plan consultation, Water Services Delivery Plan engagement, elected member feedback and engagement with mana whenua to understand customer expectations and emerging service priorities. These inputs help Council understand community preferences regarding the wastewater service's reliability, resilience, affordability and future investment priorities.

These consumer expectations are considered alongside regulatory requirements, public health obligations, risk assessments, affordability considerations and asset condition information when establishing levels of service and prioritising future investment.

Customers of the wastewater network activity expect:

- Adequate wastewater drainage to remove wastewater from the properties and to protect the health of the community
- Prompt response to requests for service relating to maintenance issues
- Protection of receiving water from contamination through cross contamination of stormwater
- Manage treatment plant effluent discharges to avoid adverse effects on the receiving water

3.3 Levels of Service Framework

Levels of Service (LoS) are performance indicators that define the outcomes the WSBU seeks to deliver through the wastewater activity and provide the basis for measuring, managing and improving service performance.

The LoS framework for the wastewater activity is outlined in Table 3-3, with the impact to consumer groups in Table 3-4.

Table 3-3 Levels of Service Framework

Outcome	Indicator / evidence	Working target/status
Public and Environmental Health	Dry weather overflows per 1,000 properties	Max 4 dry weather overflows per year
Resource Consent Compliance	Abatement notices, infringement notices, enforcement orders, or convictions in relation wastewater discharge resource consents	Max 0 compliance violations per year
Responsive service - arrival to overflow/fault	Median time to arrive on-site from notification of overflow/fault	Less than 1 hour

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Outcome	Indicator / evidence	Working target/status
Responsive service - rectification time of overflow/fault	Median time to resolve overflow/fault from notification	Less than 6 hours
Consumer experience	Complaints per 1,000 connections	Max 4 complaints per year

Table 3-4: Impact to Consumer Groups if level of service is not achieved

Consumer Group	Service Impact if Level of Service Not Achieved
Residential	Wastewater overflows and public safety risk
Commercial	Business interruption
Developers	Delays and increased costs
Environment	Reduced receiving water quality

3.3.1 Levels of Service Hierarchy

ICC and the WSBU use a hierarchy of service measures to provide a line of sight between community outcomes, customer expectations, operational performance and regulatory compliance. This framework ensures service performance is measured at both a customer and operational level.

The hierarchy consists of:

- **Community Outcomes** – longer term outcomes sought through the delivery of water supply services, including public health, reliability, resilience and the sustainable management of water resources.
- **Customer Levels of Service** – the service outcomes experienced by consumers, such as safe drinking water, continuity of supply and timely response to service requests.
- **Technical Levels of Service** – operational and engineering measures used to monitor the performance, reliability and efficiency of the water supply system.
- **Regulatory Measures** – performance measures prescribed through legislation, regulation and industry reporting requirements, including drinking water compliance (administered by Taumata Arowai) and mandatory performance measures administered by the Department of Internal Affairs (DIA).

Together, these measures provide a framework for monitoring performance, identifying service gaps and demonstrating achievement of customer, community and regulatory outcomes.

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Asset Management Plan
Consumers and Levels of Service

3.3.2 Levels of Service – Performance Measures and Targets

The table below summarises the performance measures, targets, and links to Council's community outcomes

Table 3-5: Levels of Service - Performance and Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	WSS/community outcome supported
6.1	DIA Performance Measure 1 (system and adequacy) Number of dry weather sewerage overflows per 1,000 properties	Max 4 per year	Existing service response target	Council monitors and effectively manages the wastewater network to support community wellbeing and environmental health	To safeguard public health and the environment
6.2	DIA Performance measure 2 (discharge compliance) Compliance with ICC's resource consents for discharge from its sewerage system measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions Received by ICC in relation to those resource consents.	Max 0 per year	Existing service response target	Council monitors and effectively manages the stormwater network to support environmental health and efficient use of resources	To safeguard public health and the environment
7.1	a) The median response time from notification to arrival on-site to attend sewerage overflows resulting from a blockage or other fault in the sewerage system	≤1 hour	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources	To support economic growth of the community
7.2	b) The median response time from notification to resolution of sewerage overflows resulting from a blockage or other fault in the sewerage system	≤6 hours	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources	To support economic growth of the community
7.3	DIA Performance Measure 4 (customer satisfaction) The number of complaints received about: • sewage odour • system faults • system blockages	Max 4 per year	Existing service response target	Council is responsive to the community in order to manage the wastewater network to support environmental health and efficient use of resources	To support economic growth of the community

Asset Management Plan
Consumers and Levels of Service

- ICC's responsiveness (expressed per 1,000 properties connected to the Council's sewer system)

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3.4 Current Performance

Available performance results indicate that the wastewater activity is generally achieving its established service targets. The current performance suggests that the wastewater network is meeting customer and regulatory expectations. However, continued attention is required in areas such as resilience and asset condition to ensure current performance levels can be sustained over the longer term.

The sections below discuss the WSBU performance trends over the last five to six years.

3.4.1 Network Dry Weather Overflows

The dry weather overflows have consistently fallen under the maximum target rate for the past five to six years. They are recorded based on callouts to the WSBU and then assessed if there is an overflow from the wastewater network. Overflows from residential properties are not counted in this number.

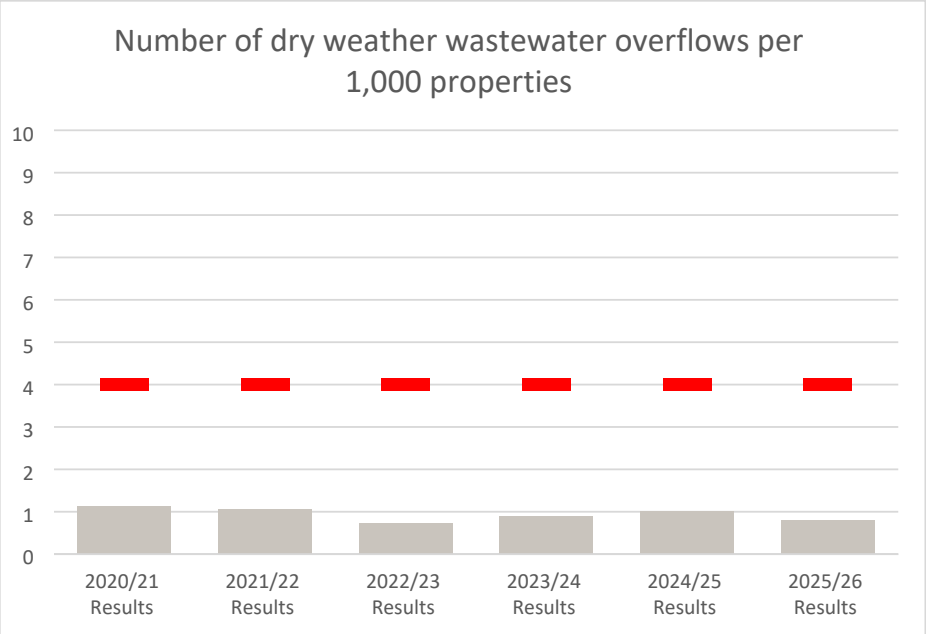


Figure 3-1 DIA Performance Measure: Dry Weather Overflows

3.4.2 Resource Consent Non-Compliance

The WSBU has not received any abatement notices, infringement notices, enforcement orders or had any convictions in relation to their wastewater system resource consents in the past five to six years. However, an enforcement order and subsequent conviction occurred in 2019/2020 related to a constructed sewer overflow connected to the stormwater system. Since then, known constructed wastewater connections to the stormwater network from the wastewater network have been disconnected and sealed off.

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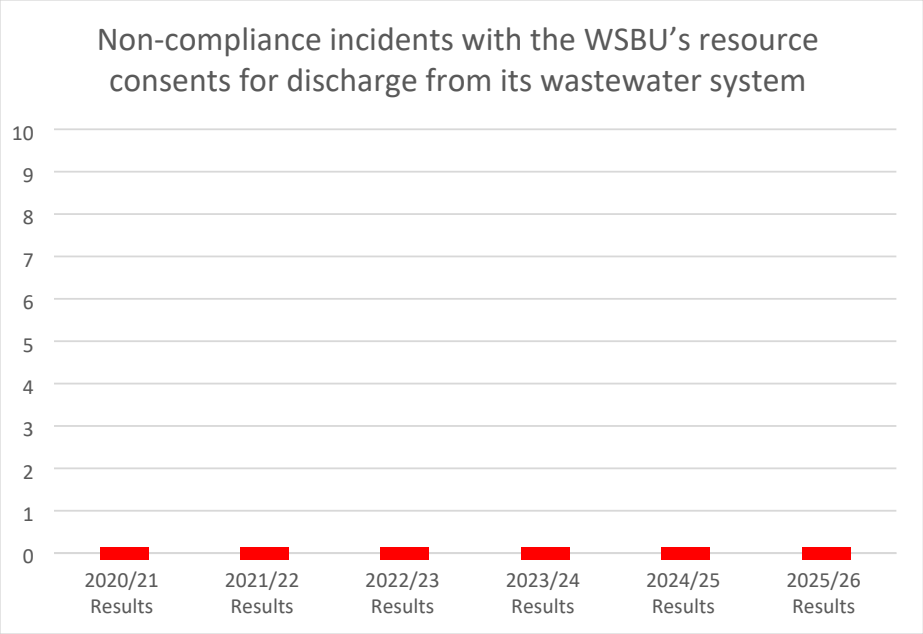


Figure 3-2 DIA Performance Measure: Non-compliance Incidents

3.4.3 Wastewater Overflow and Fault Resolution

Wastewater system overflows and faults have consistently been attended and resolved well within the target timeframes. This indicates that operational processes, contractor performance, and network management arrangements are effectively responding to issues with the wastewater system.

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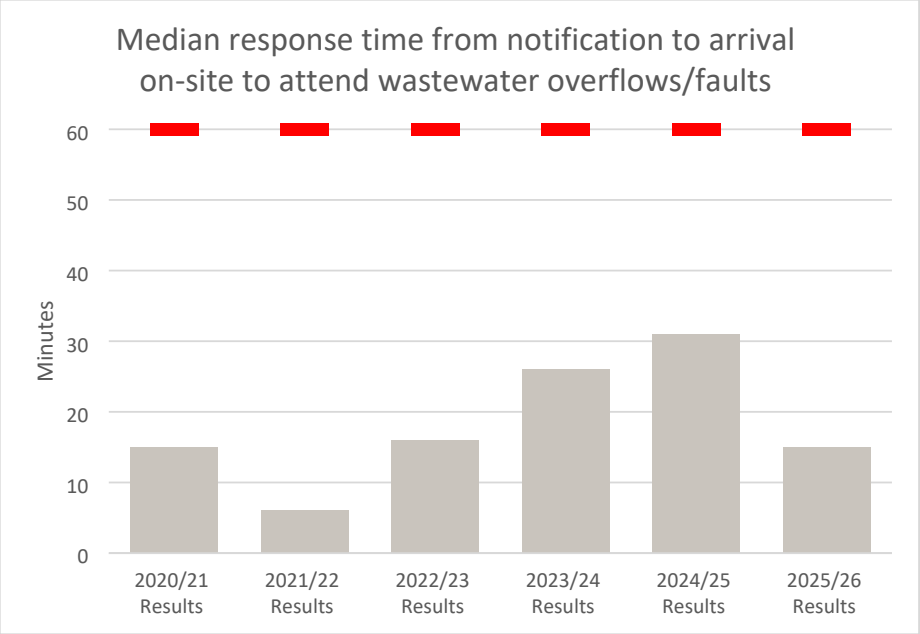


Figure 3-3 DIA Performance Measure On-site Response Time

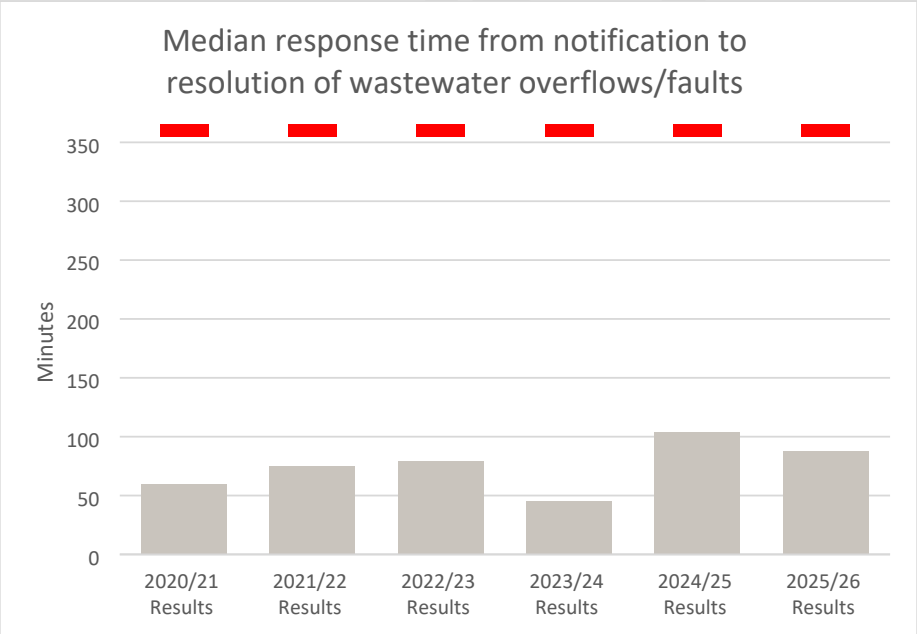


Figure 3-4 DIA Performance Measure Resolution Response Time

3.4.4 Customer Satisfaction

The number of customer complaints has generally been below the WSBU's target except in 2023/24 where there were 4.69 complaints received per 1,000 connected properties. This suggests that while wastewater services are generally meeting customer expectations, there is room for improvement. The WSBU continues to monitor customer feedback and complaint trends as an important source of information for service improvement and future investment planning.

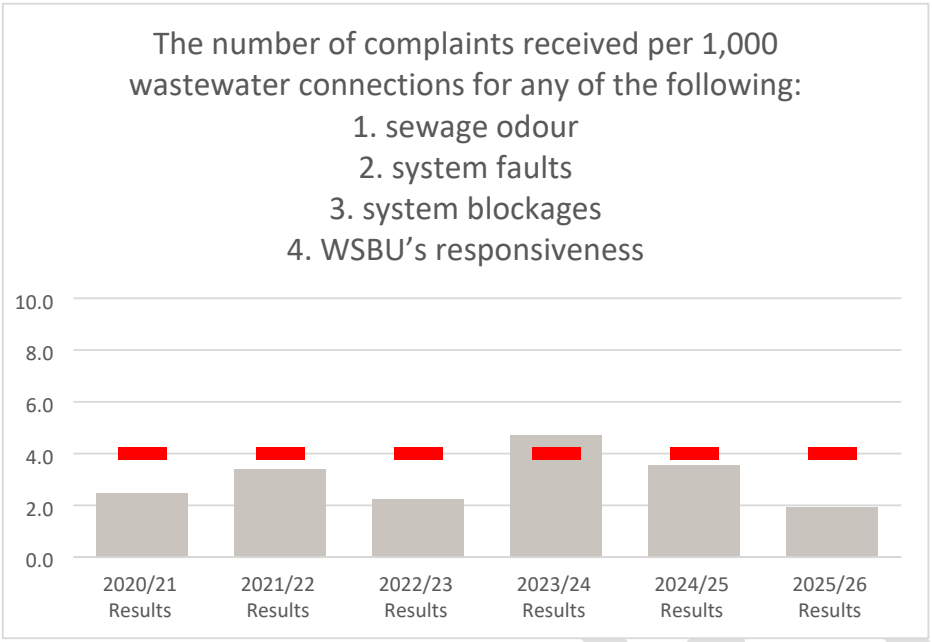


Figure 3-5 DIA Performance Measure Customer Complaints

3.5 Future Levels of Service

The WSBU does not currently propose any material changes to the levels of service, performance measures, or performance targets for the wastewater activity over the next 10 years. The existing framework is considered appropriate for monitoring service performance, meeting regulatory obligations, and reflecting current consumer expectations.

Levels of service will continue to be reviewed through the WSBU's strategic planning and reporting processes. Future reviews may consider regulatory change, growth, climate resilience, environmental outcomes, water demand management, and evolving community expectations. Any approved changes will be incorporated into future planning documents and investment.

3.6 Complaints and Requests

The WSBU monitors customer requests, service enquiries and complaints through its customer service systems. Customer feedback provides an important source of information regarding service performance, consumer expectations and emerging operational issues.

Complaint and request information is regularly reviewed to:

- Identify recurring service issues and trends
- Monitor performance against established levels of service
- Identify potential asset performance or condition issues
- Prioritise operational and maintenance responses
- Inform future renewal, resilience and improvement planning

Customer requests and complaints are considered alongside operational performance data, asset condition information, risk assessments, and regulatory requirements when determining future investment priorities.

Although complaint levels remain low relative to the WSBU performance targets, ongoing monitoring of customer feedback provides an important mechanism for identifying service gaps and opportunities for continuous improvement.

3.7 Links to the Investment Delivery Plan

The Levels of Service (LoS) framework is a key input to investment planning for the wastewater activity. LoS provide an important link between customer expectations, regulatory requirements, service performance, risk management, and future capital investment decisions. Performance against agreed service levels is regularly monitored to identify service gaps, emerging risks, capacity constraints, and opportunities for improvement. Where current or forecast performance is not expected to achieve the agreed LoS, an appropriate response will be considered through the IDP. Investment associated with Levels of Service is typically directed towards one or more of the following drivers:

- Regulatory requirements and Treaty settlement obligations
- Environmental improvements and efficiencies
- Meeting current levels of service
- Enhancements to levels of service
- Resilience and risk
- Other applicable investment
- Growth and future demand

This approach helps ensure that expenditure is directed towards initiatives that maintain or improve service performance, address identified risks and support the long-term sustainability of the wastewater activity. Significant wastewater projects currently identified as contributing to LoS improvements include:

- Mersey Street wastewater main duplication
- Clifton WWTP discharge upgrade
- Bluff WWTP discharge Upgrade
- Otatara rising main wastewater network improvement
- Preston Street rising main duplication
- Lindisfarne rising main duplication
- Makarewa Treatment Plant

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Confirm performance measure trend narrative; add context of additional complaints in 2023/2024 if possible.
Confirm consumer groups, and if there are any industrial / commercial users.
Add consumer group impact statements.
Update figures once residential growth and connection forecasts are confirmed by ICC.

4 Asset Portfolio, Condition and Performance

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C8 and C13
This chapter should demonstrate	Portfolio, maps, critical assets, condition, capacity, performance and asset statistics.

4.1 System Overview

The WSBU owns and maintains assets on behalf of the community, providing a wastewater disposal service to each property in Invercargill, Bluff, Otatara, Ōmāui and Kennington residential areas. Treated effluent is discharged from the Clifton Wastewater Treatment Plant to the New River Estuary, from the Bluff Wastewater Treatment Plant to Foveaux Strait, and from the Ōmāui Oxidation Pond to land adjacent to the community. ICC holds consents issued by Environment Southland for these discharges.

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The city has three wastewater networks consisting of a total of 378 km of pipe in a variety of materials and in sizes ranging from 40 mm diameter to 1,800 mm diameter. The most common material category is earthenware (comprising 55% of the network) and the most common size category is 150mm diameter (comprising 68% of the pipe network). The separate wastewater networks are located at Ōmāui, Bluff and Invercargill, serving populations of approximately 70, 2,080 and 46,220 respectively, each with a local wastewater treatment plant.

The wastewater system includes 31 pump stations ranging in size from those serving only a few households, to the Mersey Street station which serves a population of about 26,000.

The pipe network is aging with about 69 km of the network now over 100 years of age, which is the assumed economic life of most pipes. The IDP includes funding for renewal of ageing pipelines, and some investigation and prioritisation of renewal needs has been initiated, including CCTV inspection of 24% of the network, and a flow monitoring survey. Flow monitoring surveys have revealed high levels of stormwater infiltration in some areas, and renewal work may need to focus on some of these areas to reduce the risk of wastewater overflows.

The WSBU retains pipe, pump station, and treatment plant asset data and maintenance records on an in-house Asset Management Database called IPS. However, the WSBU are currently planning to move to a new asset management system called TechOne in 2026/27. The public can access some of the collected asset data through an online ArcGIS viewer.

The asset data for this AMP was accessed from IPS on 27 July 2026. Statistics referred to in this document are from this data set, but asset data categorised as inactive, abandoned, removed, duplicate, or proposed have been removed.

IMAGE PLACEHOLDER

Figure 4-1: Invercargill City Council Schematic of Wastewater System

4.2 Asset Categories and Description

The wastewater asset base has been grouped, where practicable, into the Water Services Information Disclosure asset categories. These asset groups are used throughout this AMP to describe the asset portfolio.

- Wastewater pump stations
- Wastewater Reticulation Assets
- Wastewater Storage Facilities
- Wastewater Treatment Facilities and Outfalls
- Wastewater Monitoring and Control
- Non-network Assets

The wastewater system comprises the following principal asset groups:

Table 4-1: Asset Portfolio Summary

Asset Group	Primary Function	Quantity	Average Age
Wastewater Pump Stations	Provides pressurised wastewater conveyance to pumped reticulation pipes	31	46 years*
Wastewater Reticulation Pipes - Gravity	Provides wastewater conveyance through gravity reticulation pipes	334 km	66 years
Wastewater Reticulation Pipes - Pumped	Provides wastewater conveyance through pumped reticulation pipes	44 km	22 years
Wastewater Reticulation Manholes	Provides maintenance access to wastewater pipes	3,744	62 years

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Asset Group	Primary Function	Quantity	Average Age
Wastewater Storage Facilities	Provides operational storage for the wastewater network	1	38 years
Wastewater Treatment Facilities	Provides wastewater treatment to enable discharged of wastewater to meet consented standards	3	40 years
Monitoring and Control Systems - Telemetry	Provides data monitoring for processes, primarily for wastewater pump stations and treatment facilities	55	4 years
Monitoring and Control Systems – Remote Terminal Units (RTUs)	Provides data monitoring and operational control for processes, primarily for wastewater pump stations and treatment facilities	28	4 years

**The pump stations have multiple components with variable ages, typically the original wet well structures are older than the pumping mechanical and electrical equipment. The average age for the pump station's original structure is used in the above table.*

4.2.1 Wastewater Pump Stations

The wastewater activity includes 31 pump stations located throughout the wastewater network. The stations vary in size from those with less than 10 connected properties to the Mersey Street Pump Station. Mersey Street Pump Station serves the majority of Invercargill, including the Commercial and Business Centre, with an estimated connected population of 23,000.

The pump stations are monitored and controlled by operations staff using the Supervisory Control and Data Acquisition (SCADA) system, which provides real-time data on equipment performance and triggers alarms when processes exceed pre-set limits.

All stations are equipped with electric pumps and have sufficient capacity to deal with peak infiltration flows, and stand-by capacity to deal with pumps being out of service due to breakdown or maintenance requirements. The major pump stations (Mersey Street, Preston Street, Lindisfarne Street, and Bluff main wastewater pump stations) and some minor stations are equipped with stand-by generators which will operate the stations at full capacity in the event of power failure.

In the event of power failure at the smaller stations, wet wells can be emptied by a suction tanker while power supply is restored, or power can be supplied by a mobile power generator.

Pump stations are designed to deal with the expected wastewater flows from their respective catchments including some groundwater and stormwater I&I. However, as the pump stations are generally located in the lowest part of catchments and often close to waterways, they are susceptible to stormwater flooding during extreme rainfall events (greater than five year return period rainstorm), or as a result of breaches in the stop bank system.

Weekly preventative inspections of pump stations are carried out by WSBU staff to ensure operational efficiency. Annual inspections are completed in partnership with the WSBU's electrical/mechanical maintenance contractor.

The pump station locations are shown on the MAP PLACEHOLDER.

4.2.2 Wastewater Reticulation Assets

The pipe network consists of 378 km of pipe in the Invercargill urban area, Otatara, Ōmāui, Kennington, and Bluff, and serves a connected population of approximately 53,867 people as well as several trade waste discharges.

The key network characteristics are:

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- 88% of the wastewater network is comprised of gravity pipework and 12% of the network is comprised of rising main pipework.
- Pipe ranges in size from 40 mm diameter to 1,800 mm diameter.
- The most common pipe material in the wastewater network is earthenware at 55% of the pipe network.
- The most common pipe size in the network is 150 mm at 68% of the pipe network.
- There is a small amount of assets with an unknown pipe material, 0.05% of the network length, and an unknown installation date, 0.05% of the network length.
- Approximately 24% the wastewater network has been surveyed by CCTV and condition rated in accordance with the New Zealand Gravity Pipe Inspection Manual.

Wastewater laterals are currently considered private property up to the wastewater main and therefore are not included in the IPS asset data. However, Council do renew and rehabilitate wastewater laterals up to the property boundary when undertaking renewal work on wastewater mains. Council are currently in the process of formalising their ownership over wastewater laterals from main pipes up to the property boundaries.

4.2.3 Wastewater Storage Facilities

The wastewater network has one storage facility, a storage pond at the Otatara Pond Wastewater Pump Station. It is a former treatment oxidation pond for Otatara, originally constructed in 1988, which has been repurposed to serve as the wet well for the Otatara Pond Pump Station since 2001.

4.2.4 Wastewater Treatment Facilities and Outfalls

There are three wastewater treatment plant (WWTP) and discharge facilities as described below:

4.2.4.1 Clifton Wastewater Treatment Plant

The Clifton WWTP receives and treats wastewater from the urban area of Invercargill, servicing a population of approximately 46,220 people and a number of trade waste discharges. An average daily inflow of 29,000 m^3 is received, screened, and treated in primary sedimentation tanks, secondary trickling filters and tertiary facultative ponds. The primary treatment plant was built in 1969, the secondary plant in 1992, and the tertiary facultative ponds in 2004. Aerated basins were built in 2006 to treat industrial effluents.

The discharge is to the New River Estuary and is covered by a discharge consent which expires in 2029.

The WWTP also holds consents to discharge stormwater and leachate to land at the biosolids drying area, and for air discharges, all expiring in 2029, and a consent expiring in 2034 to discharge biosolids to land at Sandy Point.

Discharge consent conditions were reviewed in 2010 and since then the plant has fully complied with consent conditions.

4.2.4.2 Ōmāui Oxidation Pond

The Ōmāui Oxidation Pond was constructed in 1989 and receives domestic wastewater from approximately 70 people. The discharge is to land adjacent to the pond and has a consent which will expire in 2029.

4.2.4.3 Bluff Wastewater Treatment Plant

The Bluff wastewater reticulation collects wastewater from approximately 2,080 people, and a number of trade waste dischargers who are predominately fish processors. Wastewater is treated at the Bluff Wastewater Treatment Plant. An average daily inflow of 890 m^3 is received and treated in an aerated lagoon, followed by clarification and UV disinfection. The plant was constructed in 2000.

The discharge is to Foveaux Strait at Ocean Beach and is covered by a consent which will expire in 2028.

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4.2.5 Monitoring and Control Systems

The wastewater network is supported by Supervisory Control and Data Acquisition (SCADA) systems that provide real time monitoring and operational control of treatment, storage, pump, and distribution assets. These systems support efficient system operation, enable rapid response to faults, and contribute to maintaining reliable service delivery.

4.2.6 Non-Network Assets

Non-network asset refers to a wastewater service asset that is not a network asset.
Examples include:

- resource consents
- information and technology systems (Aside SCADA)
- asset management systems
- office buildings
- vehicles
- tools and machinery

There 13 buildings recorded as being utilised for the wastewater system. Seven of these are associated with the Clifton and Bluff WWTPs, for buildings such as the control room, laboratory, or administration buildings. The remaining six buildings are primarily pump houses or equipment sheds associated with the following wastewater network pump stations:

- Mersy Street Pump Station
- Lindisfarne Pump Station
- Bluff Main Pump Station
- Preston Street Pump Station
- Clyde Street Pump Station
- Morrisons Beach Pump Station

The oldest building recorded within the network is the Clyde Street Pump Station Pump House built in 1937, and the newest building is the Bluff WWTP Control Room. The assessed remaining life of the buildings has not been recorded.

4.3 Asset Age and Remaining Useful Life

Asset age is an important indicator of future renewal requirements and long-term lifecycle expenditure. Based on the network data from IPS accessed on 27 July 2026, the average age of the wastewater pipe network is 61 years, and the average remaining useful life is 33 years. The pipe network is aging with about 69 km or 18% of the network now over 100 years of age, which is the assumed economic life of most pipes. Asset age information is used alongside condition, performance, criticality and risk information when forecasting renewal requirements and investment needs.

The WSBU engages a third-party consultant to undertake a useful life valuation of its wastewater pipe network every three years. The valuation uses material type to give a base useful life estimate which is added to the installation date and subtracted from the current year to calculate the theoretical remaining life. When an asset that is assessed as being still operational is found, even if the age and material would suggest no remaining life, it is given a minimum 3 year remaining life until the next valuation.

Asset age alone is not a reliable predictor of asset failure, as performance can vary significantly depending on material type, operating environment, maintenance history and operating conditions. Renewal decisions are therefore based on a combination of age, condition, performance, risk and criticality rather than age alone.

The pipe network asset remaining useful life profile is shown below in Figure 4-2.

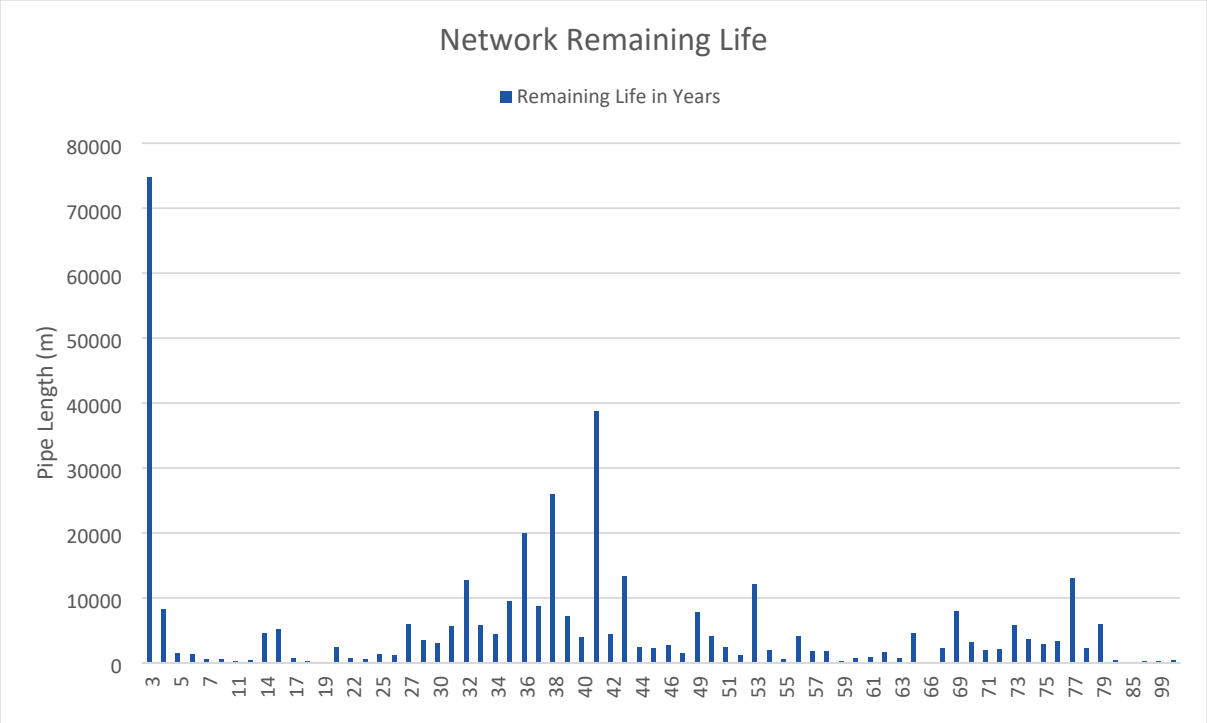


Figure 4-2: Wastewater Pipe Network Remaining Useful Life

4.3.1 Material Profile

The IPS network data indicates that the pipe portfolio comprises a mix of earthenware, PVC, concrete, polyethylene, asbestos concrete, and small lengths of other materials. About 0.2 km (0.05%) of the network pipe length has an unknown or not recorded material. The network data totals include approximately 207 km of earthenware (55%), 77 km of PVC (20%), 38 km of concrete (10%), 30 km of polyethylene (8%), and 27 km of asbestos concrete (7%).

The prevalence of older asbestos cement and earthenware assets is relevant to long-term renewal planning. These pipe materials are known to be brittle and can be at risk of cracking during ground movement.

The pipe material distribution of the wastewater pipe network is shown in Figure 4-3.

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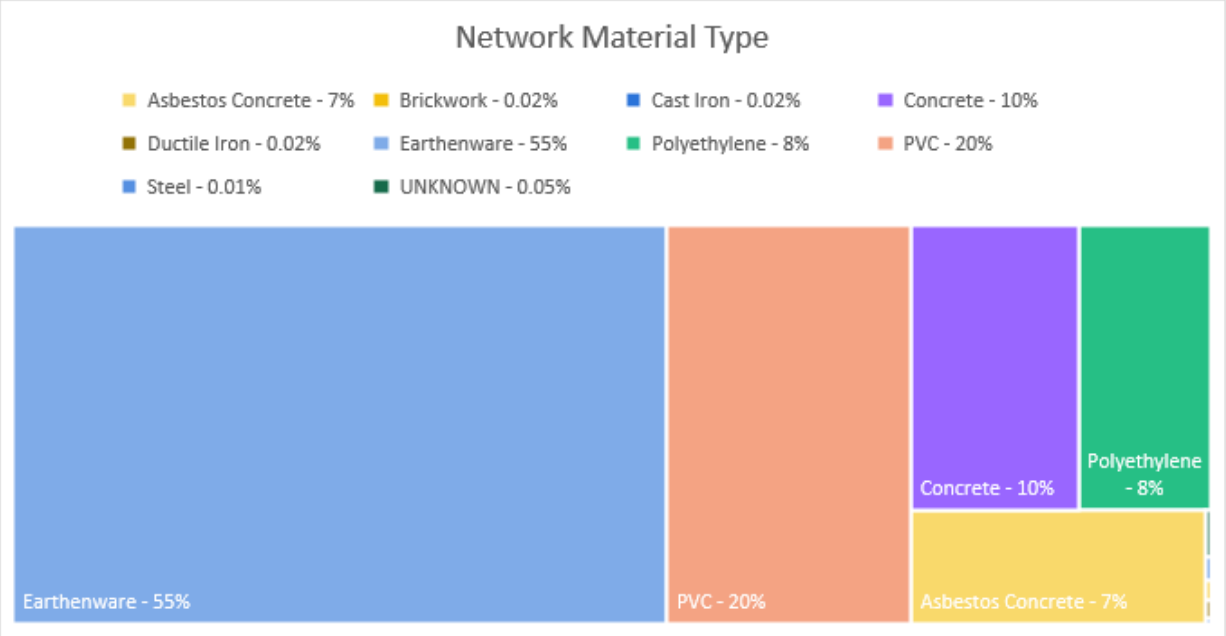


Figure 4-3: Wastewater Pipework by Material Type

The makeup of the wastewater network showing the installation decade and material of pipes is shown in Figure 4-4.

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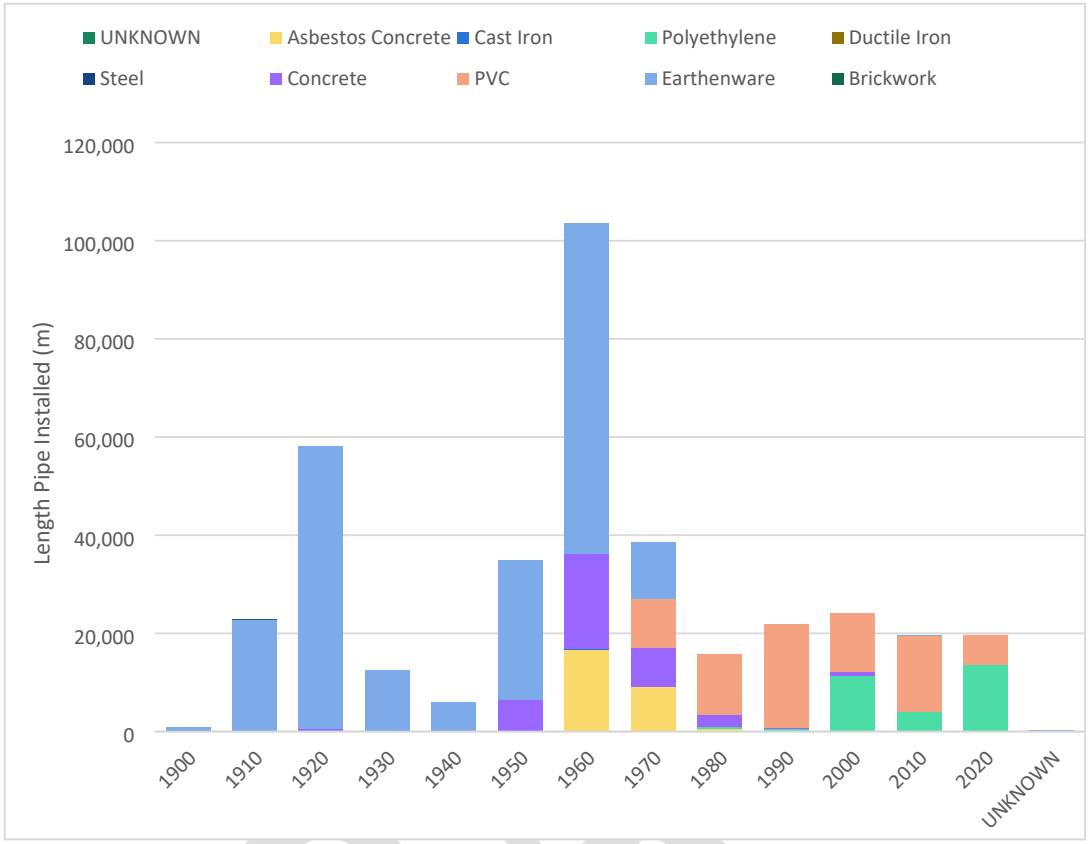


Figure 4-4: Wastewater Pipework by Decade and Material

4.4 Asset Condition

4.4.1 Wastewater Pump Station and Above Ground Assets

Condition information is obtained from a combination of:

- annual inspections and condition assessments
- routine operational inspections
- maintenance and work-order records
- equipment performance monitoring
- asset age and material information
- customer service requests
- operational knowledge and experience

Wastewater pump station assets are assessed through an annual inspection programme using structured site inspections and condition scoring. If a pump station has a generator, it is also inspected and tested annually. Inspection results are reviewed annually to identify deterioration, emerging issues and changes in condition, with findings used to inform maintenance planning, risk management, and renewal decision-making.

Buildings, structures and plant at each of the three treatment plants are regularly inspected, and an assessment made of maintenance and renewal requirements made on an annual basis. Subject to the continuing maintenance and renewal programme, the plants are in good operating condition.

Current condition assessment practices provide a moderate-high level of confidence in the overall condition of facilities; however, condition information is not consistently captured at an individual component level across all asset classes. Consequently, condition maturity is considered stronger at a

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facility level than at a detailed asset level. Improving asset-level condition data capture remains a key focus for future asset management improvements.

4.4.2 Wastewater Reticulation Assets

The condition of buried wastewater assets is less understood than that of above-ground assets. While asset performance indicators such as fault records, inspection reports, pipe failure investigations and operational performance provide valuable insights into network condition, direct condition information is not currently available across the network assets. Condition assessment confidence is therefore lower than for above-ground assets, and renewal decisions rely more heavily on asset age, material, failure history, criticality and operational performance information.

The WSBU commenced programmed CCTV (Closed Circuit Television) inspection of its wastewater network focusing on ageing and problem areas of the network. These inspections condition rate assets in accordance with the New Zealand Gravity Pipe Inspection Manual. Based on the IPS data from 13 October 2026, approximately 24% of the pipe network has been CCTV inspected.

The WSBU has not CCTV inspected enough of the network to determine the overall network condition rating. Development of an ongoing CCTV inspection programme for network condition rating purposes is planned as part of improving asset management maturity for the WSBU.

Network condition assessments are currently based on a desktop exercise using experienced engineering knowledge of the network's performance and maintenance history. That assessment recorded a value of 25% of the network being less than average condition. The CCTV structural pipe condition results are shown in Figure 4-5. Currently the work done by the CCTV inspection programme indicates 49% of the network being less than average condition which does not reflect the assessment above. This is based on available structural scores of 4 or 5 and excludes not inspected assets. The difference is partly because the CCTV programme prioritises aging and problem areas of the network so could produce conservative results. Results can be revaluated at the WSBU's request if the scores are considered to be higher than the CCTV indicates and may be reduced. Continuation of the CCTV programme will provide longer term validation of results.

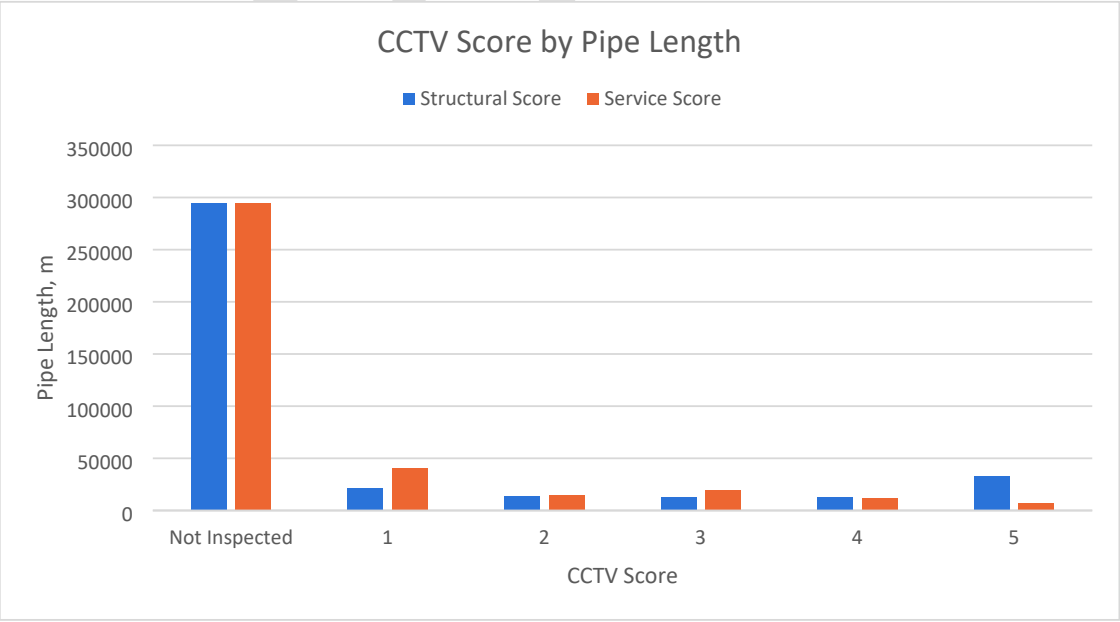


Figure 4-5: Wastewater Pipe CCTV Structural Score

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This information is used as well as fault records, criticality, and operational performance to support risk-based renewal planning. Collectively, the inspection programme demonstrates that condition issues are generally identifiable before they lead to significant service impacts. However, the findings also highlight the need for ongoing condition assessments.

4.4.3 Confidence in Current Asset Condition Information

Table 4-2 Confidence in Current Asset Condition Information

Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
Wastewater Pump Stations	High	Frequent operational monitoring and annual condition assessments.	Routine inspections indicate assets are generally in average condition. During the 2025 inspections three pump stations had valves faults, and others had minor issues identified such as water being in the oil.
Wastewater Reticulation Assets	Moderate	CCTV Inspections progressing on previously not CCTV inspected assets. Fault history, and material and age assessments used where CCTV is not available.	Currently the work done by the CCTV inspection programme indicates 31% of the wastewater pipe network being less than average condition. A previous desktop assessment based on asset data estimated 25% of the pipework as being in less than average condition.
Wastewater Storage Facilities	Low to Moderate	Otatara Pond is only storage asset. It is inspected when the associated Otatara Pond pump station is inspected annually. As well as operational monitoring when needed.	The latest annual inspection of the Otara Pond Pump Station conducted on 4 September 2025, indicated the wet well/pond was in average condition.
Wastewater Treatment Facilities	High	Daily operational monitoring and annual condition assessments.	Clifton WWTP has a dedicated operations personnel member who can monitor the condition of the plant. The Bluff WWTP and Ōmāui Oxidation Pond are supported by visits from floating operations personnel as and when needed, who can report on identified condition. Subject to the continuing maintenance and renewal programme, the plants are in good operating condition.
Monitoring and Control Systems	High	WWTP - Daily operational monitoring supported by annual site inspections. Pump stations - annual site inspections	Pump Station inspections indicate the associated monitoring equipment is generally in average condition.
Non-Network Assets	Low - Moderate	Varies depending on asset but primarily operational inspections.	Condition information is gathered during operational and maintenance activities; however, asset-level condition data is not yet consistently recorded across the network. Improved condition data capture is

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Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
			identified as an improvement item in Section 10.3.

4.5 Asset/System Performance

The wastewater activity performance management focuses on maintaining service reliability and the long-term sustainability of the network.

Key aspects of system performance include:

- **Reduction in overflow events** – The wastewater network experiences I&I, increasing the risk of wet weather overflows from the network. All known constructed overflow points in the network have been sealed to reduce the incidence of overflows.
- **Reliability of wastewater service** – Service reliability is influenced by the performance of critical assets, including the WWTPs, key wastewater mains, and pump stations. Failure of these assets could have significant consequences for public and environmental health.
- **Operational resilience** – Pumped infrastructure and SCADA systems support network operations, system monitoring and response to operational events.
- **Regulatory compliance** – Compliance with treated wastewater and discharge consent conditions and other regulatory requirements is a key driver of operational activities and future investment planning.

Overall, the wastewater system is considered capable of meeting current service requirements, with future investment focused on maintaining reliability, improving resilience and supporting ongoing regulatory compliance.

4.6 Asset Capacity and Utilisation

ICC's current forecast is for 0.5% growth in residential and non-residential connections. The Invercargill City District Plan 2013 provides for limited extension of the urban zone to provide for residential development, and it is expected a further increase in households will result from infill development, as large existing urban properties are subdivided to provide additional residential sites. The trunk wastewater pipes and treatment plants are of sufficient capacity to accept wastewater from a significantly larger population than is expected, and a need for upgrading due to population growth is not anticipated.

However, new industries are expected, and if they eventuate, have the potential to create significant new demands on the network. ICC is planning for this uncertainty by allowing for growth where the additional cost would be met via financial contributions, reprioritisation of the capital programme and, if necessary, an increase in the budget provided for the capital programme.

When industry is taking higher water flows, there would likely be demand for increased capacity on the wastewater network between the new industry, pump stations and / or piped network through to the Clifton WWTP. In some cases, this may need additional pipe capacity beyond renewal expectations and much earlier than otherwise planned for. The capability of the Clifton WWTP for some specific or heavy load waste could be a factor but without specific knowledge of the type of development, this cannot be planned for.

It would be likely that these types of industry would partially treat wastewater on site before discharge to the network. ICC's Trade Waste Bylaw provides a clear direction for charging and recovery, in this instance.

4.6.1 Wastewater Treatment Plants

The Clifton, Ōmāui and Bluff WWTPs have sufficient treatment capacity to meet current demand and forecast residential growth. Flows are monitored at the Bluff WWTP from the incoming Bluff pump station and between the clarifier and UV using a MagFlow Flowmeter. The Clifton WWTP inflow

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(Raven-Eye) and internal plant flows are monitored using Doppler flowmeters. The Ōmāui oxidation pond's level is monitored, and this is used control the Ōmāui Oxidation Pond Pump discharge rate to the spray irrigation system.

Investment priorities at the treatment facilities are primarily focused on upgrading the treatment processes and discharge arrangements to meet upcoming consent requirements with the new WEPS regulations.

4.6.2 Pump Stations

Existing pump station infrastructure is considered capable of supporting forecast demand; however, a number of pump station assets perform critical operational functions and remain important resilience assets. Future investment is focused on maintaining reliability and reducing vulnerability associated with critical pumped infrastructure.

Flow rates at pump stations are monitored using SCADA systems, except for four non-SCADA sites.

4.6.3 Wastewater Pipe Network

Capacity in parts of the wastewater network is compromised by high levels of I&I which can cause pipes to overflow during high intensity rain events. The WSBU has started a flow monitoring programme to identify areas most affected by infiltration and will address these issues in the pipe renewal programme.

The Wastewater hydraulic model is currently being updated and calibrated to give the reliable results necessary to analyse the current performance and utilisation. The model was originally developed in the Mike Urban Software but is being transferred into ICM Infoworks, as there is limited capability in the country for operating the MIKE URBAN Software. The calibrated model is expected to be completed in October 2026.

4.7 Critical Assets

Critical assets are assets whose failure would have a significant impact on public health, service continuity, regulatory compliance, environmental outcomes or the WSBU operations. Due to the configuration of the wastewater network, several wastewater assets perform essential functions and have limited operational alternatives or redundancy. These assets receive a greater level of operational oversight, maintenance planning, renewal consideration, and resilience assessment than non-critical assets.

The asset register provides an initial basis for identifying potentially critical network assets through network role, diameter, location, and service area. Assets are generally assigned a criticality level using a graded scale (e.g. minor to extreme), with assets identified as critical where failure would result in major or extreme consequences, particularly in situations where redundancy or alternative supply options are limited.

Figure 4-6: General Definitions of Levels of Criticality

Criticality Level	General Description
Insignificant / Minor 1 and 2	Insignificant is at a level of incidents affecting only a few customers and causing minor inconvenience. Failure of the asset is quite site-specific. Minor is similar but affecting groups of customers, but with the response completed within the target Levels of Service. Failure of these assets may be indicative of overall deterioration.
Low 3	This group includes several types of assets that justify management at a more intense level than 1 or 2. This would include situations where adverse effects justify an escalation of the provider's normal response. It also includes assets that receive regular (or event specific) inspections for security, graffiti, maintenance, cleaning, operational status, etc. Such inspections may be augmented by SCADA monitoring for status and operational purposes. Asset failures can occur but are expected to have relatively minor consequences.

Criticality Level	General Description
Moderate 4	Assets in this group are likely arterial with significant impacts when failure occurs. Monitoring and pro-active management would be in place but not to the 'avoid at all costs' level of Major. Single failures might occur and this would trigger an urgent response to avoid recurrence.
Major 5	This is likely to be the highest Consequence of Failure that a provider would choose to adopt. The asset involved would be highly monitored and pro-actively renewed with a strong focus on avoidance of any failure occurring.
Extreme (Catastrophic) 6	This column is intended to indicate the most extreme outcomes that could conceivably occur. Ideally assets would be re-configured to avoid this possibility even if the Likelihood of Failure is very low.

The wastewater system contains a number of critical assets which are listed in Table 4-3.

Table 4-3: Extreme and Major Critical Wastewater Assets

Critical Assets	Why Critical?	Consequence of Failure	Criticality
Clifton WWTP	Main treatment and discharge facility for Invercargill, if it fails there would be a significant risk of large untreated wastewater spills to the environment.	Major spill to environment, including local land area and the Estuary. This would endanger public and environmental health.	Extreme
Bluff WWTP	Main treatment and discharge facility for Bluff, if it fails there would be a significant risk of large wastewater spills to the environment.	Major spill to environment, including local land area and Bluff coastal area. This would endanger public and environmental health.	Extreme
Mersey Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to surrounding urban area and Waihōpai River. This would endanger public and environmental health.	Extreme
Preston Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to surrounding urban area and Waihōpai River. This would endanger public and environmental health.	Major
Lindisfarne Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to surrounding urban area and Otepuni Creek. This would endanger public and environmental health.	Major
Bluff Main Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to environment, including local land area, the Bluff Industrial Railway Line, and Awarua / Bluff Harbour. This would endanger public and environmental health.	Major

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Critical Assets	Why Critical?	Consequence of Failure	Criticality
Kekeno Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to environment, including local land area and the Estuary. This would endanger public and environmental health. The Kekeno Pump Station and Rising Main services commercial industries which would have to shut down operations if there is an asset failure.	Major
Dunns Road Pump Station and Rising Main	Key network conveyance for high flows of wastewater	Major spill to environment, including local land area and the Estuary. This would endanger public and environmental health.	Major
Gravity Stream Crossings	If these pipes fail, it will take additional time and effort to repair them due to their depth and size. This makes the consequence of their failure worse.	Spill directly into waterway, adverse effect to environmental and public health. Some crossing infrastructure can be difficult to access safely for repairs leading to an extended spill time.	Major
Key large and deep Wastewater Mains	If these pipes fail, it will take additional time and effort to repair them due to their depth and size. This makes the consequence of their failure worse.	The location of the failure may be difficult to identify, and it will take additional time and effort to repair the failure potentially leading to worse spill to the local environment.	Major
SCADA Systems	These assets are required for the wastewater system to function correctly and mange flows.	A failure of SCADA would result in the inability to effectively remotely manage wastewater flows and would make responding issues in the network significantly more difficult.	Major

Criticality map

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
SCADA Data from each WWTP- Develop graphs for total monthly, annual flows
Insert the current network map and critical assets
Confirm statistic information aligns with ICC expectations
Confirm condition assessment processes going forward
Confirm approach taken to clean up IPS data is appropriate.
Asset information, condition, maintenance history etc to be provided for the Otatara Pond.

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5 Future Demand and Impact of Drivers

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(1)
This chapter should demonstrate	Demand, utilisation, capacity, uncertainty, growth, constraints, demand management and water loss.

5.1 Demand Forecast

The adopted planning baseline forecasts low growth in demand for wastewater services over the planning period. The serviced population equivalent for wastewater is projected to increase from approximately 53,335 people in FY2026/27 to 56,063 people by FY2036/37, while residential wastewater connections are forecast to increase from 22,628 to 23,786 over the same period. This equates to approximately 0.5% annual growth and reflects continued low-density urban development within the district.

Reticulated wastewater services are currently provided to Invercargill, Bluff, and Ōmāui. Communities such as Makarewa are not connected to the reticulated wastewater network and are excluded from current demand forecasts.

Based on current forecasts, the wastewater system is expected to have sufficient capacity to accommodate anticipated population growth over the planning period without significant growth-related infrastructure investment. Forecast demand can generally be accommodated through existing network capacity, planned renewals, and ongoing optimisation of system performance.

Incoming flows to the Cliffton WWTP, combined with the reported average water usage indicates that there is a large portion of wastewater flows coming from non-residential trade waste users. It is included as an improvement in this AMP that the trade waste flows and residential flows are included separately in future reporting.

Table 5-1: Wastewater Population Equivalent Demand Forecast

Measure	FY2026/27	FY2036/37	Change
Serviced population Equivalent*	53,335	56,063	+2,728
Residential Properties	22,628	23,786	+1,158
Non-residential Properties	1,583	1,664	+81

5.2 Factors Influencing Demand

Demand for wastewater services is influenced by a range of demographic, economic, environmental, and customer-related factors. Key demand drivers for the wastewater activity include:

- Population growth occurring at a different rate or location than currently forecast.
- Changes in commercial and industrial wastewater demand.
- Potential extension of wastewater services to currently unserviced areas.
- Future regulatory requirements and environmental constraints.
- Climate variability, extreme weather events, and increasing I&I.

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Population growth remains the primary driver of long-term residential demand. Climate variability, increased I&I, and industry development also influence demand. These factors are increasingly important considerations for future demand management and investment planning.

5.3 Implications to the Wastewater Activity

5.3.1 Growth and Development

A demographic shift towards an older population is predicted. This is expected to result in an increase in the number of households, as more people live alone, but is not expected to result in a significant increase in the volume of domestic wastewater.

The Invercargill City District Plan 2013 provides for limited extension of the urban zone to provide for residential development, and it is expected a further increase in households will result from infill development, as large existing urban properties are subdivided to provide additional residential sites. The trunk wastewater pipes and treatment plants are of sufficient capacity to accept wastewater from a significantly larger population than is expected, and a need for upgrading due to population growth is not anticipated.

While the major urban areas of the City have a reticulation system, smaller townships and rural properties use onsite disposal systems. The issue of choosing between systems will apply to new subdivisions and lifestyle block development. It may be more economical for properties to be serviced by onsite disposal rather than extending the public reticulation system. Any onsite disposal system will need to meet the environmental standards for discharge required by the operative regional water plan. There will remain a demand for rural residential options, the WSBU does not intend to extend the wastewater network to service these properties and will expect them to provide suitable on-site effluent disposal systems.

Makarewa has a population of approximately 1,134 that is not currently serviced by the reticulated wastewater system and uses on-site effluent disposal systems. There is not expected to be significant development in the community, but there is a risk for the ageing septic systems to cause contamination in the local area. A budget allowance of $2,800,000 in 2034 has been allowed for in the IDP for a WWTP should one be needed to mitigate the risk of ground contamination from the existing systems.

The local economy is expected to grow and diversify, and this is likely to result in additional industries with a need to dispose of trade wastes. The wastewater activity has some capacity to accept trade waste from new development industrial zones within the city, including the Awarua Industrial Estate. Trade wastes are regulated and controlled by the Trade Waste Bylaw to ensure that trade wastes do not compromise the operation of the activity.

ICC has rezoned land at Awarua for Industrial Development, and it is expected that industry wishing to establish in the area will require effluent treatment. The WSBU intends to collect and convey effluent to the Clifton WWTP, and, depending on strength, effluent may be pre-treated at Awarua either by the industry or by the WSBU. Because industry requirements vary considerably, it is intended to consider and provide services in negotiation with industry as they establish, with funding to be recovered as a cost against the development, including the costs of pre-treatment systems at Awarua, or of capacity upgrades of the Clifton WWTP.

5.3.2 Legislative Change and Regulatory Requirements

The National Policy Statement for Freshwater Management and Environment Southland's 'Southland Water and Land Plan (Operative in Part)' is expected to have some significant implications for the wastewater activity, relating to the quality of effluent discharges, and cross contamination between wastewater and stormwater.

Subpart 1 of Part 2 of the WEPS, covering Overflows from Reticulated Wastewater Networks, came into effect on 1 September 2026. The wastewater network previously had 15 constructed overflow locations, which were all sealed off in 2020. Dry weather overflows can still occur in within the network due to blockages or asset failures. Wet weather overflows can occur due to high intensity rain events in areas

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with high levels of I&I. These dry or wet weather overflows would occur at uncontrolled overflow locations, such as a manhole, gully trap, of pump station. Under the WEPS, these events would still require a resource consent, with the risk of infringement notices, abatement notices, or prosecution under the RMA if unconsented overflows occur.

ICC currently holds three treated wastewater discharge consents that will expire within four years and will be affected by the recent legislative and regulatory changes. It is expected that the discharge consents will be affected as follows:

- **Bluff Wastewater Treatment Plant Discharge (expires 2027)**

The new discharge consent will be required to comply with WEPS. Work has been budgeted for to assess the anticipated scope of works to acquire a new consent. Currently it is expected to require upgrades to the outfall pipe as a minimum.

- **Ōmāui Oxidation Pond Discharge (expires 2029)**

This discharge is to land, adjacent to the coastal marine area, and impacts on the Coastal Marine Area (CMA) have not been observed. An upgrade requirement is not anticipated for consent renewal.

- **Clifton Wastewater Treatment Plant Discharge (expires 2029)**

This discharge is to the New River Estuary and adds to high nutrient loading from other sources. It is likely that a significant treatment upgrade will be required at significant cost. Options have been assessed at a high level with budget allocated to pursue a selected option with outfall and plant upgrades.

5.3.3 Inflow and Infiltration Management and Climate Change Resilience

Climate change will have an effect on the wastewater activity long term, in particular the way I&I is managed and how network resilience is developed.

Flow monitoring surveys have revealed high levels of stormwater infiltration in some areas, and it is likely renewal work will focus on these areas to address the incidence of wastewater overflows.

Pump stations are designed to deal with the expected wastewater flows from their respective catchments and with significant amounts of groundwater and stormwater I&I. However, as the pump stations are generally located in the lowest part of catchments and often close to waterways, they are susceptible to stormwater flooding during extreme rainfall conditions (greater than five year return period rainstorm) or as a result of stopbank damage due to flooding.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Document forecast method, demand factors, peak demand, industrial assumptions, scenarios, uncertainty, tools, network constraints and confidence required by C11.Confirm statistic information aligns with ICC expectations

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6 Risk and Resilience

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C14
This chapter should demonstrate	Top water risks, controls, residual exposure, resilience, dependencies, emergency and business-continuity arrangements.

6.1 Risk Management Policy and Framework

ICC currently has a draft Risk Management policy dated June 2026 which sets out ICC's mandatory requirements for effective risk management. The policy is aligned with ISO 31000:2018 Risk Management - Guidelines, and sets ICC's commitment, principles, and governance expectations.

ICC's Risk Management Framework (RMF) is currently being drafted, and will operate alongside the Risk Management Policy. The RMF is aligned with ISO 31000:2018 but is intended to operate as a living document that can be refined as ICC's operating context, risk profile and risk maturity evolve. The RMF describes how risk management is applied in practice, including processes, escalation pathways, reporting rhythms, and the use of risk registers. Risk appetite and tolerance settings are maintained within the framework so they can be updated as required without triggering full policy adoption processes.

The Risk Management Policy and Framework identify the following risk types and risk categories for consequence scaling and appetite:

Risk Types

- Strategic
- Operational
- Programme/Project

Risk Categories

- Financial sustainability
- People and knowledge
- Service delivery, critical services
- Legal and regulatory compliance, privacy
- Health, safety and wellbeing
- Information management, cyber
- Environment and climate resilience
- Projects and property
- Reputation, community trust
- Achievement of strategic objectives (opportunities)

6.2 Priority Wastewater Activity Risks

The wastewater activity faces several activity specific risks which are summarised in Table 6-1.

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Table 6-1 Priority Wastewater Activity Risks

Risk Description	Risk Type	Risk Category	Potential consequence	Current/planned control
Pipe blockage or collapse causing backup and wastewater overflow	Operational	Legal and regulatory compliance, privacy	Overflows occur, endangering public and environmental health. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Ongoing CCTV programme surveys network condition. Renewals of poor condition pipework, preventative maintenance, and targeted capacity improvements.
Pump station failure causing backup and wastewater overflow	Operational	Legal and regulatory compliance, privacy	Overflows occur, endangering public and environmental health. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Annual condition assessments of pump stations check for issues that need to be addressed. Key pump stations have backup power generators in case of power failure. Key pump stations operate with duty/assist/assist pump arrangements.
Treatment plant mechanical and electrical failure	Operational	Legal and regulatory compliance, privacy	Overflows occur, endangering public and environmental health. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Annual condition assessments of WWTP check for issues that need to be addressed. Operations personnel is present at Clifton WWTP to respond to emergencies. Clifton and Bluff WWTPs have backup power generators in case of power failure. SCADA control is available for most pump stations and some treatment components.
Pipe network overflow due to wet weather and network I&I	Operational	Legal and regulatory compliance, privacy	Overflows occur, endangering public and environmental health. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Ongoing CCTV programme surveys network condition including I&I. Renewals of poor condition pipework, and targeted capacity improvements.
Flooding greater than five-year return, causing wastewater system overflows	Operational	Environment and climate resilience	Overflows occur, endangering public and environmental health. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Hydraulic modelling, overland flow path management, renewals and targeted capacity improvements.

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Risk Description	Risk Type	Risk Category	Potential consequence	Current/planned control
Earthquake causing network damage	Strategic	Service delivery, critical services	Overflows occur, endangering public and environmental health. Service disruption and increased repair times.	Emergency response arrangements, storage, inspections, renewals and operational contingency planning.
Aging infrastructure and asset failure	Strategic	Service delivery, critical services	Overflows occur, endangering public and environmental health. Service disruption and increased reactive maintenance.	Ongoing CCTV programme surveys network condition. Renewals of poor condition pipework, and targeted capacity improvements.
Climate change and more intense rainfall	Strategic	Environment and climate resilience	Network capacity is reached or exceeded more frequently resulting in overflows.	Ongoing CCTV programme surveys network condition including I&I. Renewals of poor condition pipework, and targeted capacity improvements.
Discharge non-compliance with quality requirements	Strategic	Legal and regulatory compliance, privacy	Consent breach, receiving environment effects and additional regulatory scrutiny. Abatement notices, infringement notices, or prosecutions occur due to failing regulatory compliance.	Consent monitoring, source investigations, operational controls and improvement actions.
Data and modelling limitations	Programme/ Project	Information management, cyber	Reduced confidence in investment decisions and renewal forecasts.	Asset data improvement, modelling, CCTV, condition programme and governance.
Delivery and affordability constraints	Programme/ Project	Financial sustainability	Delayed risk reduction and rephased investment.	Programme prioritisation, deliverability review and IDP alignment.

6.3 Pipe Resilience Risks

The ICC Three Waters Asset Management Plan 2024 identifies pipe blockages and pipe failure as the key risks for the wastewater network. Currently the controls in place are to undertake emergency pipe repairs when pipe obstructions or failures are reported. The planned further response is to continue to undertake CCTV to improve confidence in the condition of the network and proactively identify pipe obstructions or poor condition.

The pipe capacity is another risk area, with exceedance of design capacity identified as a potential issue with the changing climate and future development levels. The WSBU proposes to review the design standards used for the wastewater activity to determine if they are still adequate for future scenarios.

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6.4 Climate Change and Resilience

The wastewater activity will be impacted over the next 80-100 years and beyond, both by a change in rainfall intensities (I&I) and sea levels rise (discharge from Clifton WWTP). The effect of climate change occurring more quickly than anticipated may require The WSBU to review and change its current activities and levels of service. This could have a significant financial impact on the community.

There is a known unconstructed wastewater overflow location at a manhole in Turnbull Thomson Park. This occurs due to the I&I induced wet weather flows exceeding the capacity of the downstream infrastructure. As a result of climate change these high wet weather events can occur more frequently increasing the risk to the public and the WSBU.

Several of the network's wastewater pump stations are in low lying coastal areas that could be susceptible to increased flooding and sea level rise risks in future. If this occurs the pump station could be overwhelmed and unable to function as intended resulting in wastewater mixing with the stormwater flooding.

Over the planning period, the WSBU intends to progressively improve its understanding of climate risk and incorporate climate considerations into asset management planning, risk management, lifecycle decision-making, asset renewals, and future investment prioritisation.

This includes undertaking climate risk and vulnerability assessments, developing hazard and critical asset mapping, and applying adaptive planning approaches where there is significant uncertainty regarding future conditions.

Future AMP updates should reflect relevant findings from regional climate change initiatives and any evolving national requirements relating to climate adaptation, regional spatial planning, and resource management reform to ensure long-term infrastructure planning remains resilient and fit for purpose

6.5 Emergency Management and Business Continuity

The WSBU maintains business continuity and emergency response arrangements to support continued delivery of essential wastewater services during emergency events. Existing controls include emergency response plans, Emergency Management Southland and lifelines coordination arrangements, standby power generation, incident response procedures, and mutual aid agreements, critical spares. These measures support response and recovery during major infrastructure failures, contamination events and natural hazard emergencies.

6.6 Interdependencies and Resilience

The wastewater activity is dependent on a range of supporting infrastructure and external services. These interdependencies include groups within ICC and Environment Southland and services such as the stormwater activity, water supply activity, planning, environmental protection, emergency management, regulatory compliance and land development functions. These interdependencies should be recognised in risk assessments, investment planning and operational response arrangements.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
ICC to confirm if a Climate Risk and Resilience Assessment is underway for the WSBU Assets. Confirm identified risks are appropriate and there are no gaps.

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7 Lifecycle Management

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C12 and C13
This chapter should demonstrate	Operations, planned / predictive / reactive maintenance, renewal need, pipe replacement and non-network asset plans.

7.1 Lifecycle Approach

The WSBU applies a whole of life approach to managing the wastewater activity. The intent of this approach is to plan for asset requirements and function throughout its life from inception, operation, renewal, and disposal. This approach provides a more efficient way to manage costs of the assets in the long term. The SAMP holds the common methodology, while this AMP demonstrates how it is applied to wastewater assets.

7.2 Asset Acquisition and Procurement

Asset acquisition occurs in the wastewater activity when the WSBU takes ownership of wastewater assets from a developer or when the WSBU designs and constructs or upgrades its own new wastewater assets. New development wastewater reticulation assets are expected to comply with the Subdivision, Land Use, and Development Code of Practice 2023. The Code specifies minimum standards and guidance for infrastructure accepted into The WSBU networks and privately owned infrastructure that connects to those networks. As part of the WSBU's subdivision assessments, the adequacy of infrastructure into which the subdivision feeds will be considered, and, if necessary, upgraded as part of development. When new wastewater network assets are constructed, the as-builts are submitted to the WSBU and asset data is entered into the asset database.

Assets are acquired as a result of:

- Taking over new reticulation constructed as part of sub-divisional development (constructed at the developer's expense)
- Extensions constructed by the WSBU to service new areas
- Asset upgrading constructed by the WSBU to provide additional system capacity to overcome inadequacies or provide for growth (e.g. larger drains or pumps)

7.3 Operation and Maintenance

The wastewater network is operated and maintained to ensure the efficient utilisation of the assets and to achieve the stipulated levels of service. Operational strategies include the efficient control and monitoring of mechanical and electrical plant, and the pipe network to ensure continuity and quality of service. Maintenance strategies aim to ensure efficient operation over the useful service life of assets, to ensure target standards are met, and to prevent premature asset failure or deterioration.

Within the pipe network, most maintenance is reactive to reported faults or blockages, with planned maintenance activities including checking of overflow structures, cleaning syphons and air valves, and other assets which have a higher incidence of blockage.

Within the pump stations and treatment plants, operators and maintenance contractors routinely inspect, clean, adjust and monitor items of plant to ensure that they continue to operate at optimum performance levels, and that significant maintenance issues are identified early, to ensure appropriate maintenance is undertaken and service life is maximised. The wastewater activity incorporates telemetry systems that can provide continuous control and surveillance of mechanical plant and can effectively warn of plant failure requiring operator intervention, thus reducing the need for scheduled attendance and improving response times to maintenance issues.

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A reticulation maintenance contract is currently held with Downer, who will undertake maintenance and repair work. A separate contract for electrical and mechanical systems is held with Wallace Murray Electrical, for works that cannot be handled by the WSBU's in house resources. Wallace Murray Electrical also has a staff member stationed at the Clifton WWTP. Operators are shared between the wastewater and stormwater assets, with one operator dedicated to the pump stations, and two operators 'floating' to address any issues that arise. An operator is also stationed at the Clifton WWTP during business hours. SCADA alarms are triaged by the 24hr call service for the WSBU and then passed on to operators as required.

To strengthen lifecycle traceability, inspection recommendations should be assigned a work-order or project reference, risk priority, responsible owner, target completion date and closure status. Material unresolved findings should be explicitly linked to the risk register, renewal programme and Investment Delivery Plan.

7.4 Renewals and Deliverability

The renewal programme is intended to maintain the overall standard of the wastewater system at a level which reflects its age profile by providing for the rehabilitation or replacement of individual assets as they reach the end of their useful life. It must be funded adequately to maintain current levels of service and the overall quality of the network.

Major renewal projects are subject to competitive tendering, using 'lowest cost conforming' or 'weighted attributes' assessment procedures in accordance with the New Zealand Transport Agency Competitive Pricing Procedures Manual.

Renewal budgets provide for renewal of individual assets at the end of their predicted life. Asset lives are reviewed at three yearly intervals, depending on assessed condition and performance of the asset, and renewal budgets adjusted accordingly. Individual assets are assessed as they come near the predicted service life, and depending on conditions, may be replaced earlier or later than the assigned life.

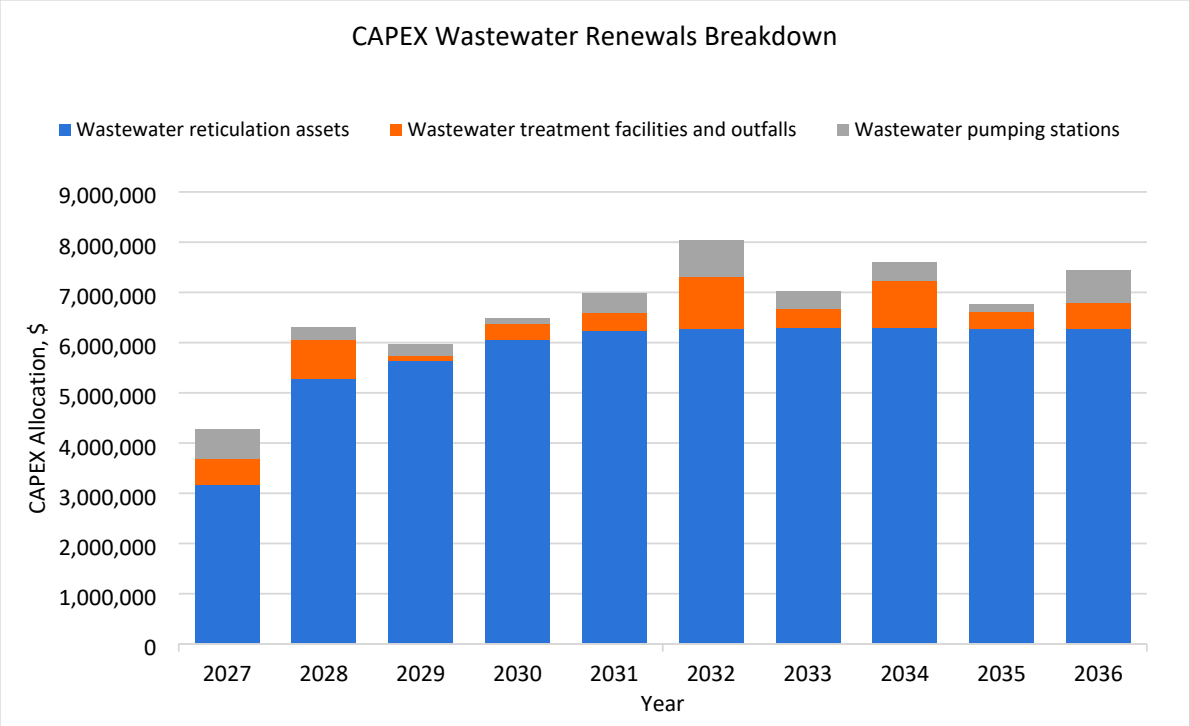
An asset is renewed when it fails to meet the required LoS. Non-performing assets are identified by the monitoring of asset reliability, capacity and efficiency during planned maintenance inspections and operational activity. Indicators of non-performing assets include:

- Repeated asset failure
- Repeated pipe blockages or overflows
- Ineffective and / or uneconomic operations
- Inefficient energy consumption

The wastewater renewals CAPEX breakdown is shown in Figure 7-1.

Figure 7-1: CAPEX Wastewater Renewals Cost Breakdown

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7.5 Disposal of Assets

The wastewater assets are intended to operate in perpetuity to provide a continuing wastewater drainage service to the developed areas of the district. Therefore, it is intended that individual assets will only be disposed of at the end of their service life, at which time they will be replaced with new assets, or become obsolete as part of new development projects. In general, where assets are in the same location, the old asset will be removed as part of the renewal project.

Because assets will usually be at the end of useful life at disposal, they are expected to have zero residual value. Specific funding is therefore not allocated to disposal of assets, but where costs are incurred in their removal, these will be included in development and renewal project costs.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Populate maintenance standards, planned and reactive programmes, annual pipe replacement kilometres, funded / unfunded need and evidence confidence.

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8 Asset Improvements and Enhancement Programme

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(2)-(4)
This chapter should demonstrate	Every material asset improvement, drivers, outcomes, options, trade-offs and IDP linkage.

8.1 Investment Drivers

Investments in asset improvements are required to ensure the wastewater activity continues to meet its LoS requirements. These investments include planned maintenance projects, renewals, consenting projects, network extensions, and upgrades. The investment drivers are based on the Asset Management Objectives from the SAMP. These are described in Table 8-1.

Table 8-1 Investment Drivers' Descriptions

AM Objective	Description
Maintain safe, compliant and efficient water services	Ensure water, wastewater, and stormwater assets constantly meet public health, environmental, and regulatory requirements.
Manage affordability while investing for the future	Balance renewal, resilience investment, and debt to manage affordability for current and future ratepayers.
Sustain core infrastructure over the long term	Maintain and renew the existing asset base so that assets remain fit for purpose.
Reduce risk from ageing and critical assets	Systematically reduce service and compliance risk arising from ageing infrastructure and single points of failure.
Improve resilience to climate and natural hazards	Increase the resilience of water assets to flooding, drought, seismic events, and sea level rise.
Lift asset management maturity	Progress asset management practices across all three waters
Enable planned succession of assets	Ensure clear asset succession pathways by aligning investment prioritisation, renewal timing, and funding decisions to manage risk, optimise value, and promote efficient spending.

8.2 Investment Categories

The WSBU has adopted the Commerce Commission capital expenditure categories for both network and non-network assets:

8.2.1 Network Asset Investment Categories

8.2.1.1 Levels of service

These projects aim to maintain or improve assets levels of service. This includes projects adding resilience to the network, particularly for critical assets. There are multiple resilience projects for duplicating rising mains, such as for Mersey Street Pump Station, Dunns Road Pump Station, Preston Street Pump Station, and Lindisfarne Pump Station. A wastewater pump station relocation is also identified for health and safety and seismic resilience improvements, as it is currently located in the

carriageway of a road. The Cliffton WWTP discharge upgrade is also included as a LoS improvement as it will contribute to regulatory requirements and Treaty settlement obligations.

8.2.1.2 Growth

Growth projects are planned to enable network expansions and capacity upgrades for new residential and industrial flows. This includes a sludge tank replacement at Bluff WWTP to improve future capacity and existing operational constraints. It also includes construction of a new WWTP for Makarewa (which is currently not serviced by a reticulated wastewater network) and reticulation extensions for Makarewa.

8.2.1.3 Renewals

The wastewater renewal works in the capital programme to 2057 include the pipe network, pump stations, and treatment facilities.

Pipe network renewals cover the business-as-usual programme for wastewater network upgrades based on asset condition, age, and fault history. Funding has been allocated every year throughout the 30 year planning period.

Pump station renewals cover the business-as-usual programme for wastewater pump station upgrades based on asset condition, age, and fault history. Funding has been allocated to all but one year (2051) throughout the 30 year planning period.

Wastewater treatment facility renewals cover replacement and upgrades of equipment and infrastructure across the three existing locations, Cliffton WWTP, Bluff WWTP, and Ōmāui oxidation pond. Funding has been allocated every year throughout the 30 year planning period.

8.2.2 Non-Network Asset Investment Categories

8.2.2.1 Property

There is only one project relating to a property upgrade for the wastewater programme. This is to install a fire suppression system in the building housing the switchboard equipment at Cliffton WWTP.

8.2.2.2 Vehicles

Vehicles are considered a three waters activity and there is an allowance of $122,000 each year for the next 30 years for pool vehicles used across the three waters service.

8.2.2.3 Consents

Each of the existing wastewater consents has funding allocated for renewing the consent on the year the consent expires.

The consent expiry dates for each treatment facility are due in the next couple of years and have funds allocated for their renewal or replacement. The consenting for the Cliffton and Bluff WWTPs will be updated to reflect changes in treatment and effluent discharge requirements.

Other consent renewals include a consent renewal for wastewater pipelines under the Mokotua Stream and Waimatua Creek in 2054, and a consent renewal for discharging biosolids to Land at Christies Road in 2031/32.

8.2.2.4 Digital

The digital / IT capital funding allocation is for the implementation and calibration of hydraulic network modelling systems to support wastewater network planning, analysis, and optimisation. The model calibration is in progress, due to be completed in October 2026, and further funding has been allocated from 2027 to 2031.

8.3 Overview of Planned Investment

Error! Reference source not found.Error! Reference source not found. shows the planned capital investment (CAPEX) programme for the wastewater activity over the planning period (30 years). The programme reflects the investment required to across the investment category priorities identified throughout this AMP.

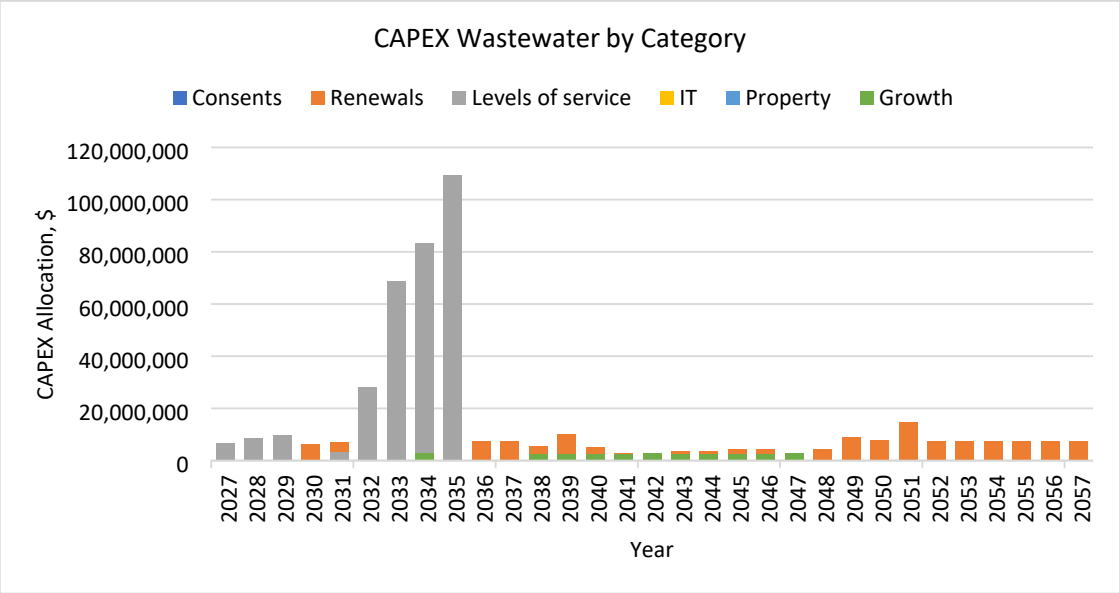


Figure 8-1 Wastewater CAPEX Projection

The spike in expenditure from 2032 to 2035 reflects the expected upgrade of the Cliffton WWTP and treated effluent discharge. The project is currently undergoing optioneering for the works required to meet the expected new consent conditions and requirements. The costs given for this project are an average across the potential options and would be refined once an upgrade option has been selected. Figure 8-2 shows the planned capital investment (CAPEX) programme with the Cliffton WWTP Discharge project removed, to demonstrate the typical spending profile.

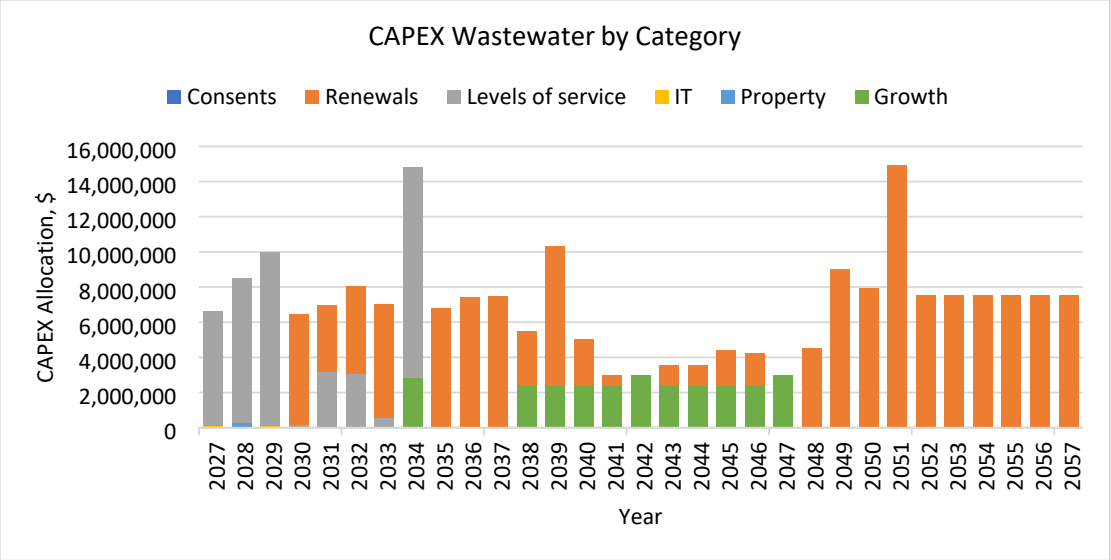


Figure 8-2 Wastewater CAPEX Projection without Cliffton WWTP Discharge Upgrades Project

The wastewater renewals projects can be further broken down just the renewals for the pipe network assets, pump station assets, and treatment facility assets, refer **Error! Reference source not found.**. Much of the funding allocated to renewals is planned for pipe network renewals to reduce the risk of failure and improve the service reliability. In 2051 there is a planned renewal for the primary treatment facilities at Cliffton WWTP, with current plant having been installed in 1969, increasing the allocated funding for treatment facilities and outfalls.

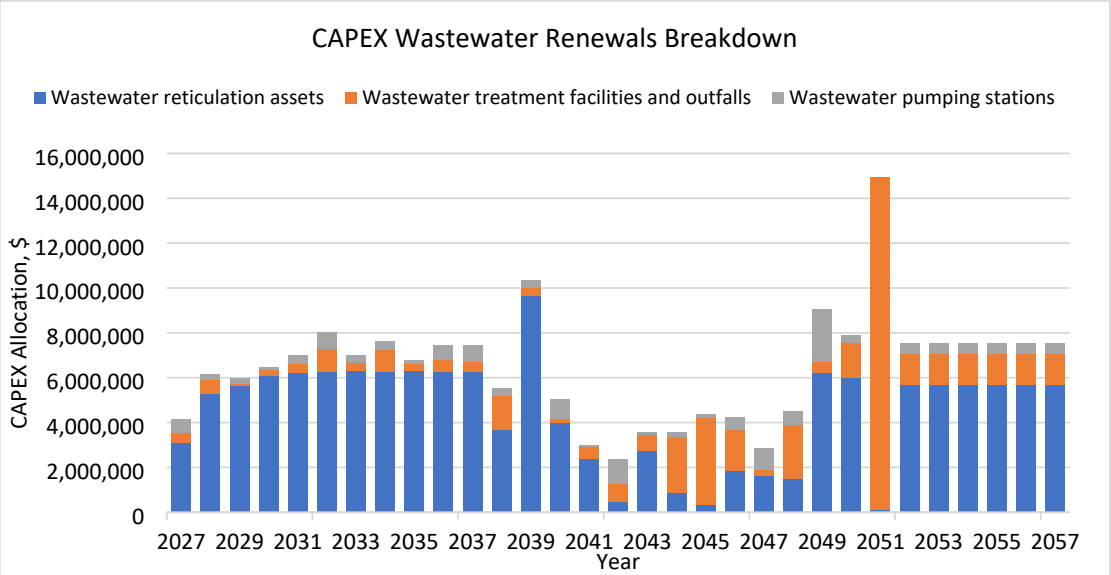


FIGURE REF

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8.4 Critical Asset Resilience Improvements

The WSBU has identified several critical wastewater assets that are essential for maintaining the wastewater activity. While these assets are recognised within the criticality framework, there is currently no formal linkage between critical asset assessments and the capital investment programme, as planned investment activities are not tagged as being related to critical infrastructure.

Future updates of this AMP will seek to strengthen this connection by explicitly linking critical assets, risk assessments, renewal needs, and resilience initiatives to planned investment activities. This will support more transparent prioritisation of expenditure and provide a clearer line of sight between identified risks, resilience outcomes, and investment decisions. As the WSBU continues to improve its asset information systems and digital asset registers, the intention is to implement functionality that enables critical assets to be directly linked to renewal and capital investment programmes, supporting more robust risk-based planning and investment decision-making.

8.5 Summary of Key Projects

The key projects included in the 30 year capital funding programme for the wastewater activity are listed in Table 8-2.

Table 8-2 Key Projects for the Wastewater Activity

Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
Consents	Consent Upgrades Cliffton WWTP	Maintain safe, compliant and efficient water services	Investment to upgrade the discharge process at the Clifton WWTP, supporting compliant and effective management of treated wastewater discharges.	Acquire consent for a compliant approach to Cliffton WWTP's treated effluent discharge. This enables the Cliffton WWTP Discharge Upgrade to be defined and proceed.
Consents	Consent upgrades Bluff WWTP	Maintain safe, compliant and efficient water services	Capacity-driven investment in wastewater treatment facility to address current operational constraints and support future service demands.	Acquire consent for a compliant approach to Bluff WWTP's treated effluent discharge. This enables the Bluff WWTP Discharge Upgrade to be defined and proceed.
Consents	Consent renewal Ōmāui oxidation pond discharge	Maintain safe, compliant and efficient water services	Resource consent renewal for Ōmāui oxidation pond discharge. This is anticipated to be a standard consent renewal process with no significant changes to operational conditions.	Maintain a compliant wastewater system for Ōmāui.

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Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
LOS	Cliffton WWTP Discharge Upgrade	Maintain safe, compliant and efficient water services	Investment to upgrade the discharge process at the Clifton Wastewater Treatment Plant, supporting compliant and effective management of treated wastewater discharges.	Maintain a compliant wastewater system for Cliffton WWTP.
LOS	Bluff WWTP Consent Upgrades	Maintain safe, compliant and efficient water services	Resource consent renewal for Sewerage TP - upgrades Bluff. This investment ensures continued regulatory compliance for wastewater operations.	Maintain a compliant wastewater system for Bluff WWTP.
LOS	Pump Station Replacement	Maintain safe, compliant and efficient water services	Relocation of wastewater pump station to address health and safety requirements, including improved operational access and safety considerations.	Pump Station moved to a more safely accessible location.
LOS	Lindisfarne Rising Main Duplication	Reduce risk from ageing and critical assets	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.	Additional resilience for a critical asset.
LOS	Mersey Street Rising Main Duplication	Reduce risk from ageing and critical assets	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.	Additional resilience for a critical asset.
LOS	Otatara Rising Main Duplication	Reduce risk from ageing and critical assets	Duplication of wastewater infrastructure to enhance network resilience and increase conveyance capacity, supporting long-term service reliability.	Additional resilience for a critical asset.

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Asset Management Plan
8 Asset Improvements and Enhancement Programme

Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
LOS	Preston Street Rising Main Duplication	Reduce risk from ageing and critical assets	Installation of a duplicate wastewater rising main to address reliability issues with existing infrastructure. The new alignment provides operational resilience while the original asset transitions to inactive status.	Additional resilience for a critical asset.
Renewals	Wastewater Pipe Renewals	Sustain core infrastructure over the long term	Planned renewal programme for wastewater network. This ongoing investment maintains service levels through systematic replacement of aging infrastructure.	Maintaining desired level of service for the wastewater system.
Renewals	Wastewater Treatment Facilities Renewals	Sustain core infrastructure over the long term	Replacement of wastewater treatment facility equipment to maintain operational capability and service reliability across operational sites.	Maintaining desired level of service for the wastewater system.
Renewals	Wastewater Pump Stations Renewals	Sustain core infrastructure over the long term	Planned renewal programme for wastewater pump station. This ongoing investment maintains service levels through systematic replacement of aging infrastructure.	Maintaining desired level of service for the wastewater system.
Growth	Bluff WWTP Sludge tank replacement	Maintain safe, compliant and efficient water services	Capacity-driven investment in wastewater treatment facility to address current operational constraints and support future service demands.	Improved capacity at Bluff WWTP.
Growth	Makarewa Treatment Plant	Manage affordability while investing for the future	Extension of wastewater reticulation network to support planned residential and commercial development. This investment enables growth and ensures adequate service capacity for new connections.	Enables replacement of existing reliance on septic tanks within Makarewa.

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Asset Management Plan
8 Asset Improvements and Enhancement Programme

Investment Category	Improvement	Asset Management Objective(s)	Description	Intended Outcome
Growth	Reticulation extension - communities	Manage affordability while investing for the future	Extension of wastewater reticulation network to support planned residential and commercial development. This investment enables growth and ensures adequate service capacity for new connections.	Enables residential and commercial growth. Enables replacement of existing reliance on septic tanks within Makarewa.
Digital	Wastewater Hydraulic Model Calibration	Enable planned succession of assets	Implementation and calibration of hydraulic network modelling systems to support wastewater network planning, analysis, and optimisation.	Improved planning information for making decisions affecting the wastewater system.

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9 How we Manage the Activity

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C9
This chapter should demonstrate	Governance, capability, asset-information lifecycle, systems, integration, confidence, monitoring and review.

9.1 Governance and Accountability

ICC retains responsibility for the governance and delivery of the wastewater activity through an in-house WSBU. The WSBU provides organisational separation, financial ring fencing and dedicated leadership for water services while remaining part of Council.

A dedicated Water Committee, comprising elected members and an independent member, provides governance oversight of water services. The Committee oversees service performance, regulatory compliance, risk, and delivery of the investment programme within its delegations.

The WSBU implements approved programmes and provide the asset, cost, condition, risk, and performance information required for planning and decision-making. ICC's corporate functions provide supporting financial, digital, customer, procurement, legal, and communications services. Contractors and consultants provide delivery capacity and technical expertise where required.

9.2 Service Delivery Model

The WSBU delivers the wastewater activity through a combination of WSBU staff, contractors, and consultants. The WSBU retains accountability for service performance, regulatory compliance, asset management, investment planning, and risk management.

A 15 year term maintenance contract is currently held with Downer, who will undertake maintenance and repair work that cannot be managed by the WSBU's in-house resources. A separate 25 year contract for electrical systems is held with Wallace Murray Electrical, who also has a staff member stationed at Clifton WWTP during working hours. This arrangement is scheduled to be renewed with a 15 year contract in December 2026

A summary of the delivery approach for wastewater activities is presented in Table 9-1.

Table 9-1 Wastewater Activity Delivery Approach

Activity	Delivery Approach
Wastewater treatment operation and maintenance	WSBU staff operate the wastewater treatment facilities and undertake minor maintenance. Contractors undertake specialised maintenance as required. The ICC water operations call centre is available outside of business hours.
Wastewater network operations and maintenance	Led and coordinated by the WSBU, assisted by the ICC call centre. Operations and network monitoring are completed by WSBU staff. Contractors undertake specialised maintenance as required.
Asset management and investment planning	Led by the WSBU (asset information management, performance and risk assessment, lifecycle planning, renewal prioritisation and investment programme

Activity	Delivery Approach
	development). Specialist consultant support is used where required.
Asset condition assessments	Led by the WSBU and specialist contractors, such as CCTV inspections, generator testing, pump testing, and annual inspections.
Capital works delivery	Led by the WSBU and delivered with contractors and specialist consultants
Emergency response and recovery	Delivered through WSBU operational arrangements, maintenance contractors, and the Emergency Management Southland Group
Hydraulic and network modelling	Led by the WSBU, undertaken by specialist consultants using ICM InfoWorks
Environmental laboratory services	Delivered by ICC's IANZ accredited environmental laboratory
Wastewater discharge compliance information and reporting	Led by the WSBU and supported by Lutra through a Infrastructure service agreement.
Specialist investigations	Delivered by the WSBU, specialist consultants and contractors, including ground survey, LiDAR, imaging and CCTV investigations.
SCADA System Support	Automation for Industry (AFI) provides software monitoring, problem resolution, application changes, new installations, and after hours call out support.

9.3 Asset Information Systems

Reliable asset information supports the operation, maintenance and long-term management of the wastewater activity. The WSBU uses asset, spatial, financial, operational, compliance, customer and document-management information to understand asset location and characteristics, monitor service and asset performance, manage work, assess risk, forecast lifecycle needs and support investment decisions.

Figure 9-1 provides a schematic of the WSBU's wider telemetry and communications environment, including the links supporting the stormwater pump stations. The diagram also includes water supply and stormwater facilities because elements of the communications network support multiple water services. The system monitors and or controls 67 of the 75 WSBU sites (33 Water, 34 Wastewater and 8 Stormwater). These sites range from treatment plant and pump stations, down to water reticulation pressure sensors. The remaining 8 sites are very small and are inspected weekly.

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The radio system is digital, and access to the remote sites is either via fibre, radio or cellular networks

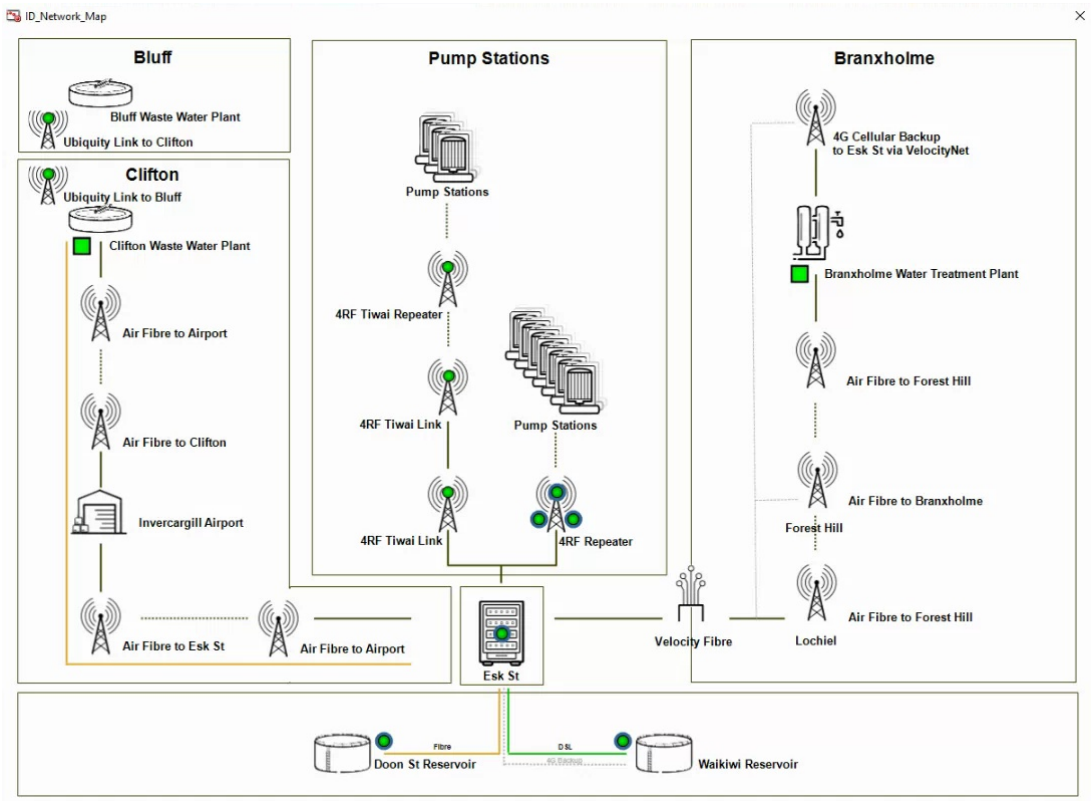


Figure 9-1: Schematic of the 3 Waters Operational Environment

9.3.1 Asset Software

Asset information is collected and updated throughout the asset lifecycle with various software systems. Information is recorded and maintained across the WSBU's document management systems. The principal software systems and their uses are summarised in Table 9-2.

Table 9-2: Asset Information Systems and their Purposes

Information System	Primary Purpose
Infor Public Sector (IPS)	Asset inventory and job management information used to support maintenance and asset planning.
TechOne (Enterprise Asset Management)	Asset inventory, valuation information, work management, inspections, maintenance history and asset-data capture. IPS is being replaced by TechOne Enterprise Asset Management.

Information System	Primary Purpose
ESRI - ArcGIS	Spatial asset information used to publicly display, map, locate, and analyse the wastewater network.
AVEVA Plant SCADA	Provides operational monitoring and control across treatment plants, and pump stations. SCADA systems provide continuous monitoring for flow and pressure at most of the network pump stations, and flow and BOD monitoring at the Clifton and Bluff WWTPs.
ICM InfoWorks	Network information used to assess capacity, flow scenarios, and the effects of proposed infrastructure changes.
Infrastructure Data	Management and compliance reporting of wastewater discharges.
Pathway	Customer service requests, faults and complaints used to support operational response and performance reporting.
Ostendo	Asset database scheduling for plant equipment only (TechOne may replace this function)

9.3.2 System integration and decision support

Information from the WSBU's asset management systems is used to support:

- Operational monitoring, control, and fault response
- Regulatory level of service and compliance reporting
- Condition, performance, and criticality assessment
- Maintenance and renewal planning
- Network capacity and demand assessments
- Asset valuation, depreciation, and expenditure forecasting
- Risk assessment and investment planning

Information is exchanged between systems through a combination of system interfaces, established business processes, and staff-led verification and reconciliation. This enables information from various sources throughout the asset lifecycle to be considered together when planning and prioritising work. However, there are not processes in place to link all available asset data from the various data sources and some data can only be assessed through specific software. This can restrict visibility of the necessary information to make holistic decisions regarding the wastewater activity.

9.3.3 Data standards

Consistent data standards support informed decision-making throughout the asset lifecycle. Reliable and well-structured asset data improves confidence in operational, maintenance, renewal and investment decisions, supports regulatory reporting, and enables information to be shared effectively between systems and business processes.

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The Three Waters Asset Data Standard (3W ADS) version 4.0 has been published by Water New Zealand in January 2026. The standard provides a nationally consistent framework for classifying and describing water supply, wastewater and stormwater assets. The standard includes common asset classes, attributes and data structures intended to improve interoperability, reporting, and asset management practices across the New Zealand water sector.

The WSBU intends to progressively align its wastewater asset information with the applicable 3W ADS requirements. The current extent of alignment has not yet been formally assessed. Implementation will need to consider:

- Asset classification and hierarchy structures
- Alignment between the asset register and GIS
- Common asset identifiers across multiple systems
- Information requirements for new, renewed and vested assets
- Management of legacy, incomplete, and non-standard records
- Data quality, validation, and migration processes
- Information required to support operational, financial, regulatory and asset management reporting.

Taumata Arowai, the Water Services Authority, is developing National Engineering Design Standards (NEDS) to promote greater consistency in the planning, design and delivery of water infrastructure across New Zealand. The proposed standards are intended to apply to water supply, wastewater and stormwater infrastructure managed by councils and water organisations, including new infrastructure that connects to or becomes part of those networks. The WSBU will continue to monitor the development of NEDS and any associated national guidance, codes of practice or asset information requirements. All relevant requirements will be considered as part of future updates to engineering standards, asset information processes and systems.

Alignment will be implemented progressively and coordinated with the transition to TechOne Enterprise Asset Management. Existing asset information will be mapped and validated before migration to minimise the risk of losing or maintaining incorrect information.

9.3.4 Appropriateness of Asset Information Systems

The WSBU's asset information systems are assessed as partially appropriate. There are limitations in data completeness and visibility across multiple software systems and data confidence varies across the asset portfolio. The main gaps are limited condition information, incomplete component-level information for complex assets, and incomplete asset records. Complex assets include pump stations and treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, or telemetry equipment. These gaps affect confidence in making appropriate planning and investment decisions.

The implementation and commissioning of TechOne Enterprise Asset Management represents a potential change in the WSBU's asset information capability. The transition provides an opportunity to establish a more standardised asset data system. Realising these benefits will depend on how well the existing and future data is collected and validated within TechOne.

Current improvement priorities are to:

- Complete the implementation and commissioning of TechOne EAM and components
- Complete asset data validation and migration to TechOne
- Improve assets data collection (including component level condition data)

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- Document information handlers' roles and responsibilities

9.3.5 Cyber and Access Security

ICC's IT Services team manages the servers supporting wastewater information systems. System access and changes are controlled through individual user credentials. The policies, procedures, functional descriptions, and service agreements governing SCADA access and cybersecurity require confirmation. SCADA alarm priorities are operational controls and are documented separately to this AMP.

There is a growing risk of ransomware attacks on government infrastructure and the potential for the WSBU to be locked out of the SCADA systems losing automatic control of various pump stations and treatment processes, which would then have to be manually operated. A Cyber Security Risk Assessment is included in the improvement plan to better understand these risks.

9.4 Asset Information Lifecycle

Asset information is created, maintained and used throughout the asset lifecycle. The lifecycle comprises the following stages:

1. Create or acquire
2. Capture and validate
3. Operate and maintain
4. Monitor performance
5. Assess risk
6. Plan investment
7. Renew, enhance, reuse, or retire

Information generated at each stage is used in subsequent decisions, creating a continuous cycle of information capture, review and improvement.

9.4.1 Create or Acquire Assets

Asset information is created when assets are constructed, renewed, modified or vested in the WSBU. Information is obtained through design, consenting, construction, inspection, testing, commissioning and project handover.

For subdivision and land development works, the WSBU reviews engineering information and proposed infrastructure through the consent and technical approval process. The survey plan is certified under section 223 of the Resource Management Act 1991 when it conforms with the approved subdivision consent. Certification under section 224(c) confirms that the subdivision consent conditions have been met to the satisfaction of the WSBU or otherwise addressed through an applicable statutory mechanism.

Before new infrastructure is vested or accepted, the required inspections, testing, commissioning and handover information are completed in accordance with the consent conditions and the Code of Practice. Handover information includes, where applicable:

- Approved as-built drawings
- Asset location, configuration, and attributes
- Inspection and test results
- Commissioning and compliance records
- Operating and maintenance documentation
- Ownership and asset status
- Capital cost and valuation information

Accepted information is provided to the WSBU so that the asset data, GIS, document, and valuation records can be created or updated.

9.4.2 Operate and Maintain

Operational and maintenance activities generate information about asset condition and performance. Information is obtained through a variety of sources including operational monitoring, inspections, and planned and reactive maintenance.

SCADA and telemetry provide operational information and alarms for the majority of pump stations and some treatment components.

Asset information and attribute data is updated when activities result in a material change to an asset, including:

- Maintenance or repair
- Replacement of an asset or component
- Changes to condition or operating status
- Changes to asset configuration or function
- Identification of a fault or recurring failure
- Inspection, testing, or investigation results

Relevant changes are reflected in the asset register, GIS, document-management, and valuation records, where applicable. The lifecycle management activities informed by this information are described in Section 7.

9.4.3 Monitor Performance and Assess Risk

Asset performance is monitored using operational data and condition assessments. This information is reviewed to identify and monitor:

- Changes in asset condition or performance
- Recurring faults and failure trends
- Capacity or service constraints
- Compliance issues
- Changes in asset criticality or risk
- Emerging maintenance, renewal or improvement needs

Material findings are recorded in IPS but will be recorded in TechOne following the asset management system transition. Where an assessment identifies missing or uncertain information, the limitation is recorded and may result in further investigation.

9.4.4 Plan Investment

Asset information is used to information to identify maintenance, renewal, and improvement needs. These needs are assessed and prioritised through the WSBU's planning processes and inform:

- maintenance and renewal programmes
- this Asset Management Plan
- the Investment and Delivery Plan
- business cases and option assessments
- capital and operational budgets
- expenditure and valuation forecasts

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The quality and completeness of the underlying information affect confidence in the scope, timing, and cost of proposed investment. Assumptions, data limitations, and forecast confidence are recorded where they affect investment decisions.

Detailed investment priorities and improvements are described in Section 8 and the IDP. The prioritisation framework and lifecycle decision-making methodology are established in the SAMP.

9.4.5 Asset Retirement/Reuse

Assets may be retired when they are no longer required to support the agreed LoS. The retirement approach considers the asset's condition, material, location, residual function, safety and environmental risks, potential for reuse, and the cost and practicability of removal.

When an asset is retired, its operational status and any continuing function are recorded in the asset register and spatial records. Relevant valuation and supporting document records are also updated. Project managers and maintenance contractors provide the information required to update these records following renewal, replacement, modification, or decommissioning work. This maintains traceability between the retired asset and any replacement asset.

Retired above ground plant and equipment is removed or disposed of where practicable. Equipment with a residual market value may be sold, while other items may be recycled or disposed of as scrap. Significant civil assets may be demolished, retained, or replaced depending on the future requirements of the site. Historically, income from wastewater asset disposals has been considered insignificant.

Disused pipes may be:

- Removed as part of renewal or other construction work
- Disconnected, sealed and left in place
- Abandoned and filled (or otherwise stabilised) where required to manage structural or ground subsidence risks
- Retained for possible future recommissioning or rehabilitation
- Repurposed as a conduit where appropriate

Where a pipe remains in the ground, its status, material, location, and residual function remain identifiable in the asset register and GIS. If an asset is reused or its function changes, the asset record is to be updated rather than deleted, so its history and relationship to the network remain traceable.

Particular care is required for abandoned asbestos-cement pipes because future removal can be a health and safety risk, and costly to dispose of. The WSBU's earlier planning documents identify pipe disposal as an unresolved issue and note that disused pipes have historically been disconnected and left in the ground. They also identify filling with a low-strength material or removal to an approved landfill as possible treatments.

9.5 Service and Asset Monitoring

ICC monitors the Wastewater activity to confirm that levels of service are being achieved, assets and systems are performing as intended, and emerging operational, maintenance, and investment needs are identified. The following services and asset activities are monitored:

- Treatment, storage, pumping, and network performance
- Discharge wastewater quality and compliance
- SCADA and telemetry alarms

- customer requests and complaints
- Asset faults, failures, and service interruptions
- Inspection and maintenance outcomes
- Asset condition and performance

Wastewater effluent quality and receiving environment compliance is demonstrated through the number of breach notices the WSBU receives annually. SCADA and telemetry provide real-time operational monitoring and alarms for the treatment plant, pump stations and other monitored assets. This includes flow and pressure monitoring at pump stations, and biological oxygen demand (BOD) at the Clifton and Bluff WWTPs.

Monitoring information is recorded asset-information systems and is used to:

- Respond to faults and abnormal operating conditions
- Identify recurring failures and deteriorating performance
- Initiate inspections, investigations, and maintenance
- Update condition and risk assessments
- Assess achievement of levels of service
- Support renewal planning
- Comply with discharge consent reporting requirements
- Inform future investment decisions

9.6 Asset Management Capability

Effective management of the wastewater activity depends on having sufficient people with the appropriate skills, knowledge, systems, and authority.

The WSBU delivers these functions through a combination of Water Services staff, other Council teams, contractors and specialist advisers. Current capability includes wastewater treatment operations, network operations and maintenance, in-house engineering services, asset management, compliance monitoring, customer response, and capital delivery. External providers supplement internal capability for specialist investigations, condition assessments, hydraulic modelling, design, construction and technical support.

Operational capability is supported by experienced staff and established contractor arrangements. Network maintenance and fault responses are led and coordinated by the WSBU with contracted support. Specialist providers also support SCADA, environment compliance information, laboratory services and other technical functions.

Asset management capability is continuing to develop. Current limitations include reliance on the knowledge of key individuals, incomplete asset and condition information, developing system integration, and the need to strengthen links between asset data and investment decisions. The transition to TechOne provides an opportunity to improve asset information governance, data consistency, work and inspection records, and decision traceability.

The WSBU’s approach is to progressively strengthen internal capability while continuing to use external expertise where specialist skills or additional delivery capacity are required. Improved systems, documented processes, defined responsibilities and knowledge-management practices will also help reduce reliance on individual staff knowledge and support decisions.

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Asset Management Plan
9 How we Manage the Activity

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Confirm current governance, roles, contracts, system architecture, data lifecycle, asset-data standards, integration controls, reporting, and review arrangements.

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10 Continuous Improvement

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C15
This chapter should demonstrate	Current/target maturity, assessment results, detailed improvement plan, innovation and next assessment.

10.1 Improvement Basis

Known gaps should be acknowledged and addressed through a committed improvement plan rather than overstating maturity. The improvement plan should include each action, benefits, indicators and timeline.

10.2 Asset Management Maturity Assessment

ICC's asset management maturity objective is to achieve and maintain an intermediate level of asset management practice across the WSBU. This reflects the complexity of water services assets, increasing regulatory expectations, and the need for evidence based decision-making to support service delivery, risk management, and long term investment planning.

The most recent formal asset management maturity assessment available to the WSBU was undertaken in 2017 using the Infrastructure Management Manual (IMM) Asset Management Maturity Framework. The assessment was completed internally and evaluated key elements of asset management practice including service planning, lifecycle management, risk management, financial planning, and continuous improvement. The results are illustrated in Figure 10-1.

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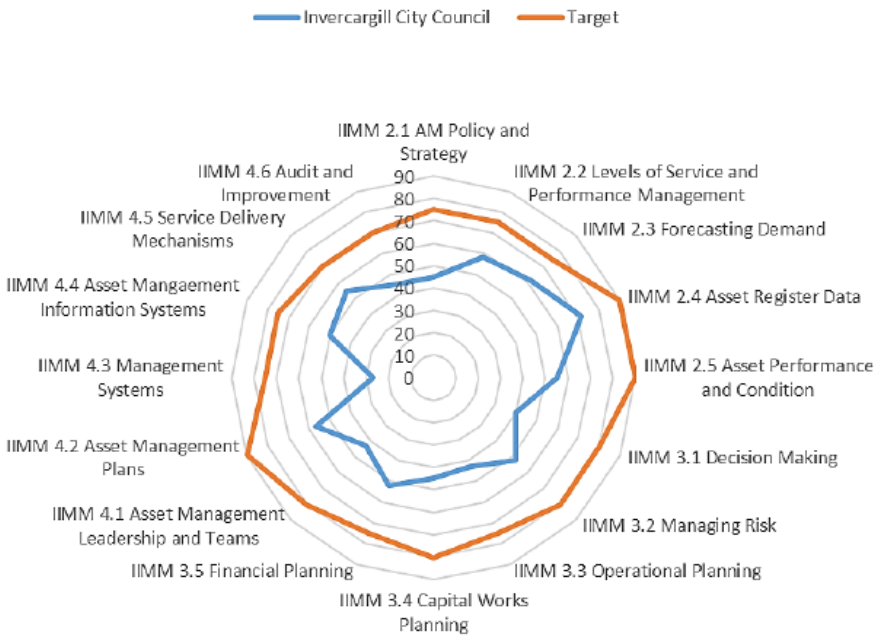


Figure 10-1: Asset Management Maturity Assessment Results (2017)

The assessment indicated that ICC's three waters activities were generally operating at an Intermediate level of maturity.

These findings support the Intermediate Maturity, with a focus on addressing identified gaps and embedding continuous improvement practices across all three water services.

A comprehensive baseline maturity assessment, including recommendations and an improvement roadmap, is planned for early 2027 to establish a current view of asset management performance and capability. The assessment will establish a current view of asset management performance, identify priority improvement opportunities, and support future updates of the WSS, SAMP, AMPs, and IDP.

10.3 Priority Improvement Programme

The Asset Management Improvement Plan provides a structured approach for continually improving ICC's asset management practices, information, systems and decision-making processes. Improvement actions have been identified through development of this AMP, previous asset management maturity assessments, Commerce Commission Information Disclosure requirements, risk and resilience assessments, asset information reviews, condition assessments and operational experience.

Improvement actions are prioritised based on their contribution to service delivery, risk reduction, regulatory compliance, information quality, asset management maturity and investment decision-making. The WSBU recognises that not all improvements can be delivered simultaneously and will progressively implement improvements having regard to organisational capacity, affordability and deliverability

Key improvement themes for the wastewater activity are:

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- Improve network understanding through hydraulic modelling calibration and flow monitoring improvements
- Increasing confidence in asset condition through CCTV investigations
- Update asset documentation and improve component level data for complex assets

The key priorities for the wastewater improvement plan are summarised in Table 10-1.

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Asset Management Plan
10 Continuous Improvement

Table 10-1: Summary of Priority Wastewater Improvement Items

Improvement	Description	Asset Management Objective	Benefit	Timeframe
Develop a Buried Asset Condition Assessment Programme	Limited buried asset condition information requires the development of a structured condition assessment programme for water reticulation assets, including targeted investigations, inspections and condition grading.	Enable planned succession of assets	Improves confidence in renewal timing and reduces the risk of unexpected failures.	Unknown
Hydraulic Model Calibration	The wastewater network hydraulic model needs to be calibrated to ensure it is accurate to the current network.	Enable planned succession of assets	A calibrated hydraulic model can used to assess changes to the network, growth, and overflow risks. This will enable more informed investment decisions.	Ongoing
Lateral Ownership	Wastewater and Stormwater laterals are currently considered private property up to the wastewater main. However, the WSBU does renew and rehabilitate wastewater laterals up to the property boundary when undertaking renewal work on wastewater mains.	Enable planned succession of assets	The water committee is currently considering ownership of lateral assets to the boundary. If laterals remain private ownership, the property owner will be responsible for replacement when there is a fault.	Due in October 2026
Addressing network Inflow & Infiltration (I&I)	I&I investigations are required to identify the locations of the network that are most susceptible to wet weather flows and notify property owners of contributing faults in their private systems. Rehabilitation and renewal works will then be needed to remediate portions of the wastewater network.	Improve resilience to climate and natural hazards	Reducing I&I in the network will improve the capacity of the network during wet weather and reduce the risk of wastewater surcharging and overflows.	Unknown
Climate Risk and Adaption Planning	No detailed climate risk assessment has been completed for any of the three waters activities. Therefore, consequence of failure, exposure and vulnerabilities are not well understood. Assess the vulnerability of the various three water supply assets to drought, flooding, storm events, earthquake and climate change impacts. Use findings to prioritise resilience improvements and future investment planning.	Improve resilience to climate and natural hazards	Enable risk-based asset investment and evidence to support climate risk investments.	Ongoing
Asset Management Capability Development	Strengthen asset management knowledge and practices across the WSBU by embedding whole of life asset costs, risk-based decision making and continuous improvement into O&M and planning.	Lift asset management maturity	Builds asset management capability and ownership, improving consistency and confidence in decision making.	Process to begin in 2027
Asset Information Standards Alignment	Implement a staged approach to aligning asset data, hierarchies (parent, child and component assets), classifications and attributes with the 3WADS	Lift asset management maturity	Improves data quality, consistency and traceability for reporting, planning and investment decisions.	Ongoing
Asset Class/Cohort Planning	Parent/child relationship. Complex assets include pump stations and treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, plant and equipment or telemetry equipment etc. and some component-level assets are missing from the asset data. It is intended to improve the data capture and links between these assets as part of the move to the new TechOne data system.	Lift asset management maturity	Improving asset data quality and visibility or these assets will provide operators better information to manage the existing system and will improve the ability to make appropriate planning decisions for these assets.	Unknown
Asset Management Maturity Assessment	Undertake a formal asset management maturity assessment and develop an improvement roadmap aligned with the Strategic Asset Management Plan.	Lift asset management maturity	Targeted improvement and governance of water services.	Unknown
Functional Descriptions and Operation and Maintenance (O&M) Manuals	Most pump stations and treatment facilities have functional descriptions available through the SCADA system, but a small number are missing and need to be created and uploaded to the system. Required sites such as Clifton and Bluff WWTPs have O&M Manuals but these are not up to date and not available digitally. These should also be updated and available digitally.	Maintain safe, compliant and efficient water services	Having accurate and accessible functional descriptions and O&M manuals help operators to manage the applicable sites particularly if they experience complex issues that need to be addressed.	

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Asset Management Plan
10 Continuous Improvement

Improvement	Description	Asset Management Objective	Benefit	Timeframe
Flow Monitoring Improvements	The doppler flow meters within the Cliffton WWTP are inaccurate and there is no flow monitoring for flows entering the Ōmāui Oxidation Pond. These systems require improved systems to monitor flows.	Maintain safe, compliant and efficient water services	Understanding the flows through Cliffton WWTP will enable better performance control and monitoring of the treatment processes. Monitoring the flows into the Ōmāui Oxidation Pond will improve the understanding of capacity in the Ōmāui wastewater network, and treatment and irrigation system.	
Mitigation of Overflows at Turnbull Thomson Park	The manhole upstream of the Lindisfarne Pump Station in Turnbull Thomson Park is known to surcharge in large wet weather events. This poses a risk to public health and safety as well as the reputation of ICC and the WSBU. The current approach to address the risk is to reduce upstream inflow and infiltration sources.	Maintain safe, compliant and efficient water services	Preventing the overflows from occurring will eliminate the risk to public health from the wastewater ponding and will stop ICC received infringement notices, abatement notices, or prosecution for having an unconsented overflow event.	
Risk and Emergency Arrangements	Document emergency arrangements and procedures, such as how to maintain or restore services in a major event.	Maintain safe, compliant and efficient water services	Controlled and resilient environment.	
Water Service Performance Framework	Review and refine levels of service, performance measures and reporting processes to align with Water Services Strategy and Information Disclosure requirements.	Maintain safe, compliant and efficient water services	Improves transparency and provides clearer links between service outcomes, performance and investment.	
Fault and failure data analysis	Analyse 3 water network asset data including condition information, customer requests and maintenance records to identify failure trends, high-risk assets and renewal priorities. Integrate findings into risk assessments and renewal planning.	Maintain safe, compliant and efficient water services	Improves understanding of network performance, supports evidence based renewal planning and reduces reliance on age and material based assumptions.	
CCTV Condition Assessments Expansion	There is limited coverage of the network for CCTV condition assessments. The programme of CCTV assessments needs to progress to increase network coverage and improve understanding of the condition of the network.	Reduce risk from ageing and critical assets	A better understanding of the condition of the network will enable more targeted investment decisions so the areas most in need of rehabilitation can be remediated first	
Lifecycle Planning Improvement	Develop improved deterioration modelling, intervention strategies and renewal forecasting methodologies across major asset classes.	Sustain core infrastructure over the long term	Supports long-term stewardship of assets and improves confidence in lifecycle investment forecasts.	
Use Additional Asset Data Points to Inform Renewal Programme	Integrate asset condition data, criticality, performance and risk information to support evidence and risk based decisions including renewal programme prioritisation.	Sustain core infrastructure over the long term	Directs investment towards assets with the highest risk and service consequences.	
Three Waters Critical Asset Framework Development	Criticality mapping is incomplete and evidence requires validation. The 2017 Project Max criticality framework is focused mainly on asset types and does not provide a complete view of critical water supply assets. Expand criticality framework/register to include source, treatment, storage, pumping and SCADA assets. Ensure it is aligned with ICC's Risk Management Framework	Sustain core infrastructure over the long term	Enable risk-based asset investment and evidence to support investments.	
Trade Waste Monitoring	Incoming flows to the Cliffton WWTP, combined with the reported average water usage indicates that there is a large portion of wastewater flows coming from non-residential trade waste users. In future trade waste flows are to be monitored and reported separately.	Lift asset management maturity	Separate flow monitoring and reporting enables a greater accuracy of understanding of network flows.	

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10.4 Innovation

The WSBU will monitor and investigate advances in technology where appropriate to improve performance against Levels of Service and cost effectiveness. The WSBU team attend conferences and keep up with industry good practice. There are no specific innovations in place for the wastewater activity.

10.5 Review and Continuous Improvement

The WSBU will review this Wastewater AMP annually to keep it aligned with current service performance, asset risks, regulatory requirements, and investment priorities. Regular data-quality reviews and continued condition-assessment programmes will improve confidence in asset information, particularly for assets where condition evidence is limited. Review findings will be used to update asset records, risk assessments, renewal priorities, and future AMP content.

Progress against the wastewater priority improvement items will also be monitored through the annual review process. Improvement actions will be updated as better information becomes available and will be informed by the planned 2027 asset management maturity assessment and improvement roadmap. This will support the progressive improvement of asset management capability, decision making, resilience planning, and regulatory readiness across the wastewater activity.

DRAFTING GAP / ICC CONFIRMATION REQUIRED / IMPROVEMENT PLAN
For each improvement item, add owner, date identified, target date, cost, resources, capability requirements, and progress evidence for each action.
Confirm identified improvement item and if there are any gaps.
Identify any innovations in the wastewater activity.

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Appendices

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Appendix A Schedule Compliance Map

Clause	Primary location
C6	Chapter 1: Introduction and Plan Context Chapter 2: Strategic and Regulatory Context
C7	Chapter 3: Consumers and Level of Service
C8	Chapter 4: Asset Portfolio, Condition and Performance
C9	Chapter 9: How We Manage the Activity
C10	Chapter 3: Consumers and Level of Service
C11	Chapter 5: Future Demand and Impact of Drivers Chapter 8: Asset Improvements and Enhancement Programme
C12	Chapter 7: Lifecycle Management
C13	Chapter 4: Asset Portfolio, Condition and Performance Chapter 7: Lifecycle Management
C14	Chapter 6: Risk and Resilience
C15	Chapter 10: Continuous Improvement

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Stormwater Asset Management Plan

Invercargill City Council

In-House Water Services Business Unit

Stantec

Stantec New Zealand

Prepared for:
Invercargill City Council

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Prepared by:
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Revision	Date	Description	Status
01	15 September 2026	Stormwater AMP	Working draft for ICC comment
02	16 October 2026	Stormwater AMP	Draft for issue to ICC

Author/s:	Ashleigh Denize | Stantec New Zealand
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Approved for Issue by:	Kathrin Winkelmann

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Drafting conventions

Commerce Commission Information Disclosure references are included in the Section tables throughout the document to identify relevant clauses and demonstrate alignment with Schedule C requirements.

For example:

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity-specific strategic, regulatory, policy, sustainability and climate drivers.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN callouts at the end of each section identify:

- information gaps or missing evidence;
- matters requiring WSBU confirmation or professional judgement; and/or
- actions required to improve AMP maturity and support future updates.

For example:

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN
No specific stormwater climate risk assessment has yet been completed. Complete a stormwater climate risk and resilience assessment and incorporate findings into future AMP update
Confirm key issues and should we add climate resilience? Test before workshop

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Executive Summary

The Stormwater Asset Management Plan sets out how Invercargill City Council and their in-house Water Services Business Unit will manage its stormwater activity over the next 30 years. The network is currently meeting its service targets and forecast growth can generally be accommodated, but changing regulation, climate effects and incomplete asset information will place increasing pressure on future performance and investment.

The stormwater network serves the urban areas of Invercargill, Otatara and Bluff and comprises approximately 416 km of pipes, 42 km of open drains and eight pump stations. Key supporting assets include tidal floodbanks, settling ponds, stormwater treatment devices, outfalls, manholes, and monitoring and control systems.

Past upgrades, particularly those completed after the 1984 floods, have improved network capacity and resilience. However, limited condition data and hydraulic modelling reduce confidence in renewal timing and flood-risk assessment. The immediate focus is therefore on better evidence: expanded inspections, updated modelling and assessment of climate and resilience risks and the impact these may have on the stormwater activity.

Planned investment will maintain existing services while addressing renewals, vulnerable pump stations, consent requirements and stormwater treatment. The priority stormwater improvements identified for the WSBU focus on lifting confidence in planning and investment decisions. This will be achieved by improving asset and customer data, expanding condition assessment and hydraulic modelling, and completing climate risk and resilience assessments.

Delivery will need to remain affordable and realistic, supported by stronger asset data, clearer governance and improved programme oversight. Clear ownership, timeframes and regular progress reviews will support delivery and inform future updates of the AMP and Investment Delivery Plan.



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1 Introduction and Plan Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C6 (1b)(1c)(1d)
This chapter should demonstrate	Approval, assumptions, summary and planning-document alignment.

1.1 Purpose and Scope

This Asset Management Plan (AMP) provides the tactical planning framework for Invercargill City Council's (ICC) in-house Water Services Business Unit (WSBU) Stormwater activity. It translates the strategic direction established in the Water Services Strategy (WSS) and the asset management principles defined in the Strategic Asset Management Plan (SAMP) into how the stormwater activity will be managed, including service levels, future demand, risks, investment needs, and improvement priorities.

The AMP supports informed decision-making by providing evidence on asset condition, performance, capacity, criticality, risk, and future service requirements. It also provides the basis for prioritising investment through the Investment Delivery Plan (IDP) and demonstrating alignment with regulatory, customer and organisational requirements.

The scope of this AMP includes all assets and activities associated with the collection, conveyance, management and discharge of stormwater within the WSBU's stormwater service areas, including Invercargill, Bluff, Makarewa, Ayoms Bush and Redmain Road, and Otatara. The stormwater activity is managed and delivered by the WSBU.

This AMP is structured to align with the Commerce Commission Water Services Information Disclosure requirements and follows the asset management planning framework established by WSBU. The document addresses consumer requirements, levels of service, asset performance, demand, risk, lifecycle management, investment planning and continuous improvement.

1.2 Planning Horizon

This AMP adopts a 30-year planning horizon to support long-term infrastructure stewardship and investment decision-making. Detailed service levels, expenditure forecasts and performance targets are generally presented for the first ten years, aligned with the WSS, IDP and the WSBU's long-term planning framework. Planning assumptions, demand forecasts and investment priorities are reviewed periodically to ensure they remain appropriate and reflect changing community expectations, regulatory requirements, and operating conditions.

1.3 Relationships with other ICC Documents

WSBU's Stormwater activity operates within a wider planning framework that includes statutory planning documents, asset management strategies, infrastructure planning, bylaws and regulatory obligations. The AMP supports the delivery of the WSBU's long-term objectives by translating strategic direction into activity-specific direction. The relationship between the principal water planning documents is shown in Figure 1-1.

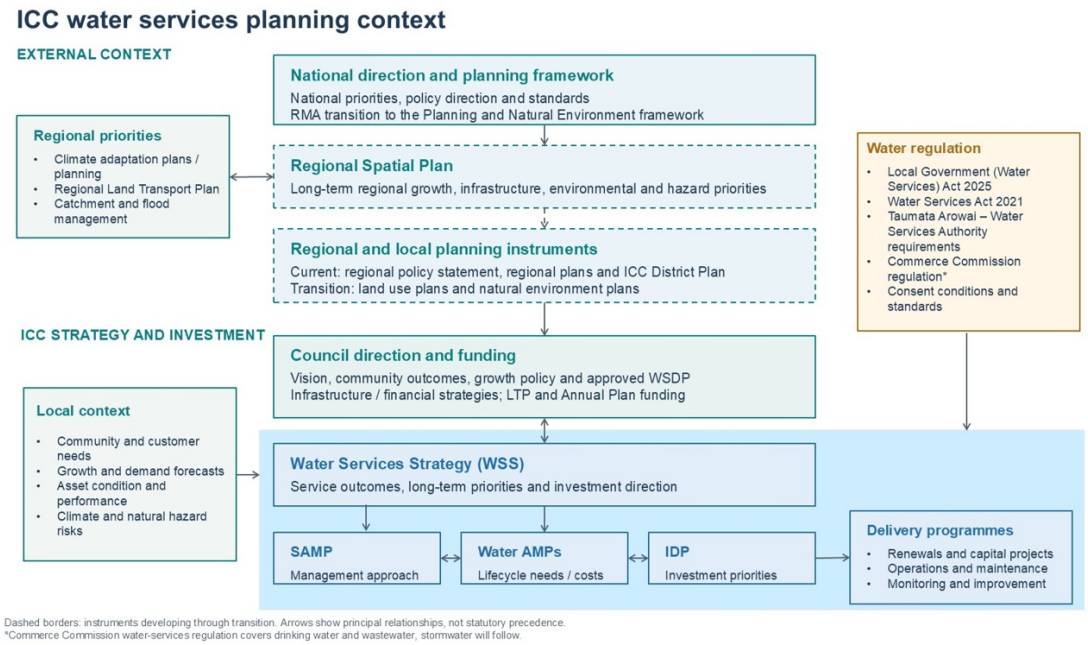


Figure 1-1: ICC Water Services Planning Context

1.4 Relationships with other Commerce Commission Documents

Under the Local Government (Water Services) Act 2025, Water Service Providers are required to prepare a WSS, SAMP, IDP and activity specific AMP's that publicly describe how water services will be delivered, provide transparency regarding planned costs and investment, and support accountability to customers and stakeholders.

Together, the WSS, SAMP, AMP, and IDP provide a connected planning framework. The WSS establishes long-term outcomes and expectations, the SAMP defines how asset management decisions will be made, the AMP identifies service risks, lifecycle needs and required interventions, and the IDP converts those needs into prioritised, staged, and deliverable investment programmes. This provides a clear line of sight from strategic objectives through to operational delivery and investment decision making.

The relationship between the key planning documents is shown in Table 1-1.

Table 1-1: Key Planning Documents

Document	Role	How this AMP Links
Water Services Strategy (WSS)	Sets long term outcomes, service expectations, strategic direction, and key investment priorities for water services. Provides transparency regarding how water services will be delivered over the planning period.	Defines what the WSBU is seeking to achieve for customers, communities, public health, environmental outcomes, and service resilience. The AMP translates these strategic outcomes into levels of service, lifecycle management strategies, risk responses, renewal needs and investment requirements.
Strategic Asset Management Plan (SAMP)	Translates strategy into asset management objectives, principles, and decision-making frameworks.	Provides the asset management methodologies, lifecycle planning approach, risk framework, and decision-making processes applied within this AMP.

Document	Role	How this AMP Links
Asset Management Plan (AMP)	Provides activity-specific planning for each three waters service, Water Supply, Wastewater, and Stormwater.	Applies the strategic direction, and asset management framework to the stormwater activity, including levels of service, demand, risk, lifecycle management, and improvement planning.
Investment Delivery Plan (IDP)	Convert needs and choices into prioritised, staged, and fundable programmes.	Uses the needs, risks, service level gaps and investment priorities identified in this AMP to develop delivery programmes and expenditure forecasts.

1.5 Activity Overview

The stormwater activity provides infrastructure and services that collect, convey, and discharge rainfall runoff from urban catchments. The activity supports public safety, property protection, transport network functionality, environmental outcomes, and community resilience.

The stormwater network includes approximately 416 km of pipes ranging from 100 mm to 2,100 mm diameter, together with approximately 47 km of open drains, most of which are located in the rural residential area of Otatara. There are 13 stormwater treatment sites (retentions and basins), and approximately nine proprietary treatment devices within the network consisting of one jellyfish filter and eight raingardens. Of the basins, 11 are privately owned and operated. The three ponds owned by WSBU are associated with stormwater pump stations. Eight stormwater pump stations provide for continued discharge of stormwater from low lying areas against high tide levels, or when receiving waters are elevated due to flooding.

The WSBU owns and maintains these assets on behalf of the local community, providing stormwater services to each property in the Bluff and Invercargill urban areas. Stormwater is discharged to natural waterways including the Waikiwi Stream, Waihōpai River, Kingswell Creek, Clifton Channel, Otepuni Stream, Oreti River, the New River Estuary, and Bluff Harbour. These waterways are managed by Environment Southland. Environment Southland also manages a series of flood protection schemes on the main waterways through the city. The WSBU manages the tide protection banks around the Waihōpai Arm of the waterways Stead Street and Cobb Road.

All stormwater sumps on roads include a 300 mm silt trap to improve runoff quality and are managed and funded as part of the roading activity so are not included as stormwater assets in this AMP.

The piped stormwater catchments in Invercargill are generally short, with the largest catchment having a maximum flow time of less than 40 minutes. The system is therefore designed for short-duration, high-intensity rainfall events. Events larger than the primary system design capacity may result in surcharging and overland flow.

In FY2026/27, the activity provided stormwater services for the urban Invercargill City area to a population equivalent of 53,626 people through 21,626 residential and 1,538 non-residential properties. ICC have generated a report for long term planning assumptions, which confirms a population growth rate of 0.5%. The serviced population equivalent is expected to increase to approximately 56,368 by FY2036/37.

The service operates within an environment of changing regulatory requirements, evolving customer expectations, ageing infrastructure, and a need to maintain long-term stormwater service resilience.

Figure 1-2 is an overview schematic of the major pipes and pumps in the stormwater network. Figure 1-3 shows both the WSBU and Environment Southland Flood Protection Infrastructure that is in place.

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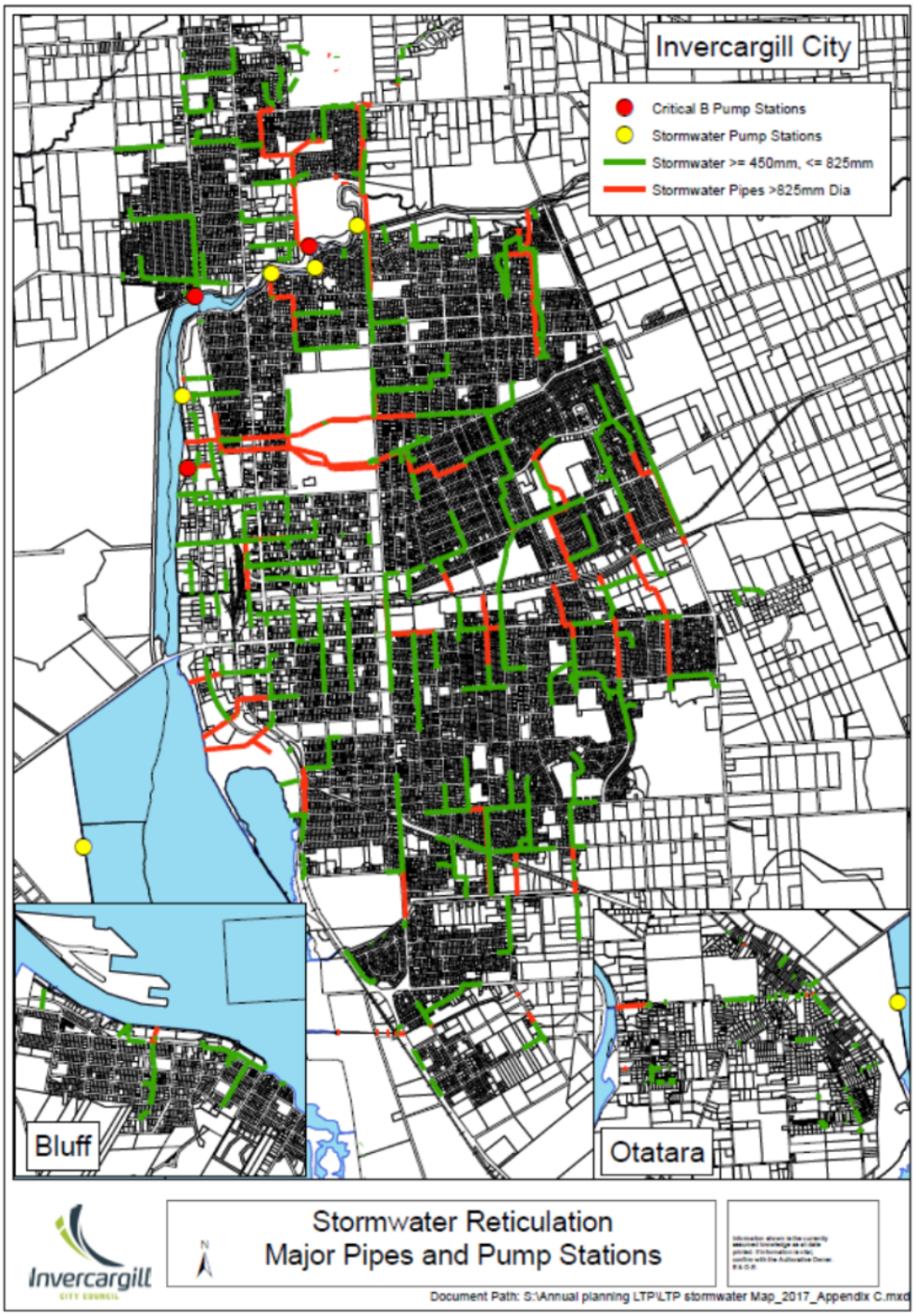


Figure 1-2: Stormwater Reticulation Major Pipes and Pump Stations

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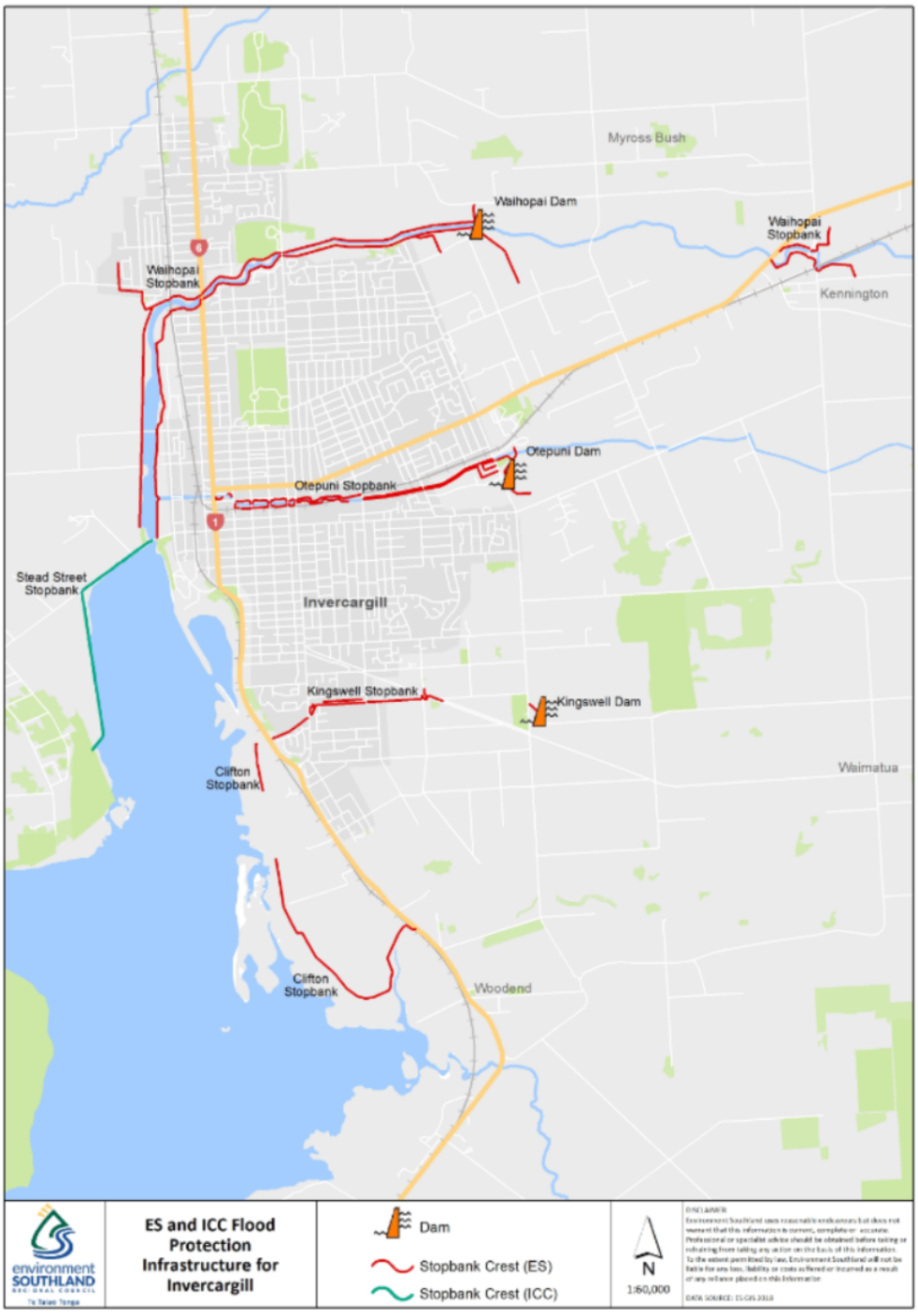


Figure 1-3: Environment Southland and WSBU Flood Protection Infrastructure for Invercargill

1.6 Significant Assumptions

This AMP identifies the key assumptions that influence service levels, risk, lifecycle planning, resilience and investment decisions. These assumptions represent the best information available at the time of preparing this AMP and will be reviewed and updated as new information becomes available.

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Table 1-2: Significant Assumptions

Assumption	Qualification	Reason for Significance
Future demand and growth will remain within current projections.	Annual growth of 0.5% for population and 0.4% for households is assumed. Actual growth may vary.	Demand assumptions underpin capacity assessments, service planning and capital investment decisions. Significant variation may result in capacity constraints, changes to levels of service, or unplanned expenditure.
Asset condition and remaining life information is adequate for AMP level planning.	Condition data is incomplete and actual asset life may differ from assumptions.	Asset condition information influences renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Assets will perform broadly in line with assumed useful lives and deterioration profiles.	Actual asset performance may vary due to condition, environment, operational and installation practices and unforeseen failures.	Asset life assumptions influence renewal timing, investment prioritisation and failure risk. Uncertainty may result in under- or over-investment and increased reactive maintenance requirements.
Environmental quality standards and regulatory requirements will remain achievable within planned investment levels.	Future regulatory requirements may introduce additional compliance obligations or more stringent service standards.	Regulatory compliance is a primary driver of operational and capital investment. Changes may affect expenditure requirements and affordability.
Sufficient skilled staff, contractors, and consultants resources will be available to operate and deliver three waters services.	Workforce shortages, contractor availability and specialist capability constraints may affect operational and capital programme delivery. (x3AMPs).	Organisational capability directly influences service performance, asset management maturity and delivery of planned investment.
Capital and renewal programmes will be delivered substantially as planned.	Forecast expenditure profiles assume sufficient organisational capacity, contractor availability, market capability and funding to deliver the planned programme. Programme rephasing may be required where delivery constraints arise.	Delivery assumptions influence the timing of risk reduction, service improvements and expenditure forecasts. Delays may increase asset failure risk and reactive maintenance costs.
Climate conditions will remain within the range considered by current planning assumptions and design standards.	Climate variability and extreme events may exceed historical patterns and planning assumptions.	Climate-related impacts may affect asset performance, resilience requirements and future investment needs.
Asset information quality and asset management system capability will improve over the planning period.	Asset information quality and asset management system capability will improve over the planning period.	Asset information underpins decision-making, forecasting confidence and compliance with Information Disclosure requirements.

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Assumption	Qualification	Reason for Significance
Critical stormwater assets will continue to perform broadly in line with current expectations.	Failure of critical assets, including the key pump stations, floodbanks and floodgates, culverts under railways and SCADA, could materially affect service delivery and investment priorities.	The stormwater system contains a number of critical assets with limited operational redundancy and/or limited overland flowpath path alternatives.
The current allocation of assets remains with ICC.	While this AMP covers stormwater assets owned by ICC and managed by the WSBU, Environment Southland also owns stormwater, drainage and flood protection assets across Southland.	Transfer of assets between Environment Southland and ICC will materially affect the AMP and the WSBU.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN
Update images with latest stormwater reticulation area, pump station locations, and floodbank maps.

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2 Strategic and Regulatory Context

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	Supporting C6, C10, C11 and C14
This chapter should demonstrate	Activity-specific strategic, regulatory, policy, sustainability and climate drivers.

2.1 Strategic Context

2.1.1 Purpose of the Activity

The purpose of local government (Section 10 of Local Government Act) is meeting the current and future needs of communities for local infrastructure, public services, and regulatory functions. The stormwater activity contributes to the purpose of local government through the provision of infrastructure under section 10 of the Local Government Act 2002 and is identified as a core service under section 11A(1)(a).

The activity contributes to the community outcomes identified in Table 2-1.

Table 2-1: Alignment of the Stormwater Activity with Local Government Community Outcomes

Community Outcomes	How the Activity Contributes
Nobody is Left Behind – Our youth, older people, different neighbourhoods and communities basic needs are met through cost effective investment, and they feel valued and proud to live here.	The stormwater activity supports safe, resilient and sustainable communities by reducing flood risk, protecting essential infrastructure and receiving environments, and enabling future growth and economic activity.
A vibrant, safe city which meets our people's diverse cultural needs.	The stormwater activity supports safe, resilient and sustainable communities by reducing flood risk, protecting essential infrastructure and receiving environments, and enabling future growth and economic activity.
A future focused economy delivered through innovation and partnership and supported by appropriate infrastructure.	The stormwater activity supports safe, resilient and sustainable communities by reducing flood risk, protecting essential infrastructure and receiving environments, and enabling future growth and economic activity.
A healthy, resilient environment supporting a healthy, resilient community.	The stormwater activity supports safe, resilient and sustainable communities by reducing flood risk, protecting essential infrastructure and receiving environments, and enabling future growth and economic activity.

Delivery of these outcomes requires the WSBU to balance service performance, resilience, environmental outcomes, regulatory compliance, and affordability when making long-term investment decisions. These outcomes are reflected through the Water Services Strategy, Levels of Service framework, risk management processes, and investment planning described throughout this AMP.

The 2024/25 Residents Survey identified stormwater services as one of the WSBU's highest-priority services, alongside wastewater, water supply, roading, solid waste management and parks and reserves. This reinforces the importance consumers place on public safety, service reliability, responsiveness, and long-term resilience of the stormwater activity.

2.2 Strategic Issues

The key strategic issues and challenges ICC are currently facing include:

- Meeting the changing needs of rangatahi as part of the wider community.
- Meeting and preparing for the changing needs of the wider community that is growing older and more diverse.
- Delivering financially sustainable and affordable investment to the core infrastructure the city needs to thrive, innovate and grow.
- Building resilience and preparedness to navigate increasingly complex environmental challenges including climate change, land contamination and earthquake risks and other natural hazards.
- Investing in partnerships and new ways of working to achieve more together.
- Demonstrating Council leadership and delivery is credible and effective, building community trust and engagement and effectively navigating regulatory change.

These Council-wide challenges provide the strategic context for the stormwater activity. The stormwater activity faces a number of strategic issues that will influence service delivery, risk management and investment decisions. The strategic issues outlined in the following sections are considered the most significant influences on the future management of the stormwater activity.

2.2.1 Asset Condition and Renewals

The WSBU has not completed CCTV inspections for enough of the stormwater network to determine the overall network condition rating. Development of an ongoing CCTV inspection programme for network condition rating purposes is planned as part of the WSBU's improving asset management maturity.

The stormwater network has benefited from significant investment since the major flooding experienced across Southland in 1984. Following these events, substantial upgrades were undertaken across key parts of the network, including the replacement and upsizing of major stormwater conveyance routes. Many critical trunk mains were upgraded to 1800 mm diameter pipes and other large-diameter assets to increase network capacity, improve flood management performance, and enhance resilience across the city. These investments have played an important role in reducing flood risk and supporting the network's current level of service.

Network condition assessments are currently based on a desktop exercise using experienced engineering knowledge of the networks performance and maintenance history. While above-ground assets have generally good condition visibility through inspections and operational monitoring, buried stormwater assets remain less well understood. The desktop assessment recorded a value of 26% of the buried network being less than average condition.

Current CCTV inspection results indicate that approximately 59% of the inspected network is in less than average condition. However, the CCTV programme has primarily targeted known problem areas, ageing assets and locations with identified faults, which may bias results toward poorer condition outcomes. Continued expansion of the CCTV inspection programme will improve confidence in network-wide condition assessments and support more robust renewal planning.

While the network has undergone significant capacity upgrades over recent decades, uncertainty regarding the condition of buried assets reduces confidence in renewal timing, remaining useful life estimates and long-term expenditure forecasting. Improving the quality and coverage of asset condition information therefore remains a significant asset management priority.

2.2.2 Compliance and Environment

Stormwater discharge consent requirements and future water-quality expectations may require increased monitoring, source investigations, and implementation of pretreatment devices where contamination sources are identified.

The water sector is undergoing significant reform, including changes to stormwater management and environmental performance, economic regulation, water services planning requirements and climate



change adaptation and resilience expectations. These reforms are increasing the focus on public health, environmental outcomes, financial sustainability, transparency, resilience, and long-term asset stewardship. Continued compliance with evolving legislative and regulatory requirements will remain a key driver of operational activities, service delivery, asset management practices, and capital investment throughout the planning period.

2.2.3 Growth and Demand

Current planning forecasts indicate that the stormwater network has sufficient capacity to accommodate anticipated residential growth across much of the serviced area. However, future demand for, and extent of services, remains uncertain and may be influenced by land-use change, development patterns, climate variability, and changes in customer expectations.

The WSBU will continue to monitor demand trends and adopt staged, evidence-based responses to emerging capacity requirements. This approach supports efficient capacity planning, targeted network extensions and timely investment decisions while avoiding unnecessary expenditure.

2.2.4 Climate Change and Resilience

Climate variability and increasing rainfall intensity may affect network capacity, flood frequency, asset deterioration, receiving environment outcomes, and emergency response requirements. Stormwater climate risk should be progressively assessed and embedded into investment planning.

While no specific stormwater climate risk assessment has yet been completed, climate-related risks are expected to influence future resilience planning, asset management decisions, and investment priorities. Particular areas of interest include floodbank effectiveness, flood exposure of infrastructure, emergency supply arrangements, network resilience and potential changes in demand patterns during more extreme weather events.

The WSBU is progressively incorporating climate considerations into planning, risk management and investment decision-making. Future work will include improved hazard information, hydraulic modelling, climate risk assessments, and adaptive planning approaches to protect and upgrade vulnerable infrastructure.

2.2.5 Financial Sustainability and Affordability

The stormwater activity faces increasing investment requirements associated with renewals, environmental, resilience, and service expectations while needing to maintain affordability and realistic delivery profiles. At the same time, delivery of capital programmes is influenced by funding constraints, contractor availability, market capacity, and organisational capability. Investment plans should balance risk reduction, service outcomes, and deliverability.

Recent programme reviews have identified the need to align investment profiles with realistic delivery capacity. Continued balancing of affordability, deliverability, risk reduction and service outcomes will remain a key strategic consideration throughout the planning period.

2.2.6 Capability and Capacity

Effective stormwater management relies on appropriate organisational capability, asset information, technical knowledge, and access to specialist resources. As regulatory requirements and service expectations continue to evolve, maintaining sufficient capability remains increasingly important.

The WSBU will continue to strengthen internal capability while strategically utilising specialist expertise where required.

Future investment in workforce development, asset information systems, data quality, and asset management maturity will support improved decision-making and service delivery.

2.2.7 Deliverability

The ability to deliver planned capital and operational programmes is influenced by organisational capacity, contractor availability, market conditions, and competing investment priorities.

The WSBU recognises the importance of developing realistic and achievable delivery programmes that align with available resources and market capacity.

Programme sequencing, procurement approaches, packaging of works and delivery planning will continue to be refined to improve programme certainty and successful delivery outcomes.

2.2.8 Flood Risk and Network Capacity

Although major capacity upgrades were undertaken following the 1984 flood event, parts of the stormwater network remain sized to older design standards. Stormwater modelling of both the primary pipe network and overland flow path network is required to better understand property risk and management responses.

2.2.9 Data, modelling and decision support

Hydraulic modelling, asset data, condition evidence, criticality and performance information are important to support evidence-based investment decisions and demonstrate compliance with information disclosure requirements.

2.3 Regulatory and Legislative Context

The WSBU operates within a comprehensive legislative and regulatory framework that governs stormwater service delivery and influences asset management practices. These requirements establish expectations relating to environmental protection, public safety, flood risk management, service delivery, economic regulation, and prudent infrastructure management.

The Stormwater activity is subject to oversight from several national and regional regulatory agencies, including:

- **Taumata Arowai/Water Service Authority** - responsible for regulating stormwater environmental performance, compliance, and risk management.
- **Commerce Commission** - responsible for the economic regulation of water services, including information disclosure (ID) requirements and performance transparency.
- **Environment Southland** - responsible for regulating environmental effects through resource consents, including discharge authorisations.

These obligations directly influence service levels, operating practices, risk management processes, asset management strategies, and investment decisions. Compliance is supported through a range of planning, operations, and assurance processes.

The principal legislative and regulatory requirements applicable to the Stormwater activity are summarised in Table 2-2.

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Table 2-2: Principal Legislative and Regulatory Requirements

Legislation / Regulation Requirements	Relevance to Stormwater
Water Services Act 2021	Establishes drinking water safety obligations, including drinking water safety planning, incident reporting, supplier responsibilities, and compliance with drinking water quality requirements.
Taumata Arowai Act 2020	Provides national oversight of network performance, risk management planning, monitoring, compliance, enforcement, and environmental impacts.
Local Government Act 2002	Requires infrastructure strategy development, asset management planning, levels of service, lifecycle management, demand forecasting, long-term funding, performance reporting, and periodic review of service delivery arrangements.
Local Government (Water Services) Act 2025	Establishes Local Water Done Well requirements, including Stormwater Network Risk Management Plans, governance arrangements, performance monitoring, and long-term financial sustainability requirements.
Commerce Act 1986 (Water Services Information Disclosure Determination 2026)	Establishes the economic regulation framework for water services and requires disclosure of financial, asset management, operational, investment, risk, and service performance information to improve transparency, accountability, and regulatory oversight.
Health and Safety at Work Act 2015	Requires management of risks to workers, contractors, visitors, and the public arising from the operation, maintenance, and construction of stormwater infrastructure.
Civil Defence Emergency Management Act 2002	Requires emergency preparedness, business continuity planning, and resilience measures, to support continued delivery of essential stormwater services during emergencies.
Resource Management Act 1991 and successor legislation	Regulates discharges, environmental effects, land use and consenting requirements for stormwater infrastructure. Requires protection of water resources, management of environmental effects and natural hazards, and compliance with planning and environmental requirements.

Collectively, these legislative and regulatory requirements influence levels of service, operational practices, asset management decisions, risk management activities, and investment priorities. This AMP describes how the WSBU intends to manage these obligations over the planning period.

2.4 Resource Consents and Compliance Obligations

Stormwater service delivery is dependent on resource consents and environmental obligations that regulate stormwater discharges and influence monitoring, investigations, operations and future investment priorities. These consents establish operational limits, environmental performance requirements and compliance obligations that influence service reliability, environmental outcomes and the WSBU's ability to accommodate future growth while maintaining agreed levels of service. Table 2-3 summarises key consents associated with the stormwater activity.

Table 2-3: Stormwater Resource Consents

Consent	Description	Expiry
AUTH-20168843	Global consent to discharge stormwater into freshwater via 146 outfalls. Consent covers the Waihopai River, Waikiwi Stream, Otepuni Creek, Kingswell Creek, Waikiwi Stream and Clifton Channel, Invercargill.	14 September 2032
AUTH-204735	To install stormwater pipes in the stopbank of the Waihopai River, just above the Borstal Bridge in Invercargill; to place an outlet structure in the coastal marine area; and to occupy the coastal marine area with the outlet structure.	31 January 2043
AUTH-205672	To install and occupy the coastal marine area a stormwater outlet, supported by concrete boxing and surrounded by rock boulders along Bluff Harbour foreshore, adjacent to Marine Parade, Bluff	26 August 2043
AUTH-302475-01	To occupy the coastal marine area with a new headwall and outlet and associated works at Bill Richardson Drive, Invercargill	14 January 2049
AUTH-20232835-01	To occupy part of the Coastal marine Area with a new stormwater outfall and associated works	07 March 2048
AUTH-204383	To discharge stormwater to land, in circumstances where it may enter water.	06 June 2042
AUTH-20136275-V2	To discharge stormwater and leachate to land, in circumstances where it may enter water, at Station Road, Invercargill, from the processing of sludge from wastewater treatment plants.	30 June 2029

2.5 Social and Cultural

A condition of the global stormwater discharge consent (AUTH-20168843) requires that the WSBU prepare and implement a Cultural Monitoring Programme (CMP) in collaboration with Te Ao Marama. The CMP is used to identify any cultural impacts ICC's stormwater discharges are having on Invercargill's receiving waters and surrounding environment, with the results reported in the Annual Report required under Condition 33 of the consent.

The performance, or lack of performance, of the stormwater has a potential direct impact on properties in Invercargill or on the use of Council amenities.

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No specific stormwater climate risk assessment has yet been completed. Complete a stormwater climate risk and resilience assessment and incorporate findings into future AMP update

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3 Consumers and Levels of Service

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C7 and C10
This chapter should demonstrate	Consumer groups and impacts, expectations, satisfaction, complaints, connection practices, indicators and ten-year targets.

3.1 Consumer and Service Baseline

The WSBU provides stormwater services to customers within Invercargill and Bluff urban areas, and the rural residential area of Otatara. The adopted planning baseline records 21,626 residential properties and 1,538 non-residential properties, resulting in a serviced population equivalent of 53,626 for FY2026/27. By FY2036/37, residential properties are forecast to increase to 22,731, non-residential properties to 1,617, and the serviced population equivalent will be 56,368, refer Table 3-1. The key consumer groups and services they require are outlined in Table 3-2.

Table 3-1: Current Forecast Stormwater Customers

Measure	FY2026/27	FY2036/37	Change
Serviced population equivalent *	53,626	56,368	+2,742
Residential properties	21,626	22,731	+1,105
Non-residential properties	1,538	1,617	+79

* Serviced population equivalent for stormwater is calculated as the total number of properties multiplied by 2.35, with the assumption that a non-residential property is equivalent in discharge and usage to a residential property.

Table 3-2: Consumer Groups and Service Requirements

Consumer Group	Service Requirement
Residential customers	Effective drainage, reduced nuisance flooding, protection of habitable floors where practicable, accessibility to local amenities, and responsive service.
Commercial and industrial customers	Reliable drainage, business continuity, flood risk management, and clear development requirements.
Road users and transport network	Functional road drainage, safe travel conditions, and reduced disruption during rainfall events.
Developers	Clear stormwater standards, network capacity information, and consistent consenting requirements.
Mana whenua and community stakeholders	Sustainable management of waterways, environmental values, and long-term resilience.

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Consumer Group	Service Requirement
Environmental regulators	Discharge compliance, monitoring, source control, and progressive improvement of stormwater quality.

3.2 Customer Expectations and Engagement

The WSBU uses a combination of resident surveys, customer requests, complaints monitoring, elected member feedback and engagement with mana whenua and the community to understand customer expectations and emerging service priorities. These inputs help the WSBU understand community preferences regarding stormwater reliability, resilience, affordability and future investment priorities.

The 2024/25 Residents Survey identified stormwater services as a high-priority community service and indicated strong support for stormwater renewal initiatives.

These consumer expectations and preferences are considered alongside regulatory requirements, public safety obligations, risk assessments, affordability considerations and asset condition information to establish levels of service for the stormwater activity.

Customers of the stormwater activity expect:

- Adequate stormwater drainage to eliminate flooding from the properties and protect the community
- Prompt response to requests for service relating to maintenance issues
- Protection of receiving water to avoid adverse effects from stormwater discharges

3.3 Levels of Service Framework

Levels of Service (LoS) framework defines the outcomes the WSBU seeks to deliver through the stormwater activity and provides the basis for measuring, managing, and improving service performance.

The stormwater activity exists to provide a safe, reliable, and sustainable drainage service to customers and communities within the serviced area. Levels of service translate community expectations, regulatory obligations, and organisational objectives into measurable performance outcomes that can be monitored and reported over time.

The levels of service for the Stormwater activity have been informed by community feedback, customer requests and complaints, Long Term Plan (LTP) and Water Services Delivery Plan (WSDP) consultation, regulatory obligations and industry good practice. The 2024/25 Residents Survey identified stormwater services as one of the highest priority WSBU services and highlighted strong community expectations regarding stormwater asset renewals and long-term resilience. WSBU uses levels of service to:

- monitor whether customer and regulatory requirements are being achieved;
- identify service gaps and emerging risks;
- prioritise operational, maintenance, and renewal activities;
- support investment planning and budgeting decisions; and
- demonstrate accountability to customers, stakeholders, and regulators.

The LoS framework for the stormwater activity is outlined in Table 3-3, with the impact to consumer groups in Table 3-4.



Table 3-3: Levels of Service Framework

Outcome	Indicator / evidence	Working target / status
Reliable drainage service	Network performance, service requests, flood incident records, and maintenance response.	0 flooding events* and less than 4 complaints per year
Flood risk management	Flooding events, habitable floor impacts, hydraulic model outputs, and overland flow path information.	0 flooding events
Responsive service	Attendance and resolution times for stormwater service requests.	1 hour or less
Environmental performance	Discharge consent compliance, monitoring, investigations, and source-control actions.	0 non-compliance notices

* a “flooding event” is defined as a wet weather event where a habitable floor within the serviced catchment is affected by surface flooding

Table 3-4: Impact to Consumer Groups if level of service is not achieved

Consumer Group	Service Impact if Level of Service Not Achieved
Residential	Property flooding, nuisance flooding
Commercial	Business interruption
Transport	Road closures and safety risks
Developers	Delays and increased costs
Environment	Reduced receiving water quality, damage to land from scouring

3.3.1 Levels of Service Hierarchy

ICC and the WSBU use a hierarchy of service measures to provide a line of sight between community outcomes, customer expectations, operational performance and regulatory compliance. This framework ensures service performance is measured at both a customer and operational level.

The hierarchy consists of:

- **Community Outcomes** – longer term outcomes sought through the delivery of water supply services, including public health, reliability, resilience and the sustainable management of water resources.
- **Customer Levels of Service** – the service outcomes experienced by consumers, such as safe drinking water, continuity of supply and timely response to service requests.
- **Technical Levels of Service** – operational and engineering measures used to monitor the performance, reliability and efficiency of the water supply system.
- **Regulatory Measures** – performance measures prescribed through legislation, regulation and industry reporting requirements, including drinking water compliance (administered by Taumata Arowai) and mandatory performance measures administered by the Department of Internal Affairs (DIA).

Together, these measures provide a framework for monitoring performance, identifying service gaps and demonstrating achievement of customer, community and regulatory outcomes.

3.3.2 Levels of Service – Performance Measures and Targets

The table below summarises the performance measures, targets, and links to WSBU's community outcomes.

Table 3-5: Levels of Service - Performance and Targets

KPI	Performance indicator	Target Year 1-10	Basis for target	Customer expectation addressed	WSS / community outcome supported
4.1	The number of flooding events that occur in the Invercargill City district	0 events	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability
4.2	For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to the WSBU's stormwater system)	0	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability
4.3	Compliance with the WSBU's resource consents for discharge from its stormwater system, measured by the number of: • Abatement notices • Infringement notices • Enforcement orders • Convictions received by WSBU in relation to those resource consents.	0 non-compliance notices	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Environmental Wellbeing
5.1	The median response time to attend a flooding event, measured from the time that the WSBU receives notification to the time that service personnel reach the site	< 1 hour	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Responsive customer service
5.2	The number of complaints received about the performance of the stormwater system (expressed per 1,000 properties connected to the WSBU's stormwater system)	< 4 complaints per year	Regulatory Compliance - Department of Internal Affairs (Non-Financial Performance Measures Rules 2024)	Reliable network performance	Customer confidence and service reliability

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3.4 Current Performance

Available performance results indicate that the Stormwater activity is achieving its established service targets. Environmental discharge compliance has been maintained, response and resolution time targets are being achieved, customer complaints remain low, and the number of flooding events remains below the current target threshold.

Overall, current performance suggests that the stormwater network is meeting customer and regulatory expectations. However, continued attention is required in areas such as discharge locations, long-term flood predictions, resilience, and asset condition to ensure current performance levels can be sustained over the longer term.

The sections below discuss WSBU performance trends over the last 5-6 years.

3.4.1 Flooding Events and Habitable Floors Impacted

Protecting public health and safety from flooding events is the highest service priority for the stormwater activity. The primary indicators used to measure performance are the number of flooding events occurring within the district and the number of habitable floors affected by flooding. These measures provide a direct indication of network performance and help identify service issues, areas of network vulnerability, and future improvement priorities.

During the 2025/26 reporting period, the WSBU achieved its performance targets, with zero recorded flooding events and zero habitable floors affected by flooding. Historic performance has not always achieved the performance targets, with the last recorded flood event occurring in 2021/22, as shown in Figure 3-1 and Figure 3-2. These results indicate that the stormwater pipe network, pump stations, flood banks, and associated infrastructure are effectively managing the majority of stormwater flows within the current LoS framework.

Maintaining this level of performance remains critical to community safety, customer confidence, and service reliability. Continued monitoring of flooding performance, together with analysis of service requests, and network incidents, helps inform operational priorities, renewal planning, and future capital investment. Ongoing investment in network renewals, monitoring systems, and operational capability will support the continued achievement of regulatory requirements and minimise risks to public safety and property.

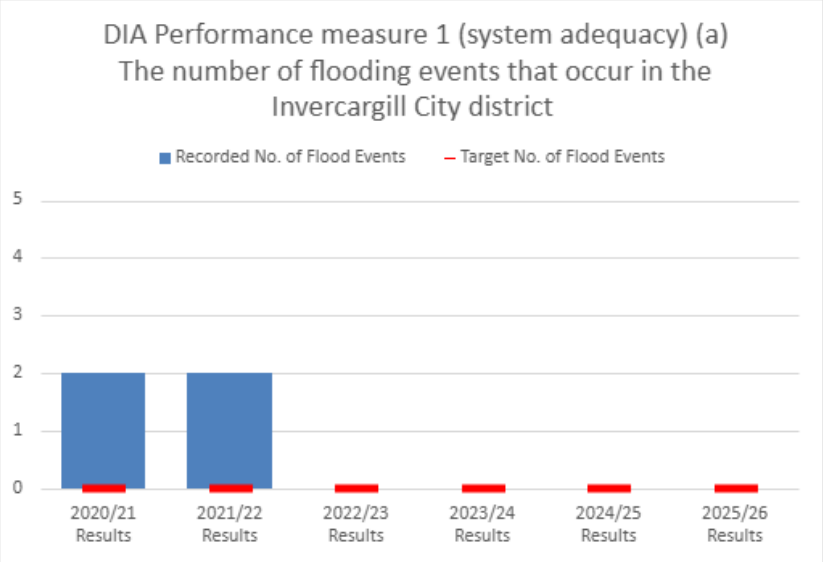


Figure 3-1: DIA Performance Measure 1a: Flooding Events

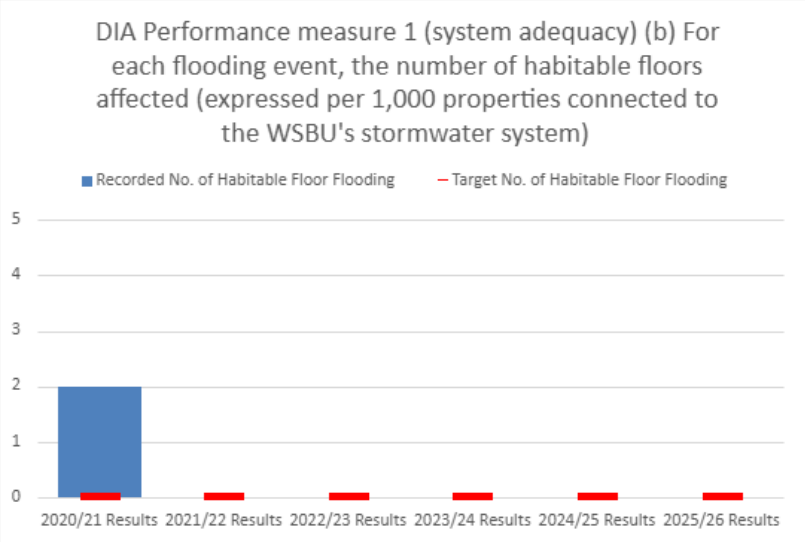


Figure 3-2: DIA Performance Measure 1b: Habitable Floor Level Flooding

3.4.2 Non-compliant Discharges

Non-compliant discharges from the stormwater system are measured through the number of abatement notices, infringement notices, enforcement orders and convictions received by the WSBU in relation to its stormwater discharge consents. During the 2025/26 reporting period, the WSBU achieved its target of zero non-compliance notices, indicating that stormwater discharges complied with regulatory requirements and that the network is performing as intended. Historic performance has not always achieved the performance targets, with the last recorded non-compliance occurring in 2020/21, as shown in Figure 3-3.

This performance contributes to the protection of receiving environments and supports broader environmental wellbeing outcomes. Continued monitoring of stormwater discharges remains important to maintain regulatory compliance, identify emerging stormwater quality issues, inform future stormwater treatment requirements, and support ongoing environmental improvement initiatives.

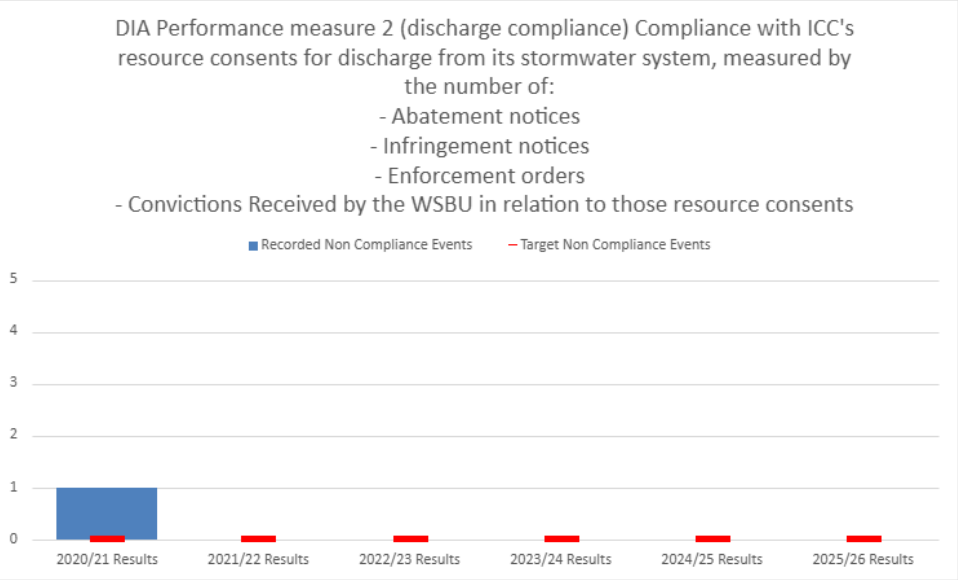


Figure 3-3: DIA Performance Measure 2: Discharge Compliance

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3.4.3 Flooding Event Response Times

Performance has consistently been within the target response time for flooding callouts, demonstrating the WSBU's ability to respond promptly to service requests and unplanned stormwater network issues. No call outs occurred within the 2025/26 reporting period, however historic performance demonstrates the WSBUs ability to achieve the response time target, as shown in Figure 3-4. This reflects a high level of customer service and operational responsiveness. Response time performance is regularly monitored to identify service issues, support operational improvements, and inform future investment priorities. Maintaining timely attendance is important for minimising customer impacts, protecting public safety, and maintaining the reliability of the stormwater network.

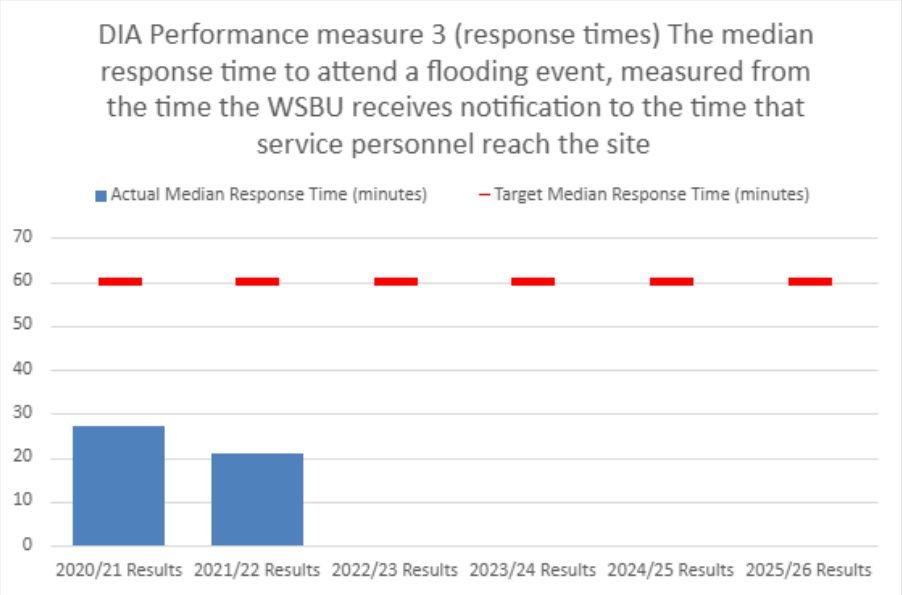


Figure 3-4: DIA Performance Measure 3: Response Times

3.4.4 Customer Satisfaction

The number of customer complaints received about the performance of the stormwater system remained below the WSBU's target during the 2025/26 reporting period, with a result of 1.8 complaints per 1,000 properties connected to the stormwater system. This indicates that stormwater services are generally meeting customer expectations. The number of complaints received, refer Figure 3-5, provides an important measure of customer confidence and service reliability and are regularly monitored to identify service issues, support continuous improvement, and inform future investment priorities. The WSBU continues to review customer feedback alongside operational performance information to improve service delivery and maintain agreed levels of service.

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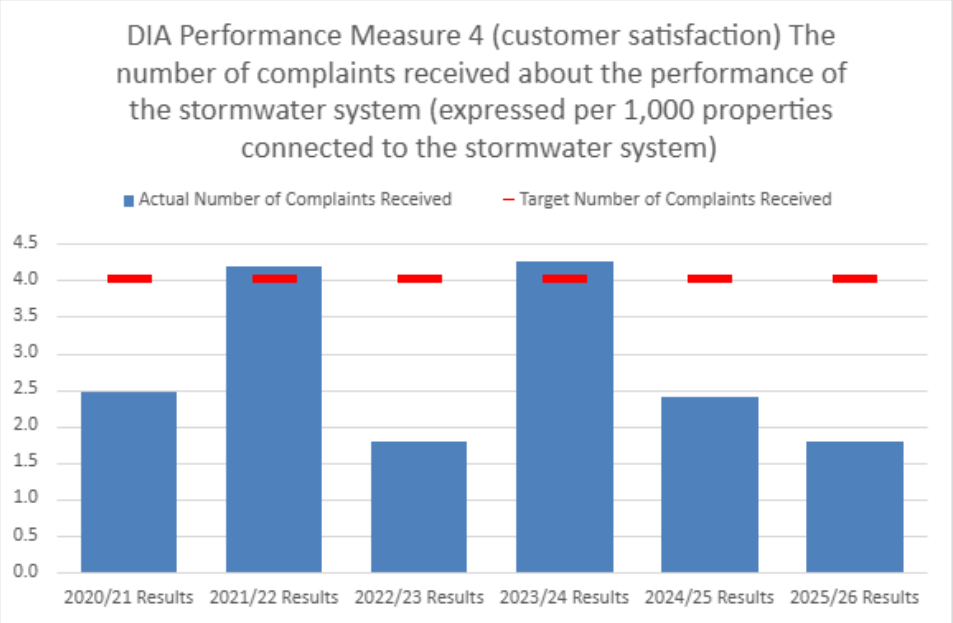


Figure 3-5:DIA Performance Measure 4: Customer Satisfaction

3.5 Future Levels of Service

The WSBU does not currently propose any material changes to the levels of service, performance measures, or performance targets for the stormwater activity. The existing framework is considered appropriate for monitoring service performance, meeting regulatory obligations, and reflecting current consumer expectations.

Levels of service will continue to be reviewed through the WSBU's strategic planning and reporting processes, including the Water Services Strategy, AMP reviews, annual performance reporting and customer engagement activities. Future changes may be influenced by regulatory reform, changing customer expectations, growth, resilience requirements, climate-related risks or improvements in asset and service performance information.

Any approved changes will be incorporated into future updates of the WSS, AMP and IDP to maintain alignment across the water services planning framework.

3.6 Complaints and Requests

The WSBU monitors customer requests, service enquiries, and complaints through its customer service systems. Customer feedback provides an important source of information regarding service performance, consumer expectations, and emerging operational issues.

Complaint and request information is regularly reviewed to:

- identify recurring service issues and trends;
- monitor performance against established levels of service;
- identify potential asset performance or condition issues;
- prioritise operational and maintenance responses; and
- inform future renewal, resilience and improvement planning.

Customer requests and complaints are received by a 24-hour service desk. The service desk triages the calls and refers them to the appropriate WSBU team or operator for resolution.

Although complaint levels remain low relative to the WSBU performance targets, ongoing monitoring of customer feedback provides an important mechanism for identifying service gaps and opportunities for continuous improvement.

3.7 Links to the Investment Delivery Plan

The levels of service framework is a key input to investment planning for the stormwater activity. Where current or forecast performance is not expected to achieve the agreed LoS, an appropriate response will be considered through the Investment Delivery Plan (IDP). Investment associated with LoS is typically directed towards one or more of the following drivers:

- Maintaining existing levels of service.
- Improving resilience and risk management.
- Meeting regulatory requirements.
- Supporting growth and future demand.
- Enhancing customer outcomes.
- Improving environmental performance and operational efficiency.

This approach provides a clear and traceable link between community expectations, service outcomes, performance targets, and investment decisions. It helps ensure that expenditure is directed towards initiatives that maintain or improve service performance, address identified risks, and support the long-term sustainability of the stormwater activity. Significant stormwater projects currently identified as contributing to LoS improvements include:

- Pipe network renewals
- Stormwater Model build and calibration
- Pump station renewals
- Relocation of pump stations in liquefaction areas
- Stormwater outfall consent renewals
- Discharge to Coastal Marine Area (CMA) consent scoping
- Stormwater treatment

Figure 3-6 shows the forecast capital investment programme that reflects planned investment to meet and enhance service levels and improve resilience. Funding for stormwater treatment investigations has been allowed for as part of all capital works going forward.

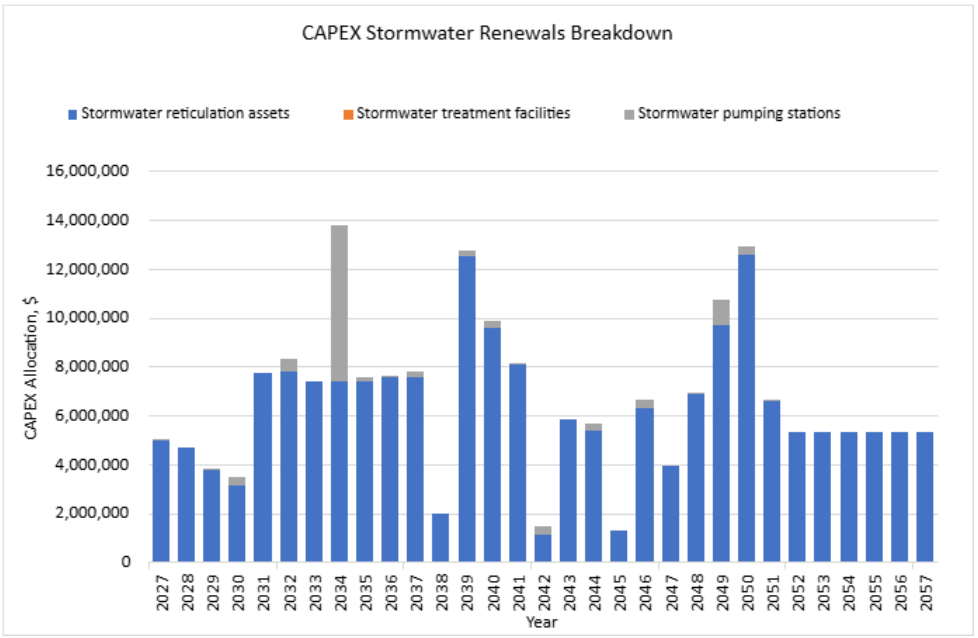


Figure 3-6: Capital Expenditure for Stormwater Renewals

Stormwater Asset Management Plan
3 Consumers and Levels of Service

SECTION 3: DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN

- *Confirm consumer groups, and if there are any industrial / commercial users.*
- *Add consumer group impact statements.*

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4 Asset Portfolio, Condition and Performance

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C8 and C13
This chapter should demonstrate	Portfolio, maps, critical assets, condition, capacity, performance and asset statistics.

4.1 System Overview

The WSBU stormwater system provides drainage services to support residential, commercial, industrial, transport, and community functions across Invercargill, Otatara, and Bluff. The system is designed to collect and convey stormwater runoff, reduce flooding impacts where practicable, and support compliance with environmental obligations.

Stormwater sumps on roads are managed and funded as part of the roading activity and are not included as stormwater assets.

The stormwater network comprises approximately 416 km of stormwater pipes, 42 km of open drains, and 8 stormwater pump stations. Two of the pump stations (Beatrice Street and Prestonville) also have settling ponds upstream of the pumped outfalls into the Waihopai River. There are also approximately nine proprietary treatment devices in the stormwater pipe network. The pipe network serves Invercargill urban area, Otatara and Bluff, with pipe diameters ranging from 100 mm to 2,100 mm. The primary pipe network is designed to convey the five-year return period storm, with anything larger resulting in overland flow.

Overland flow paths and open channel drains form an important part of stormwater system performance during events that may exceed primary network capacity. There are 42 km of open channel drains in the stormwater network. Larger overland flow paths are usually located within road corridors; however, some are located within private property. The large events also have the potential to result in regional flooding and there is a risk posed to some areas of Invercargill by the Waihopai River, Otepuni Stream, and the Kingswell Stream. These waterways have a flood protection system (flood banks) managed by Environment Southland.

The Cobbe Road (Rifle Range) and Stead Street tidal flood banks are managed by the WSBU as part of the stormwater activity. These protect the low lying areas of Lake Hawkins (including the Invercargill airport) and Otatara from tidal flooding.

The WSBU retains pipe, pump station, floodbank, ponds and treatment asset data and maintenance records on an in-house Asset Management Database called IPS. However, the WSBU are currently planning to move to a new asset management system called TechOne in 2026/2027. The public can access some of the collected asset data through an online ArcGIS viewer.

The asset data for this AMP was accessed from IPS on 27 July 2026. Statistics referred to in this document are from this data set, but asset data categorised as abandoned, removed, duplicate, or proposed have been removed. Assets categorised as inactive are still included in the data set, as it is assumed these assets could be returned to service in future.

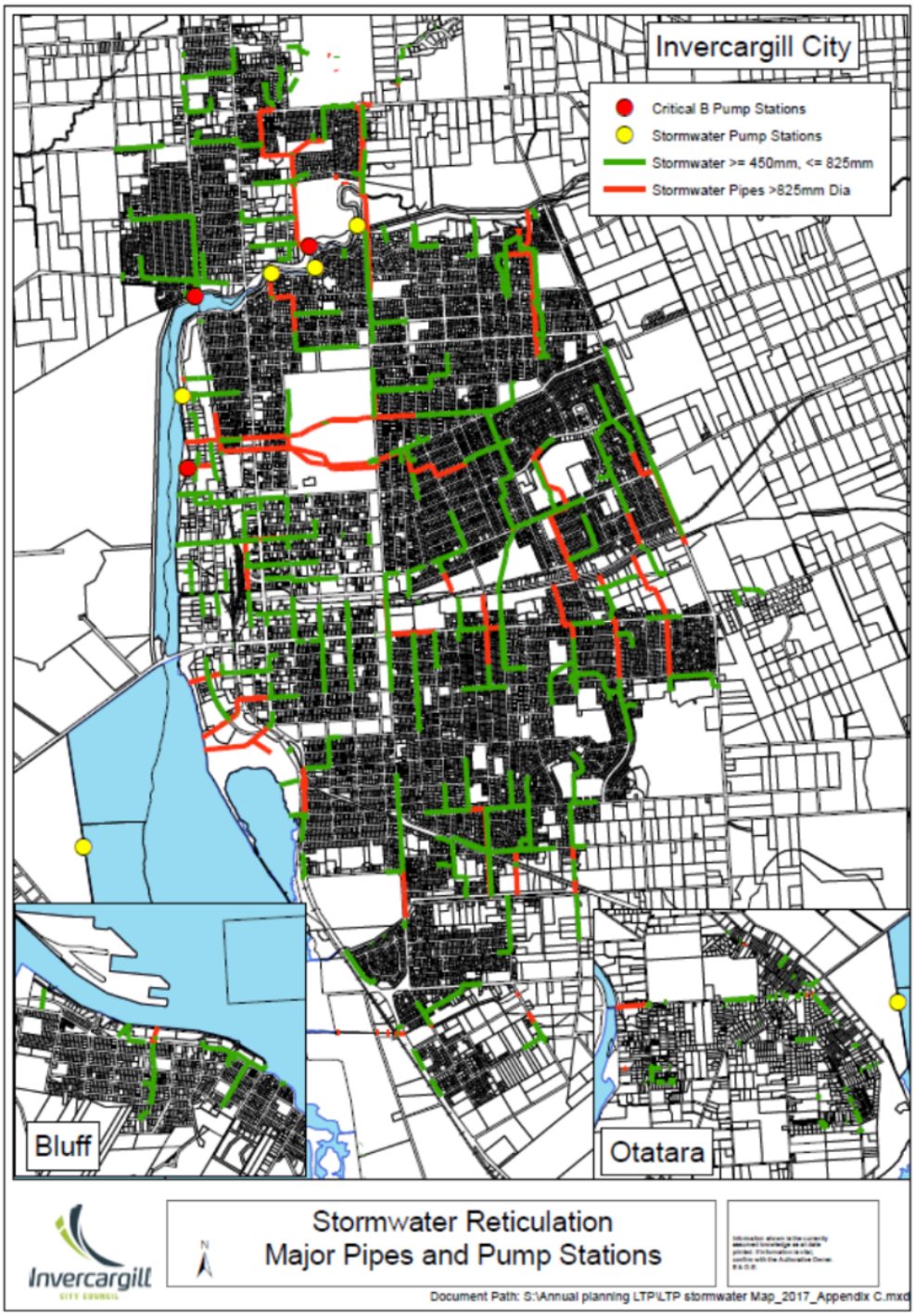


Figure 4-1: Invercargill WSBU Schematic of Stormwater System

4.2 Asset Categories and Description

The following asset groups are used throughout this AMP to describe the asset portfolio, assess asset condition and performance, forecast renewal requirements, and plan future capital investment.

- Stormwater Pipe Network

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- Stormwater Pump Stations
- Open Channels
- Flood banks
- Stormwater Ponds and Treatment
- Monitoring and Control Systems
- Non-network Assets

These asset groups are used throughout this AMP to describe the asset portfolio, assess condition, and performance, forecast renewal requirements, and plan future capital investment.

The stormwater system comprises the principal asset groups in Table 4-1.

Table 4-1: Asset Portfolio Summary

Asset Group	Primary Function	Quantity	Average Age
Stormwater Reticulation - Pipes	Primary stormwater conveyance system	416 km	59 years
Stormwater Reticulation - Manholes	Provides maintenance access to stormwater pipes	3,796	48 years
Stormwater Pump Stations	Stormwater removal	8 no.	39 years (1987)
Open Drains / Overland Flow Paths	Secondary stormwater conveyance system	42 km	44 years *60% of ditches don't have installed dates
Flood banks	Tidal influence / storm surge flooding protection	2 (total length 3.15 km)	3 years (2023)
Stormwater Ponds and treatment	Improve stormwater quality and provide operational storage for the network	2no. settlement ponds 1no. Jellyfish filter Approx. 8no. rain gardens	7 years (2019) *No recorded age for one of the ponds, or any of the proprietary devices
Monitoring and Control Systems - Telemetry	Provides data monitoring for processes, primarily for stormwater pump stations and treatment / storage facilities	10	4 years
Monitoring and Control Systems – Remote Terminal Units (RTUs)	Provides data monitoring and operational control for processes, primarily for stormwater pump stations and treatment / storage facilities	5	4 years

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4.2.1 Stormwater Reticulation

The stormwater reticulation pipe consists of 416 km of pipes in the Invercargill urban area, Otatara and Bluff, ranging in size from 100 mm diameter to 2,100 mm diameter.

The key network characteristics are:

- Pipe ranges in size from 100 mm diameter to 2,100 mm diameter;
- 51% of pipe is earthenware, ranging in age from 50 to 120 years old and in sizes up to 450 mm;
- 31.8% of pipe is reinforced concrete, predominantly in larger sizes, and;
- 15% of pipe are plastic (PVC or PE), predominantly in smaller sizes and laid since 1955.

Approximately 9.5% the stormwater network has been surveyed by CCTV and condition rated in accordance with the New Zealand Gravity Pipe Inspection Manual. Of the surveyed network, 59% is scored as 'less than average' condition.

The stormwater network has benefited from significant investment since the major flooding experienced across Southland in 1984. Following these events, substantial upgrades were undertaken across key parts of the network, including the replacement and upsizing of major stormwater conveyance routes. Many critical trunk mains were upgraded to 1,800 mm diameter pipes and other large-diameter assets to increase network capacity, improve flood management performance, and enhance resilience across the city. Figure 4-2 below provides an overview of the new pipes installed following the 1984 flooding events, broken down by pipe diameter. The 15 years immediately following the event show an increase in reticulation upgrades, with a focus on pipes with a diameter from 825 mm to 2,100 mm.

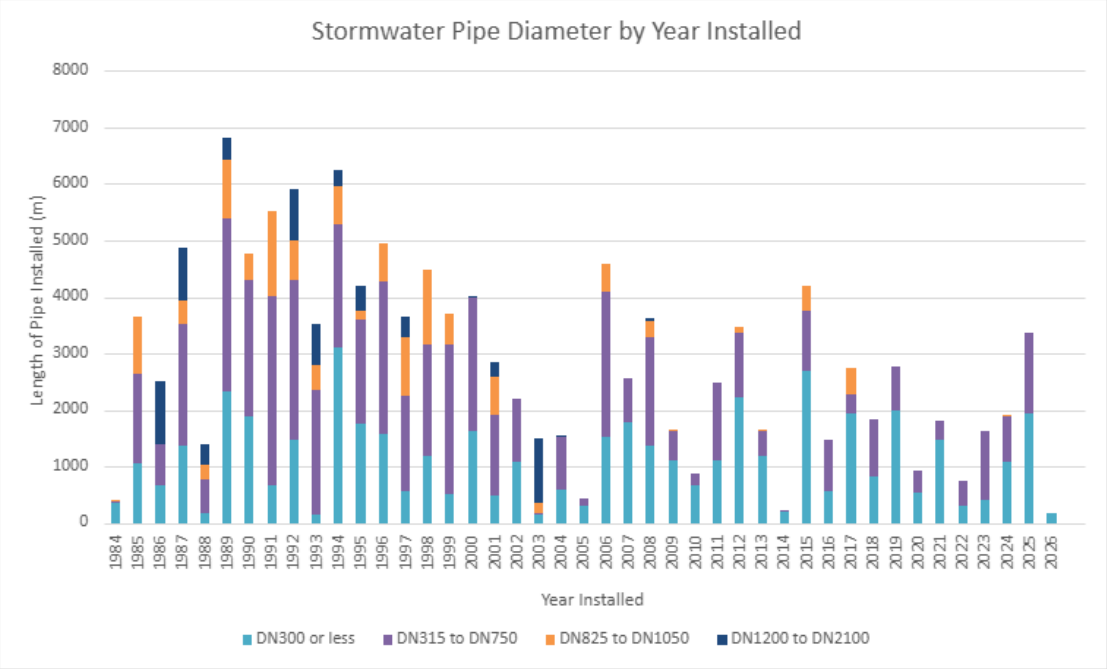


Figure 4-2: Stormwater Pipe Diameters by year installed

Stormwater is generally discharged from the pipe network directly to receiving environments via a network of outfalls, with limited treatment infrastructure currently provided upstream of discharge locations. While a global consent is in place for freshwater discharges, specific consent arrangements for discharges to the Coastal Marine Area and Bluff Harbour are yet to be established and are being investigated by the WSBU. Future management of the outfall network will also need to consider the effects of sea level rise on tidal discharge performance and network resilience.

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There are 3,877 manholes owned by the WSBU in the stormwater network, with an average age of 48 years. Of those, eight are listed as the wet-wells associated with the stormwater pump stations.. Approximately 60% of the manholes in the network are concrete, 30% have no recorded material. The remaining 10% of manholes are recorded as being either brick, cast iron, PE or PVC.

Stormwater laterals are currently considered private property up to the stormwater main and therefore are not included in the IPS asset data. However, the WSBU does renew and rehabilitate stormwater laterals up to the property boundary when undertaking renewal work on stormwater mains. The WSBU is currently in the process of formalising their ownership over stormwater and wastewater laterals from main pipes up to the property boundaries.

4.2.2 Pump Stations

The stormwater network includes eight Pump Stations (PS) located along the Waihopai Arm of the New River Estuary and the Waihopai River, including one pump station on the west side of the Waihopai Arm at the Rifle Range. The oldest of these pump stations is Prestonville PS, constructed in 1967, and the newest are Beatrice Street PS and Bill Richardson Drive PS, both constructed in 2008.

The pump stations are located in low lying areas which are protected by floodbanks ensuring that the stormwater service can continue to be provided in these areas when river levels are high due to flood flows or high tide.

4.2.3 Open Channels

In addition to the piped stormwater network, the stormwater activity includes approximately 42 km of open drains. The majority of these open drains are within the Otatara residential area.

The open channel asset portfolio comprises approximately 42 km of open drains, 2.3 km of culverts and 0.17 km of swales. Open channels provide an important secondary drainage function within the stormwater network, particularly in Otatara and other areas where overland conveyance forms part of the overall drainage system, providing drainage to both residential and rural areas, and to areas of native bush within the residential area. Of the 42 km total length, 35 km does not have a known installation date.

4.2.4 Flood banks

The Stead Street and Cobbe Road (Rifle Range) flood banks were originally built about 1910 and have a total length of approximately 3.15 km. Construction material was estuarine silts sourced from the area adjacent to the banks.

Both floodbanks were dug out and rebuilt in 2023 to improve the condition and provide adequate protection from the changing tidal influence and storm surge events. The floodbank along Stead St was rebuilt using sheet piling for watertightness, support and stabilisation, while the Cobbe Rd floodbank uses mass concrete blocks. Environment Southland also manages a series of flood protection schemes on the main waterways through the city. The floodbank locations are shown in Figure 4-3.

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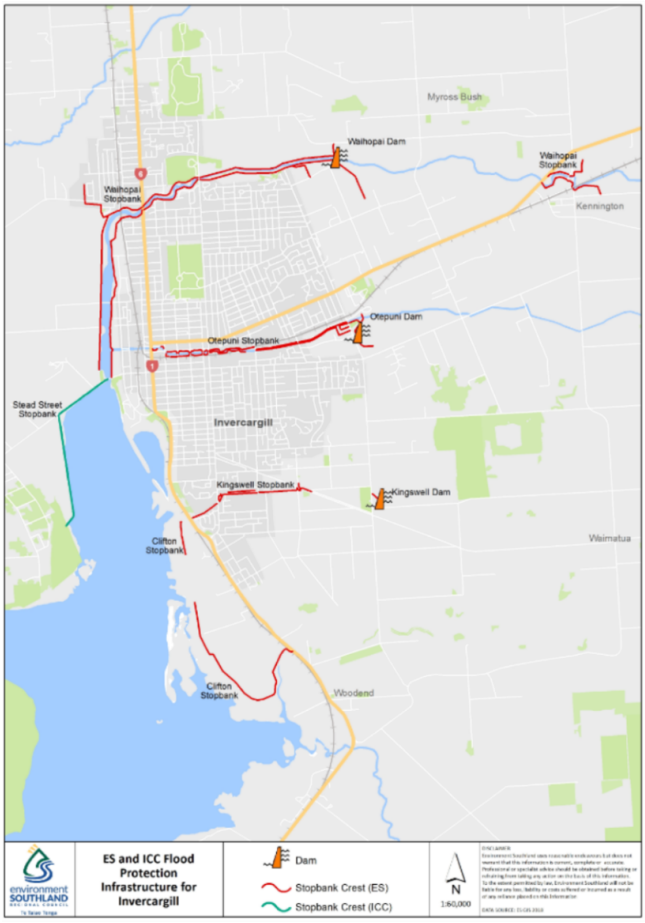


Figure 4-3: Floodbank Locations

4.2.5 Stormwater Ponds and Treatment

The Beatrice Street stormwater settling pond was installed in 2019, and is located on the stormwater network immediately upstream of the Beatrice Street Pump Station. The volume of the pond is unknown. The Prestonville settling pond is located on the stormwater network immediately upstream of the Prestonville pump station, with the construction date and pond volume unknown. There is no volume, maintenance or condition information available for either of the ponds.

There are an additional 11 private drainage / settling ponds in the network, located within the Ascot Heights subdivision. These are not WSBU assets.

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Figure 4-4:Beatrice St Settling Pond

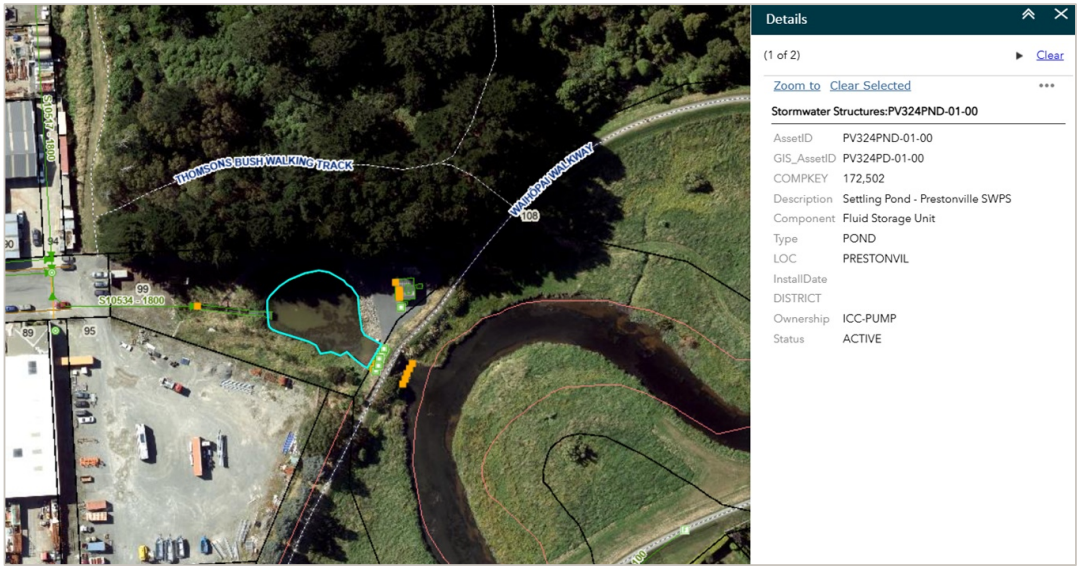


Figure 4-5: Prestonville Settling Pond

There are also a number of proprietary treatment devices across the stormwater network. There is one jellyfish filter, and approximately eight raingardens.

The installation date and current condition of the Jellyfish stormwater treatment chamber is unknown, however work orders show that annual maintenance and cleaning have occurred since 2023.

There is no information available regarding the age and condition of the raingardens in the network.

4.2.6 Monitoring and Control Systems

The stormwater system is supported by Supervisory Control and Data Acquisition (SCADA) systems that provide real time monitoring and operational control of pumping and discharge assets. These

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systems support efficient system operation, enable rapid response to faults, and contribute to maintaining reliable service delivery.

4.2.7 Non-Network Assets

Non-network asset refers to a stormwater service asset that is not a network asset.
Examples include:

- resource consents
- information and technology systems (excluding SCADA)
- asset management systems
- buildings
- vehicles
- tools and machinery

There are two buildings recorded as pump houses for the stormwater system. The first is at the Prestonville pump station and was constructed in 1967. The second is associated with the Drury Lane pump station, constructed in 1974. All buildings have a standard 80 year asset life, so the buildings have a remaining life based on age of 21 and 28 years respectively.

4.3 Asset Age and Remaining Life

Asset age is an important indicator of future renewal requirements and long-term lifecycle expenditure. The WSDP Assessment Report identified an average stormwater asset age of approximately 59 years. Asset age information is used alongside condition, performance, criticality and risk information when forecasting renewal requirements and investment needs.

Asset age alone is not a reliable predictor of asset failure, as performance can vary significantly depending on material type, operating environment, maintenance history and operating conditions. Renewal decisions are therefore based on a combination of age, condition, performance, risk and criticality rather than age alone.

The WSBU continues to improve its understanding of remaining useful life and asset deterioration to support increasingly risk-based renewal planning and investment prioritisation.

The active and inactive stormwater network remaining useful life profile is shown in Figure 4-6. Of the pipe network, 18% have an asset age greater than their design life, indicating they have exceeded their useful life based on age alone. Assets that have exceeded their useful lives are not automatically treated as an immediate renewal backlog; rather, they are re-assessed every three years and prioritised using risk and performance evidence.

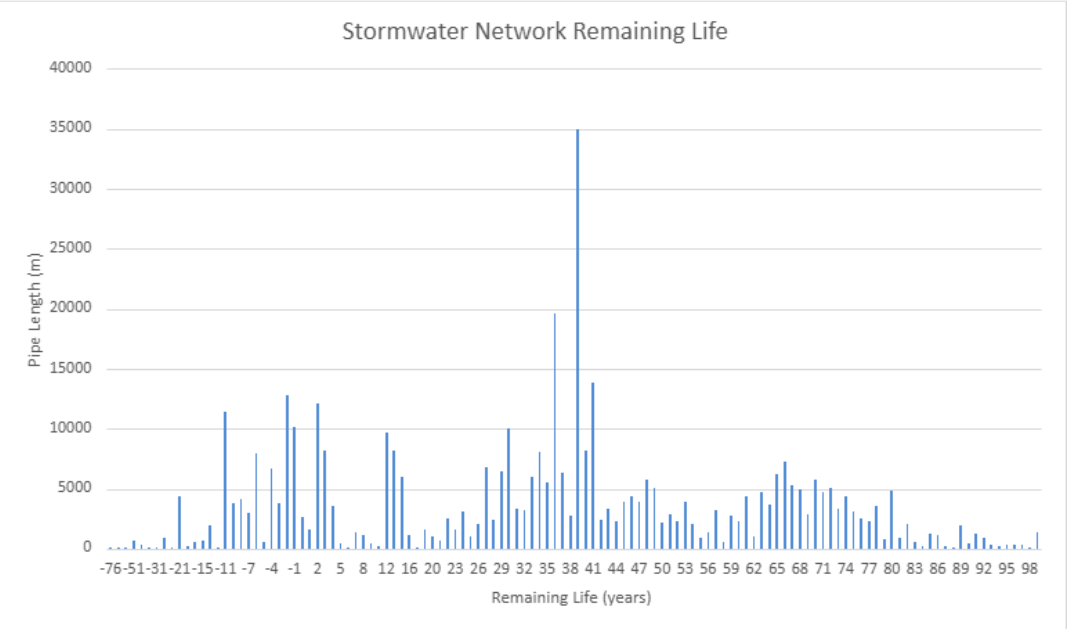


Figure 4-6: Stormwater Pipe Network Assets by remaining life based on asset age.

4.3.1 Material Profile

The asset register indicates that the pipe portfolio comprises a mix of earthenware, concrete, PVC, polyethylene, brickwork and other materials. The provisional register totals include approximately 225 km earthenware, 140 km concrete, 62 km PVC, 4km polyethylene and 1 km brickwork. These figures require validation against asset status, ownership and network classification before being adopted as the formal AMP baseline. The prevalence of older earthenware pipes as shown in Figure 4-8 is relevant to long-term renewal planning.

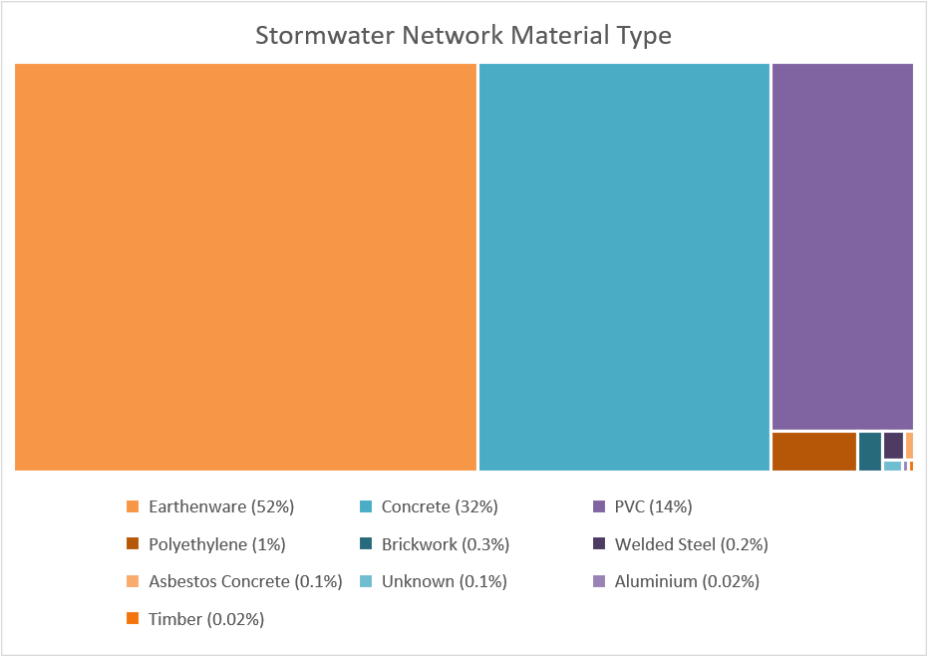


Figure 4-7: Stormwater Network Material Type

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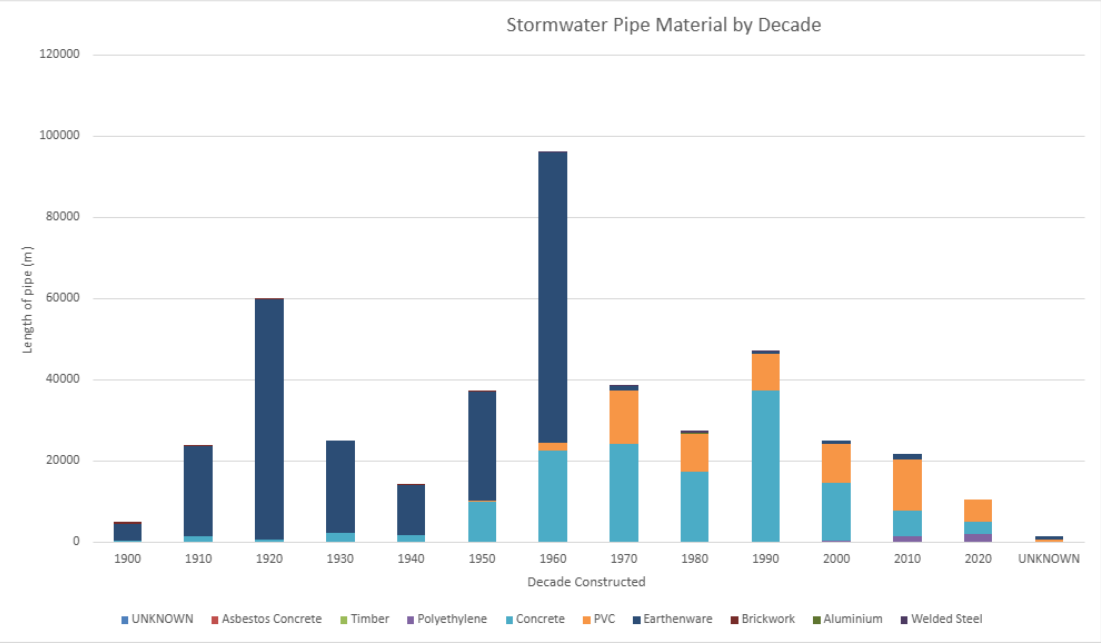


Figure 4-8: Stormwater pipe material by decade

4.4 Asset Condition (Assessments)

4.4.1 Stormwater Pump Station and Above Ground Assets Condition

Condition information is obtained from a combination of:

- annual inspections and condition assessments
- routine operational inspections
- maintenance and work-order records
- equipment performance monitoring
- asset age and material information
- customer service requests
- operational knowledge and experience

Stormwater pump stations are assessed through an annual inspection programme using structured site inspections and condition scoring. Inspection results are reviewed annually to identify deterioration, emerging issues, and changes in condition, with findings used to inform maintenance planning, risk management, and renewal decision-making. The 2017 Asset Management Maturity Assessment determined the maturity was considered to be between a core and intermediate level, with improvements planned to increase asset-level condition capture. If a pump station has a generator, it is also inspected and load tested annually.

Current condition assessment practices provide a moderate-high level of confidence in the overall condition of these facilities; however, condition information is not consistently captured at an individual component level across all asset classes. Consequently, condition maturity is considered stronger at a facility level than at a detailed asset level. Improving asset-level condition data capture remains a key focus for future asset management improvements.

There are no known inspection records for the flood banks or settlement ponds, indicating that inspections are not planned on a reoccurring basis, but rather undertaken in the event of a fault. The flood banks have a remaining life of 97 years and are expected to be in generally good condition.

The open channels across Otatara are inspected biweekly, with remedial and maintenance works carried out as required.

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Condition information regarding open drains is limited, as condition assessment records and maintenance history are not consistently available across the portfolio. While no information is recorded in regard to depth, gradients and existing culvert size, staff knowledge of the network and potential problem areas is good. As a result, confidence in the condition of open channel assets is moderate and renewal requirements are primarily informed by operational knowledge, service requests, maintenance activities, and observed performance. Improving condition data capture and inspection records for open channel assets would strengthen future renewal planning, risk assessments, and investment prioritization.

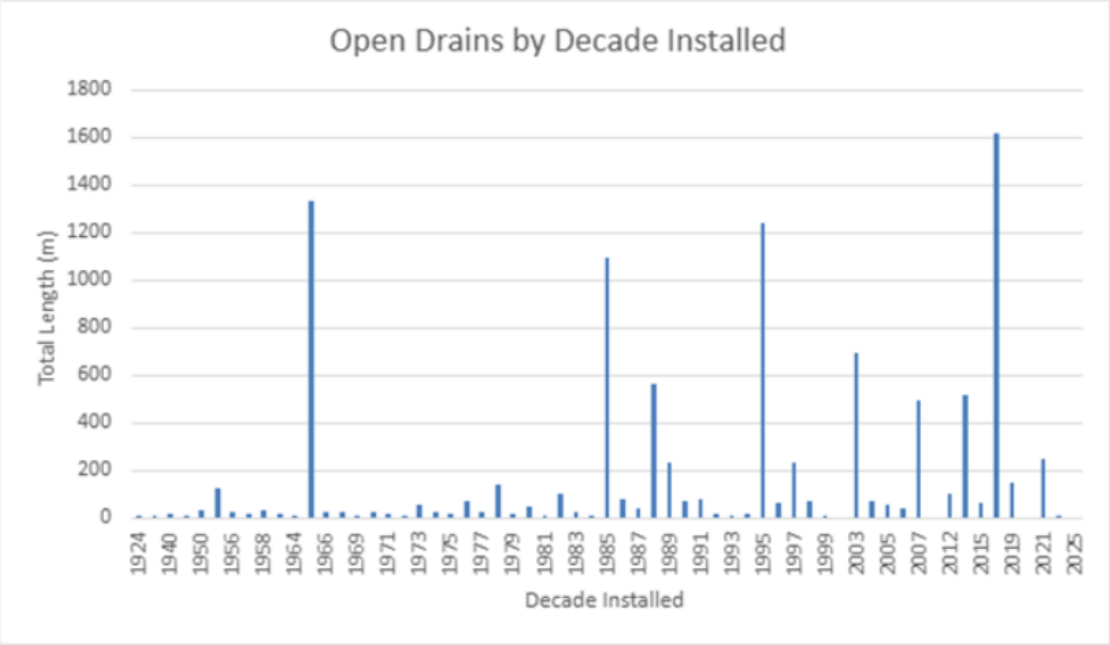


Figure 4-9: Open Drains by decade installed

4.4.2 Stormwater Reticulation Assets

The condition of buried stormwater assets are less understood than that of above-ground assets. While asset performance indicators such as fault records, inspection reports, pipe failure investigations and operational performance provide valuable insights into network condition, direct condition information is not currently available across all the network assets. Condition assessment confidence is therefore lower than for above-ground assets, and renewal decisions rely more heavily on asset age, material, failure history, criticality and operational performance information.

Approximately 9.5% the stormwater network has been surveyed by CCTV and condition rated in accordance with the New Zealand Gravity Pipe Inspection Manual. Of the surveyed network, 59% is scored as ‘less than average’ condition. The structural and service pipe condition scores have been recorded for 37% of the total length of pipes, and are shown below in Figure 4-10 and Figure 4-11. A condition grade of 1 represents a pipe that is in very good condition, with no structural defects or evidence of internal deterioration. A condition grade of 5 represents a pipe that is in very poor condition, with deterioration that has extended to a point where structural failure is imminent or has already occurred.

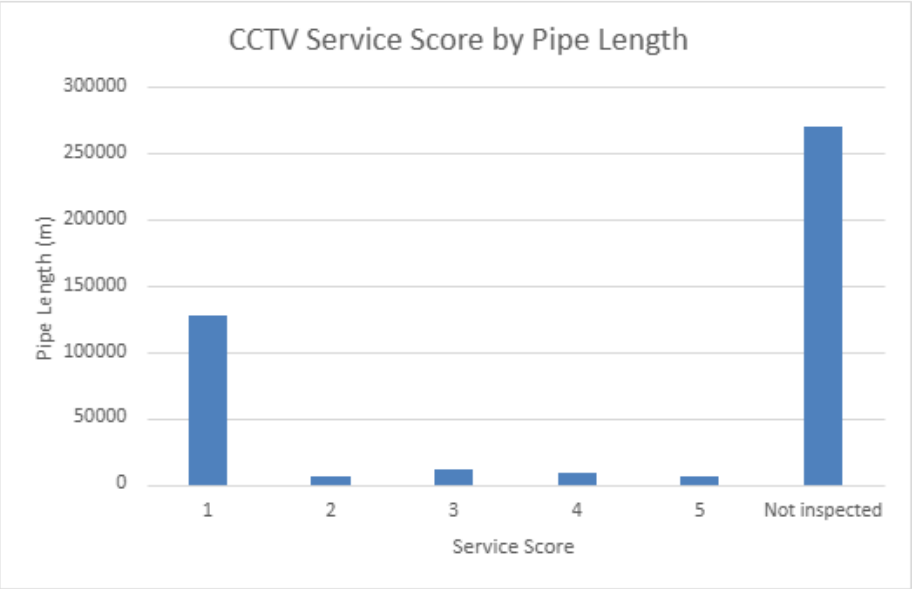


Figure 4-10: Stormwater pipe service scoring

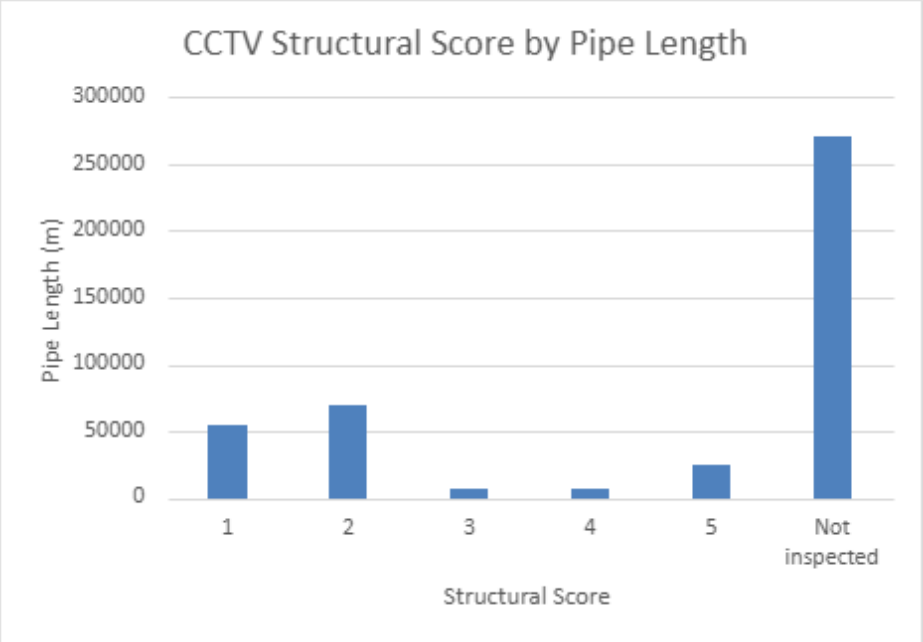


Figure 4-11: Stormwater pipe structural condition scoring

The CCTV scoring can also be broken down by pipe diameter, to demonstrate the structural and service condition variations based on pipe size. Figure 4-12 and Figure 4-13 highlight that of the larger diameter pipelines that have been inspected, they are generally found to be in better condition than the smaller diameter pipelines.

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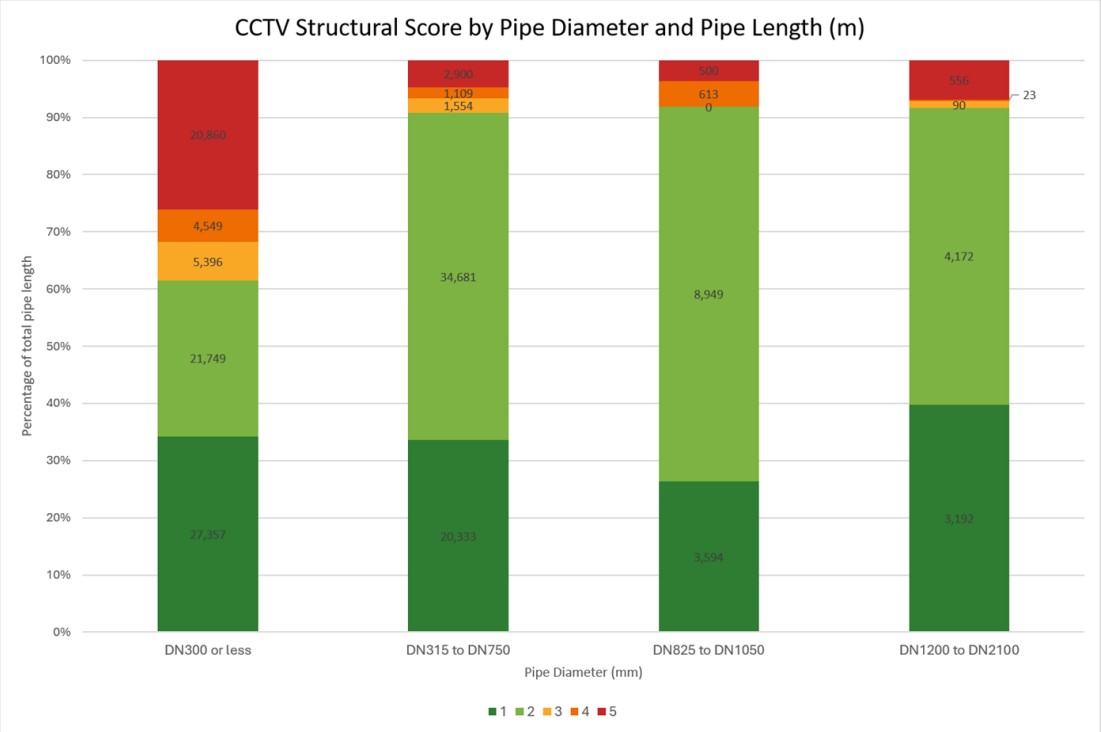


Figure 4-12: Stormwater pipe structural condition scoring by pipe diameter.

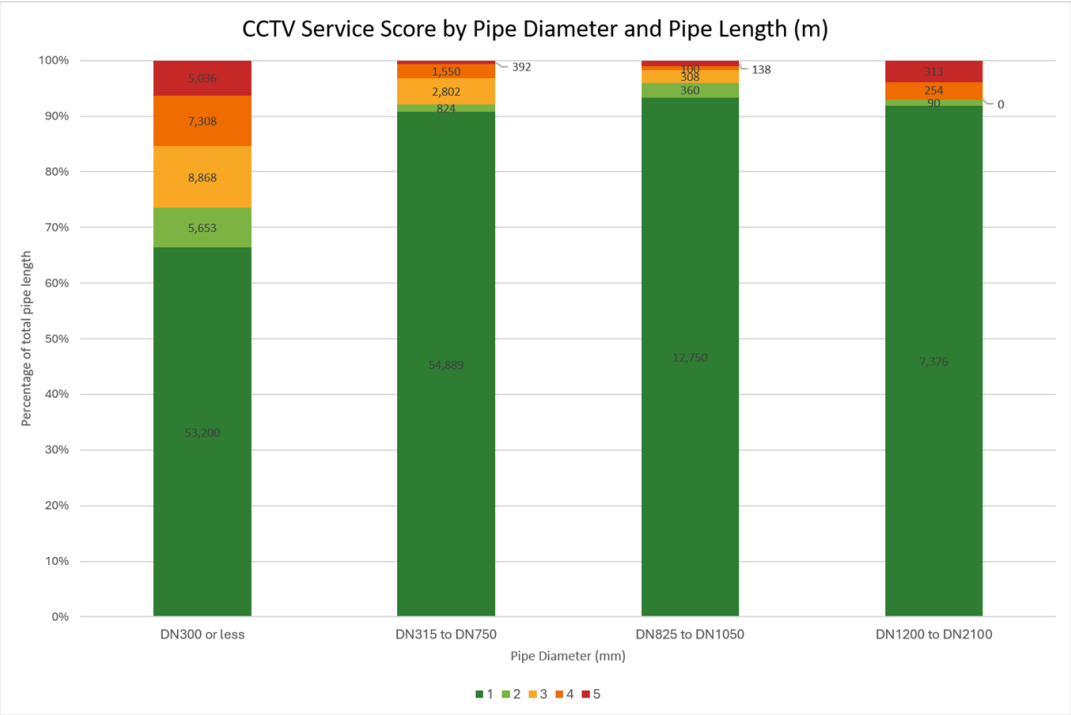


Figure 4-13: Stormwater pipe service condition scoring by pipe diameter.

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4.4.3 Confidence in Current Information

Table 4-2: Confidence in Current Information

Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
Stormwater Pipe Network	Moderate-Low	Fault history, asset age, CCTV for pipelines previously not inspected.	Direct condition information is limited. Asset condition is primarily inferred from network performance, fault history, pipe age, and material type, resulting in lower confidence than above-ground assets.
Stormwater Pump Stations	High-Moderate	Annual inspections and operational monitoring.	Annual inspections of five of the pump stations for 2025 indicate that most pumping and control equipment is operating satisfactorily, although maintenance issues such as wear of lifting equipment, pump component wear, ventilation and building maintenance requirements, and mechanical components require further investigation. Inspection records for the remaining three pump stations were not available.
Open Channels	Moderate	Fault history, staff knowledge	Open channel inspections are carried out bi-weekly, with remedial and maintenance works carried out as required. Renewal requirements are primarily informed by operational knowledge, service requests, maintenance activities, and observed performance.
Flood banks	High	Remaining life and operational performance monitoring	Flood banks were rebuilt in 2023 to increase flood protection, and are expected to be in good condition. Annual inspections, or inspection following a storm or flood event, should be carried out to assess ongoing condition.
Ponds and treatment	Moderate-Low	Fault history, annual inspections	Age, maintenance history and operational performance is unknown for both settlement ponds. The Jellyfish filter is inspected and cleaned annually. There is no information regarding the condition of the raingardens.
SCADA and Control Systems	Moderate	Annual site inspections	Condition and operational performance are annually reviewed as part of pump station inspections, providing visibility of asset reliability and performance.
Non-Network Assets	Low - Moderate	Varies depending on asset but primarily operational inspections.	Condition information is gathered during operational and maintenance activities; however, asset-level condition data is not yet consistently recorded across the network.



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Asset Group/ Class	Confidence of Condition Knowledge	Condition Assessment Approach	Key Observations
			Improved condition data capture is identified as an improvement item in Section 10.3.

4.5 Asset / System Performance

The WSDP identifies resilience, reliability, and regulatory compliance as key drivers for future investment in the stormwater activity. The stormwater activity performance management focuses on maintaining service reliability and the long-term sustainability of the network.

Key aspects of system performance include:

- **Reduction in flooding events** – The stormwater assets are critical to conveying surface water away in storm events, protecting public safety, buildings and accessibility
- **Operational resilience** – Treatment or storage facilities, pumping infrastructure and SCADA systems support network operations, system monitoring and response to flooding events.
- **Regulatory compliance** – Compliance with stormwater quality, receiving environment quality and other regulatory requirements is a key driver of operational activities and future investment planning.

Overall, the stormwater system is considered capable of meeting current service requirements, with future investment focused on renewals to maintain reliability, improve resilience, adapt to changing weather events and supporting ongoing regulatory compliance.

4.6 Asset Capacity and Utilisation

ICC's current growth forecasting anticipates a 0.5% growth in residential and non-residential properties connected to the stormwater system. The Invercargill City District Plan 2013 provides for limited extension of the urban zone to provide for residential development, and it is expected a further increase in households will result from infill development, as large existing urban properties are subdivided to provide additional residential sites.

Available planning information indicates that the WSBU stormwater system currently has sufficient pumping and network capacity to meet existing demand and forecast residential growth. As a result, planned investment is primarily focused on renewals, resilience, reliability and regulatory compliance rather than addressing widespread capacity constraints. Future environmental changes, flooding patterns and long-term resilience requirements remain important areas of uncertainty and ongoing monitoring.

Industrial development within the reticulated stormwater area could impact the capacity of the stormwater assets. This could be managed with requirements for developments to have attenuation storage and/or pre-treatment on-site for stormwater. The WSBU does not provide stormwater services to industries that are outside of the reticulated area, so industrial growth in surrounding areas would not impact the stormwater asset capacity.

4.6.1 Stormwater Network

A comprehensive understanding of the stormwater network capacity and percentage utilisation has not yet been completed. While performance records and operators' responses have indicated there remains sufficient capacity, a full assessment is still required and the WSBU recognises the critical need for an integrated modelling platform to inform decision-making.

The WSBU plans to invest in the development of a robust, comprehensive, and integrated 1D-2D Stormwater hydraulic model during the 2026/27 financial year. This model will support a more accurate representation of both underground (1D) and overland (2D) flow pathways. These pathways are key elements of information essential in subdivision decision approvals. They are also key in customer

interactions managing periods of heavy rain, and being able to understand future capacity to inform development. They also provide significant benefits when predicative risk modelling is undertaken.

4.6.2 Pump Stations

Existing pump station infrastructure is considered capable of supporting forecast demand; however, a number of pump station assets perform critical operational functions and remain important resilience assets. Future investment is focused on maintaining reliability and reducing vulnerability associated with critical pumping infrastructure.

4.7 Critical Assets

Critical assets are assets whose failure would have a significant impact on public safety, service continuity, regulatory compliance, environmental outcomes, or the WSBU operations. Due to the configuration of the stormwater network, several assets perform essential functions and have limited operational alternatives or redundancy. These assets receive a greater level of operational oversight, maintenance planning, renewal consideration, and resilience assessment than non-critical assets.

The asset register provides an initial basis for identifying potentially critical network assets through network role, diameter, location and service area. Assets are generally assigned a criticality level using a graded scale (e.g. minor to extreme), with assets identified as critical where failure would result in high or extreme consequences, particularly in situations where redundancy or alternative supply options are limited.

Table 4-3: General Definitions of Levels of Criticality

Criticality Level	General Description
Insignificant / Minor 1 and 2	Insignificant is at a level of incidents affecting only a few customers and causing minor inconvenience. Failure of the asset is quite site-specific. Minor is similar but affecting groups of customers, but with the response completed within the target Levels of Service. Failure of these assets may be indicative of overall deterioration.
Low 3	This group includes several types of assets that justify management at a more intense level than 1 or 2. This would include situations where adverse effects justify an escalation of the provider's normal response. It also includes assets that receive regular (or event specific) inspections for security, graffiti, maintenance, cleaning, operational status, etc. Such inspections may be augmented by SCADA monitoring for status and operational purposes. Asset failures can occur but are expected to have relatively minor consequences.
Moderate 4	Assets in this group are likely arterial with significant impacts when failure occurs. Monitoring and pro-active management would be in place but not to the 'avoid at all costs' level of Major. Single failures might occur and this would trigger an urgent response to avoid recurrence.
Major 5	This is likely to be the highest Consequence of Failure that a provider would choose to adopt. The asset involved would be highly monitored and pro-actively renewed with a strong focus on avoidance of any failure occurring.
Extreme (Catastrophic) 6	This column is intended to indicate the most extreme outcomes that could conceivably occur. Ideally assets would be re-configured to avoid this possibility even if the Likelihood of Failure is very low.

Critical assets perform key functions within the stormwater system, including:

- Enabling removal of surface water from low-lying areas in storm events
- Protection of low-lying areas from flooding and tidal influences

Failure of critical assets would result in:

- Widespread or prolonged flooding,
- Reduced levels of service,
- Increased Public health and compliance risks, and
- Increased Public safety and accessibility risks.

Failure of these assets would have disproportionate impacts on public safety, service continuity, regulatory compliance, and customer levels of service. Consequently, critical assets are subject to a greater level of operational monitoring, maintenance planning, renewal assessment and investment prioritisation than non-critical assets.

The stormwater system contains a number of critical assets. In particular, the service relies on four key pump stations, and two floodbanks to protect flood risk areas.

Failure of any of these assets could affect a large proportion of consumers and significantly reduce the WSBU's ability to maintain agreed levels of service. Accordingly, resilience planning, emergency response preparedness, critical asset management, and targeted resilience investment remain key components of the stormwater activity.

Table 4-4: Critical Stormwater Assets

Critical Asset	Why Critical?	Consequence of Failure	Criticality
Stormwater Pump Stations	Provide drainage to large parts of Invercargill that would otherwise be unable to be serviced due to the low lying nature of the city and the presence of the stop-banks along the major rivers and estuary.	Potential for widespread flooding impacts, safety risks, property damage.	Extreme (pumped outfalls): Preston St Pump Station, Beatrice St Pump Station, Bill Richardson Dr Pump Station, Drury Lane Pump Station. Major (SCADA with pumped outfall): Thomsons Bush Pump Station. Moderate (no SCADA, with gravity outfalls): Gladstone Terrace Pump Station, Russel St Pump Station, Rifle Range Pump Station.
Flood banks	Protect the low lying areas of Lake Hawkins (including the Invercargill airport) and Otatara from tidal flooding	Widespread flooding and disruption of safe access	Extreme
Culverts under roads and railways	Protects major transport routes from flooding	Disruption to national rail service, state highways and other roads	Major
Pipes under buildings	Risk of foundation erosion and difficultly to maintain / renew	Failure causes widespread service disruption affecting	Major

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Critical Asset	Why Critical?	Consequence of Failure	Criticality
		large parts of the network.	
Sealed Pipe System	Conveyance of water from behind stopbanks directly into the river	Failure causes widespread service disruption affecting large parts of the network.	Major
Floodgates	Prevents backflow from elevated river levels	Widespread flooding and disruption of safe access	Major
Safety Grilles	Safe covers on major stormwater pipes to prevent human access	Public safety risk	Major
SCADA Systems	Monitoring and control of critical assets	Reduced operational monitoring and control capability	Major
Larger pipes with overland flow path alternative	Heightened criticality where possibility exists that pipe systems could fail and the non-pipe system would not have adequate capacity to prevent damage occurring.	Loss of service / property damage	Moderate
Pump station rising mains	All pumps run individual discharge pipes to the stop-bank and are relatively short and low head. Allows excess stormwater to be pumped away from flood risk areas.	Potential for flooding impacts, safety risks, property damage	Moderate
Overland flow paths	Secondary stormwater conveyance system	Loss of service, potential for flooding	Minor

Current and planned critical asset resilience initiatives include ongoing management of key pump stations, and investment in network renewals.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED / IMPROVEMENT PLAN

- *Condition assessment processes going forward*

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Stormwater Asset Management Plan
4 Asset Portfolio, Condition and Performance

- *Criticality Maps*
- *Asset information, condition, maintenance history etc to be provided for the ponds and treatment devices.*

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5 Future Demand and Impact of Drivers

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(1)
This chapter should demonstrate	Demand, utilisation, capacity, uncertainty, growth, constraints, demand management and water loss.

5.1 Demand Forecast

The adopted planning baseline forecasts low growth in demand for stormwater services over the planning period. The serviced population equivalent is projected to increase from approximately 53,626 people in FY2026/27 to 56,369 people by FY2036/37, while the total stormwater properties connected are forecast to increase from 23,164 to 24,348 over the same period. This equates to approximately 0.5% annual growth and reflects continued low-density urban development within the serviced areas.

Based on ICC's forecasts for long term planning, the stormwater system is expected to have sufficient capacity to accommodate anticipated population growth over the planning period without significant growth-related infrastructure investment. Forecast demand can generally be accommodated through existing network capacity, planned renewals, and ongoing optimisation of system performance.

Table 5-1: Stormwater Connections Demand Forecast

Measure	FY2026/27	FY2036/37	Change
Serviced Population Equivalent*	53,626	56,368	+2,742
Residential Properties	21,626	22,731	+1,105
Non-Residential Properties	1,538	1,617	+79

* Serviced population equivalent for stormwater is calculated as the total number of properties multiplied by 2.35, with the assumption that a non-residential property is equivalent in discharge and usage to a residential property.

5.2 Factors Influencing Demand

Demand for stormwater services is influenced by a range of demographic, economic, environmental, and customer-related factors. Key demand drivers for the stormwater activity include:

- Population growth and the number of connected consumers
- Commercial and industrial development
- Climate variability and seasonal weather conditions
- Future service extensions and development patterns.

Population growth remains the primary driver of long-term residential demand. Climate variability, impermeable area increases and development patterns also influence demand. These factors are increasingly important considerations for future demand management and investment planning.

Going forward, the design basis for stormwater infrastructure will change from using the Representative Concentration Pathway (RCP) 4.5 climate scenario, to the RCP 6.0 climate scenario. This will likely result in higher surface runoff projections and affect the perceived capacity of the existing infrastructure. Pipe renewals will be sized for RCP 4.5.

Stormwater is expected to be managed on a site by site basis and consequently developers may need larger sized sites to be able to privately convey, treat and retain stormwater onsite for a period.

5.3 Implications to the Stormwater Activity

5.3.1 Growth and Development

Current planning assumptions indicate that population and connection growth within the stormwater service area will remain moderate over the planning period. The WSDP forecasts approximately 1% annual growth in stormwater connections, reflecting continued low-density residential development and gradual growth in the serviced population.

ICC is a Tier 3 local authority under the NPS-UD. This status provides strategic context for coordinating urban growth with infrastructure planning. For this AMP, the relevant effects are reflected through demand forecasts, capacity assessments and monitoring of residential, commercial and industrial development. Current planning indicates that forecast residential growth can generally be accommodated within existing stormwater capacity, while significant industrial development or expansion of the serviced area may trigger further investigation and investment.

Historically, the WSBU's stormwater network was developed to service a larger area than is currently connected and in the current scenario retains spare capacity across much of the network. However with the change in climate modelling RCP scenario to be used for the stormwater infrastructure sizing, capacity requirements will increase and upgrades will be required to meet the updated service levels. Currently, no significant growth-related capital investment is currently planned within the ten-year WSDP period, with investment primarily focused on asset renewals, resilience improvements, and service reliability.

Future demand may also be influenced by changes in land use which increase impervious areas, urban intensification, and growth strategies. Where new industries are proposed within the reticulated stormwater area, the implication of connection on the existing network would need to be fully assessed before proceeding. If capacity is not available, the new industrial users would either need to manage stormwater on-site or contribute to upgrades within the stormwater network. The WSBU does not currently provide stormwater services to industries outside of the reticulated stormwater area, so industrial growth in Invercargill and surrounding areas would not impact the stormwater asset capacity.

Any significant changes in growth assumptions or demand profiles will be assessed through future WSBU planning processes, AMP reviews, and investment planning activities to ensure levels of service, resilience, and regulatory obligations continue to be achieved.

Growth related investment decisions will be guided by the WSBU's broader planning framework, including the District Plan and any future regional spatial planning initiatives. Monitoring of population growth, development trends, and catchment development will remain important to ensuring infrastructure investment is appropriately timed and targeted.

5.3.2 Legislative Change and Regulatory Requirements

The National Policy Statement for Freshwater Management and Environment Southland's 'Southland Water and Land Plan (Operative in Part)' is expected to have some significant implications for the stormwater activity, relating to the quality of effluent discharges, and cross contamination between wastewater and stormwater.

5.3.3 Demand Uncertainty and Planning Assumptions

Demand forecasts are based on the best information available at the time of preparing this AMP.

The primary sources of uncertainty affecting future demand include:

- The timing and scale of new developments and impervious area
- Climate variability, increasing sea-levels, and extreme weather events.
- Future regulatory requirements and environmental constraints.
- Potential extension of stormwater services to currently unserviced areas.

The most significant uncertainties for the stormwater activity are future regulatory requirements and climate change scenarios. While current forecasts indicate that existing system capacity is sufficient to accommodate the anticipated residential growth, future development with a significant increase in impermeable area may change the stormwater requirements and require investment in treatment, storage, pumping or reticulation infrastructure.

Un-serviced areas will be developed in accordance with Low Impact Design principles to manage stormwater at the source, and discharge either directly to waterways, or to Council managed networks at the developers cost. The requirement for higher quality stormwater discharges will lead to a focus on sources of contamination both within the existing network and any new reticulation which may be added.

Climate change is expected to increase demand on the stormwater network through more intense rainfall events, increased flood risk, sea level rise and coastal inundation. These changes are likely to increase customer expectations regarding levels of service, flood protection and network resilience while also increasing demand for climate adaptation planning and asset renewal programmes. Future climate-related impacts will be considered through ongoing flood prediction modelling, resilience planning, and future AMP updates.

5.3.4 Demand and Flooding Management

Climate change is expected to increase demand on the WSBU's stormwater network through more intense rainfall, sea level rise, and coastal inundation. These changes will progressively reduce the effective capacity of low-lying coastal infrastructure, increase operational requirements, and expand the number of assets exposed to climate-related hazards. Significant uncertainty remains regarding long-term hazard projections, particularly around future sea level rise pathways, and interactions between river flooding and coastal inundation. Council and the WSBU will continue to improve hazard information, enhance climate resilience, and incorporate adaptive planning approaches into future asset management decisions.

Demand management will become increasingly important as the WSBU seeks to balance service reliability, resilience, affordability, environmental outcomes, and future growth requirements. Improved understanding of climate change patterns and discharge regulations will support more informed asset management decision-making and investment prioritisation over the planning period.

Demand management initiatives may drive future investment in stormwater treatment and system capacity. These investments are intended to improve understanding of network performance, support environmental compliance, and reduce uncertainty associated with future demand planning.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED
Document forecast method, demand factors, peak demand, industrial assumptions, climate change scenarios, uncertainty, tools, network constraints and confidence required by C11.
Confirmation of RCP climate scenario to be used in future stormwater sizing.

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6 Risk and Resilience

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C14
This chapter should demonstrate	Top stormwater risks, controls, residual exposure, resilience, dependencies, emergency and business-continuity arrangements.

6.1 Risk Management Policy and Framework

ICC currently has a draft Risk Management policy dated June 2026 which sets out ICC's mandatory requirements for effective risk management. The policy is aligned with ISO 31000:2018 Risk Management - Guidelines, and sets ICC's commitment, principles, and governance expectations.

ICC's Risk Management Framework (RMF) is currently being drafted, and will operate alongside the Risk Management Policy. The RMF is aligned with ISO 31000:2018 but is intended to operate as a living document that can be refined as ICC's operating context, risk profile and risk maturity evolve. The RMF describes how risk management is applied in practice, including processes, escalation pathways, reporting rhythms, and the use of risk registers. Risk appetite and tolerance settings are maintained within the framework so they can be updated as required without triggering full policy adoption processes.

The Risk Management Policy and Framework identify the following risk types and risk categories for consequence scaling and appetite:

Risk Types:

- Strategic,
- Operational,
- Programme/Project.

Risk Categories:

- Financial sustainability,
- People and knowledge,
- Service delivery, critical services,
- Legal and regulatory compliance, privacy
- Health, safety and wellbeing,
- Information management, cyber,
- Environment and climate resilience,
- Projects and property,
- Reputation, community trust,
- Achievement of strategic objectives (opportunities).

The WSBU manages stormwater activity risks using an integrated framework that links strategic, service, network, and asset level risks. The approach considers the likelihood and consequences of events that could affect public health, service continuity, regulatory compliance, environmental outcomes and community wellbeing.

Risk management within the stormwater activity is informed by a range of sources, including:

- Asset criticality assessments;
- Asset condition and performance information;
- Resource consent obligations;
- Network performance and hydraulic modelling;

- Operational incident and emergency response records;
- Climate and natural hazard information; and
- Strategic planning and capital investment programmes.

6.2 Priority Stormwater Activity Risks

The stormwater activity faces a number of strategic risks associated with flooding, asset failure, climate change, environmental compliance, information quality, and programme delivery. Understanding and managing these risks is critical to maintaining service levels, protecting the community and environment, and supporting evidence-based investment decisions. The priority stormwater activity risks are summarised in Table 6-1.

Table 6-1: Priority Stormwater Activity Risks

Risk	Risk Type	Risk Category	Potential consequence	Current / planned control
Flooding from events exceeding primary system capacity	Operational	Legal and regulatory compliance, privacy	Property impacts, transport disruption, community disruption and, reputational risk.	Hydraulic modelling, overland flow path management, renewals, and targeted capacity improvements.
Aging infrastructure and asset failure	Operational	Service delivery, critical services	Localised flooding, sinkholes, service disruption, and increased reactive maintenance.	Condition assessment, inspections, renewals, and criticality-based prioritisation.
Climate change, sea level rise and more intense rainfall events	Strategic	Environmental and Climate Resilience	Increased flood frequency, reduced levels of service, and higher investment requirements.	Climate risk assessment, adaptive planning and resilience investment.
Environmental non-compliance	Operational	Legal and regulatory compliance, privacy	Consent breach, receiving environment effects, and additional regulatory scrutiny.	Consent monitoring, source investigations, operational controls, and improvement actions.
Data and modelling limitations	Programme	Information management, cyber	Reduced confidence in investment decisions and renewal forecasts.	Asset data improvement, modelling, CCTV, condition programme, and governance.
Delivery and affordability constraints	Programme	Financial sustainability	Delayed risk reduction and rephased investment.	Programme prioritisation, deliverability review, and IDP alignment.

6.3 Pipe Resilience Risks

The ICC Three Waters Asset Management Plan 2024 identifies pipe blockages and pipe failure as the key risks for the stormwater primary network. Currently the controls in place are to undertake emergency pipe repairs when pipe obstructions or failures are reported. The planned further response is to continue to undertake CCTV to improve confidence in the condition of the network and proactively identify pipe obstructions or poor condition.

The pipe capacity is another risk area, with exceedance of design capacity identified as a potential issue with the changing climate and future development levels. The WSBU proposes to review the design standards used for the stormwater activity to determine if they are still adequate for future scenarios.

6.4 Climate Change and Resilience

Climate change is expected to progressively affect the capacity, reliability, and resilience of the stormwater system through more intense rainfall, rising sea levels, coastal inundation, elevated tailwater and groundwater levels, and more frequent flooding. The climate adaptation programme is informed by recent assessments of sea level rise, coastal inundation risk, vertical land movement, and future hazard uncertainty across the Invercargill District's coastal environment.

The Invercargill District is particularly exposed due to its low-lying topography and the interaction between coastal, riverine, and urban drainage systems. These effects may reduce gravity drainage and outfall performance, increase network surcharge and flooding, accelerate asset deterioration, and increase operational and renewal costs.

No detailed climate risk and vulnerability assessment has yet been completed for the stormwater activity. Consequently, the exposure, vulnerability, and adaptation requirements of the network are not fully understood. Priority assets for assessment include the four pump stations with an Extreme criticality rating (Prestonville, Drury Lane, Beatrice Street and Bill Richardson Drive), flood banks, significant railway culverts, outfalls, and key reticulation assets.

Key climate-related risks include:

- **Increasing environmental standards for discharges**: The WSBU have removed all known wastewater connections into the stormwater network to reduce contamination of the stormwater. All future capital projects include allowance for investigating the addition of stormwater treatment.
- **Greater likelihood of service disruption due to increase rainfall**: Ongoing assessments of the design basis for the stormwater infrastructure are being completed to determine if weather patterns and climate change scenarios require an increased LoS to protect public safety.
- **Flooding impacts on pumping and network infrastructure:** Most pump stations are below ground with submersible pumps, and generators are portable to allow them to be moved to higher ground. At Beatrice St, Prestonville and Bill Richardson Drive Pump Stations the pumps are fixed in place, but switchboards and critical generators have been raised above flood levels.
- **Increased operational, renewal and resilience costs:** Potentially if/as maintenance needs increase but not currently considered a high risk.

Uncertainty remains regarding the rate and timing of sea-level rise, future rainfall patterns, vertical land movement, and interactions between coastal and river flooding. The WSBU will therefore apply an adaptive approach based on improved hazard information, monitoring, and periodic review. Climate considerations will be progressively incorporated into risk management, hydraulic modelling, critical-asset assessments, lifecycle planning, renewals, and investment prioritisation.

Future work should include a climate risk and vulnerability assessment, updated coastal-inundation and flood modelling, application of appropriate sea-level-rise projections, and development of adaptive investment pathways for areas and assets most exposed to future hazards.

6.5 Emergency Management and Business Continuity

ICC and the WSBU maintain emergency response and business continuity arrangements to support continued delivery and restoration of essential three waters services during emergency events. Existing controls include emergency response plans, Emergency Management Southland and lifelines coordination arrangements, standby power generation, incident response procedures, mutual aid agreements, critical spares, emergency tanker supply and community water distribution arrangements. These measures support response and recovery during major infrastructure failures, flood events and natural hazard emergencies.

6.6 Interdependencies and Resilience

The stormwater activity is interdependent on groups within Council and Environment Southland including water (specifically wastewater), transport, parks, planning, emergency management, regulatory compliance, and land development functions. These interdependencies should be recognised in risk assessments, investment planning, and operational response arrangements.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED
ICC to confirm if a Climate Risk and Resilience Assessment is underway for the WSBU Assets. Undertake a stormwater or 3W climate risk and vulnerability assessment to understand the exposure, vulnerability and criticality of SW (and WS and WW) assets and integrate findings into future AMP update

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7 Lifecycle Management

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C12 and C13
This chapter should demonstrate	Operations, planned / predictive / reactive maintenance, renewal need, pipe replacement and non-network asset plans.

7.1 Lifecycle Approach

Stormwater lifecycle planning should use service performance, criticality, risk, condition, failure history, capacity, compliance, and whole-of-life cost. The SAMP holds the common methodology, while this AMP demonstrates how it is applied to stormwater assets.

7.2 Asset Acquisition and Procurement

Asset acquisition occurs in the stormwater activity when the WSBU takes ownership of stormwater assets from a developer or when the WSBU designs and constructs or upgrades its own new stormwater assets. New stormwater reticulation assets are expected to comply with the Code of Practice for Land Development and Subdivision Infrastructure Bylaw, 2016. The Code specifies minimum standards and guidance for infrastructure accepted into the WSBU networks and privately owned infrastructure that connects to those networks. As part of the WSBU's subdivision assessments, the adequacy of infrastructure into which the subdivision feeds will be considered, and, if necessary, upgraded as part of development. When new stormwater network assets are constructed, the as-builts are submitted to the WSBU and asset data is entered into the asset database.

Assets are acquired as a result of:

- Taking over new reticulation, storage or treatment assets constructed as part of sub-divisional development (constructed at the developer's expense)
- Extensions constructed by the WSBU to service new areas
- Asset upgrades constructed by the WSBU to provide additional system capacity to overcome inadequacies or provide for growth (e.g. larger drains or pumps)

7.3 Operations and Maintenance

WSBU operates and maintains its stormwater network to provide reliable drainage services, minimise flood risk, and achieve agreed levels of service. A combination of planned, predictive, and reactive maintenance is used to maximise asset performance and service life. Reactive maintenance addresses reported faults and blockages within the pipe network, while planned maintenance includes regular inspection and cleaning of assets. SCADA systems provide continuous monitoring of stormwater pump stations, enabling early detection of failures, and supporting predictive maintenance practices through proactive intervention and improved response times.

Renewal and replacement programmes are informed by ongoing condition, performance, and remaining life assessments. Data collection and asset monitoring support investment decisions and help identify pipes, pump station components, and other stormwater assets requiring renewal before service levels are compromised. Non-pipe assets, including pump stations, floodgates, telemetry systems, and open drainage channels, are subject to routine inspection and maintenance programmes to ensure continued functionality and resilience. Maintaining these assets at appropriate service levels reduces the likelihood of premature failure, extends asset life, and supports the long-term sustainability of the stormwater network. Open drains require a low level of maintenance compared to pipes, and are sprayed twice a year to keep vegetation under control.

Future renewals and pipe replacement activities will be prioritised based on asset condition, criticality, performance, and risk, ensuring investment is targeted where it delivers the greatest benefit to network resilience, flood protection, and service continuity.

A maintenance contract is currently held with Downer, who will undertake maintenance and repair work that cannot be managed by the WSBU's in-house resources. Operators are shared between the wastewater and stormwater assets, with one operator dedicated to the pump stations, and two operators 'floating' to address any issues that arise. SCADA alarms are triaged by the 24hr call service for ICC, and then passed on to operators as required.

To strengthen lifecycle traceability, inspection recommendations should be assigned a work-order or project reference, risk priority, responsible owner, target completion date, and closure status. Material unresolved findings should be explicitly linked to the risk register, renewal programme and Investment Delivery Plan.

7.4 Renewals and Deliverability

The renewal programme is intended to maintain the overall standard of the stormwater system at a level which reflects its age profile by providing for the rehabilitation or replacement of individual assets as they reach the end of their useful life. It must be funded adequately to maintain current levels of service and the overall quality of the network. Major renewal projects are subject to competitive tendering, using 'lowest cost conforming' or 'weighted attributes' assessment procedures in accordance with the New Zealand Transport Agency Competitive Pricing Procedures Manual.

The stormwater renewals CAPEX breakdown is shown in Figure 7-1.

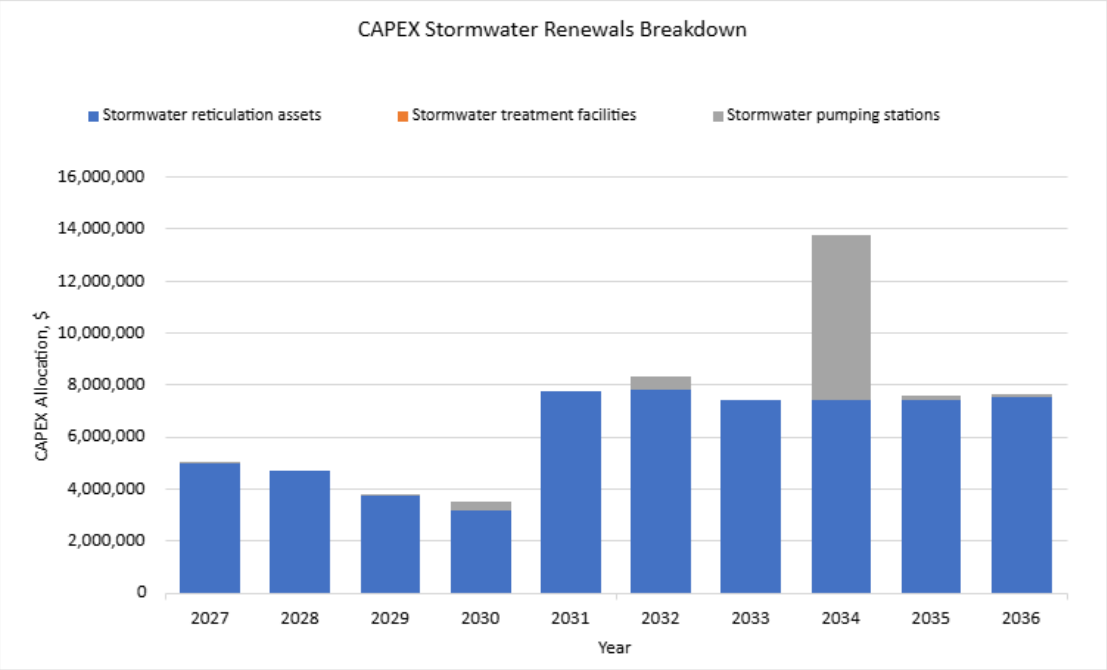


Figure 7-1: CAPEX Stormwater Renewals

The asset register records a history of pipe replacement and rehabilitation, including links between abandoned assets and replacement assets, renewal-project descriptions, and rehabilitation dates. The records show progressive replacement of older pipe materials such as earthenware with concrete and PVC across the network.

Future renewal planning should build on this information by developing cohort-based forecasts that combine installation date, material, asset remaining life, failure history, criticality, and consequence of failure. Assets that have exceeded their useful lives are not automatically treated as an immediate

renewal backlog; rather, they are re-assessed every three years and prioritised using risk and performance evidence.

7.5 Disposal of Assets

The stormwater assets are intended to operate in perpetuity to provide a continuing stormwater service to consumers, therefore it is intended that individual assets will only be disposed of at the end of their service life at which time they will be replaced with new assets, or become obsolete as part of new development projects. In general, where assets are in the same location, the old asset will be removed as part of the renewal project.

Because assets will usually be at the end of useful life at disposal, they are expected to have zero residual value. Specific funding is therefore not allocated to disposal of assets, but where costs are incurred in their removal, these will be included in development and renewal project costs.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED
Populate maintenance standards, planned and reactive programmes, annual pipe replacement kilometres, renewal backlog, funded / unfunded need and evidence confidence. In particular information regarding storage and treatment devices is missing.

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8 Asset Improvements and Enhancement Programme

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C11(2)-(4)
This chapter should demonstrate	Every material asset improvement, drivers, outcomes, options, trade-offs and IDP linkage.

8.1 Investment Drivers

Stormwater investment is driven by the need to maintain existing levels of service, renew aging assets, improve flood resilience, respond to climate change, meet environmental obligations, support growth and improve asset management maturity. Investment decisions for improvements are evidence-led and linked to the asset management objectives for the WSBU.

Table 8-1: Investments for the Stormwater Activity

Investment	Asset Management Objective(s)	Planning evidence	Required judgement
Stormwater renewals	Sustain core infrastructure over the long term.	Large number of assets have exceeded the design life and condition is unknown.	Confirm current renewal forecast, funding and deliverability.
Hydraulic modelling and flood risk mapping	Manage affordability while investing for the future. Lift asset management maturity.	Modelling of primary and overland flow path networks is required.	Confirm model coverage, priority catchments and programme.
Stormwater quality and consent compliance	Maintain safe, compliant and efficient stormwater services.	Increased monitoring and investigation requirements under new discharge consents.	Confirm consent programme, risks and funding.
Climate resilience and adaptation	Improve resilience to climate and natural hazards.	Climate risk assessment not completed for stormwater activity.	Confirm current WSBU/regional climate work and AMP actions.
Asset data and condition improvement	Lift asset management maturity. Enable planned succession of assets.	Condition evidence and criticality require validation.	Define programme, owner, cost and benefits.

8.2 Investment Categories

8.2.1 Stormwater Renewals

Physical renewal works in the capital programme to 2057 include the pipe network, pump stations, and stormwater treatment.

Pipe network renewals cover the business-as-usual programme for stormwater network capacity upgrades based on revised design flow requirements. Funding has been allocated every year throughout the 30 year planning period.

Pump station renewals cover the business-as-usual programme for stormwater pumping station capacity upgrades based on revised design flow requirements. Funding has been allocated to these renewals in 18 years out of the 30 year period. Relocation of stormwater pumping stations to enhance seismic resilience is identified as a separate renewal, and has funding allocated for 2034.

Stormwater treatment is identified in the capital program as a renewal item, however has no separate funding associated with it. Rather, the WSBU has confirmed that allowance for stormwater treatment investigations is included under all capital works moving forward.

8.2.2 Stormwater Consents

Each of the existing stormwater consents has funding allocated for renewing the consent on the year the consent expires. The global stormwater consent has funding allocated over three years in the lead up to the consent expiring.

There is also funding allocated to a coastal marine area (CMA) discharge consent in 2030. The WSBU is still scoping for this consent.

8.2.3 Digital

The digital / IT capital funding allocation is for the implementation and calibration of hydraulic network modelling systems to support stormwater network planning, analysis, and optimisation.

To address increasing uncertainty around network capacity and flood risk, the WSBU considered maintaining the current planning approach or developing a comprehensive hydraulic model. A network-wide hydraulic model was selected because it provides the greatest long-term benefit for growth planning, flood risk assessment, climate adaptation and investment prioritisation.

The model development is in progress, and further funding has been allocated from 2027 – 2031, indicating that the model is expected to be completed by 2031.

8.3 Overview of Planned Investment

Figure 8-1**Error! Reference source not found.** shows the planned capital investment programme for the stormwater activity over the planning period (30 years). The programme reflects the investment required to address resilience, growth, renewals, compliance, and levels of service priorities identified throughout this AMP.

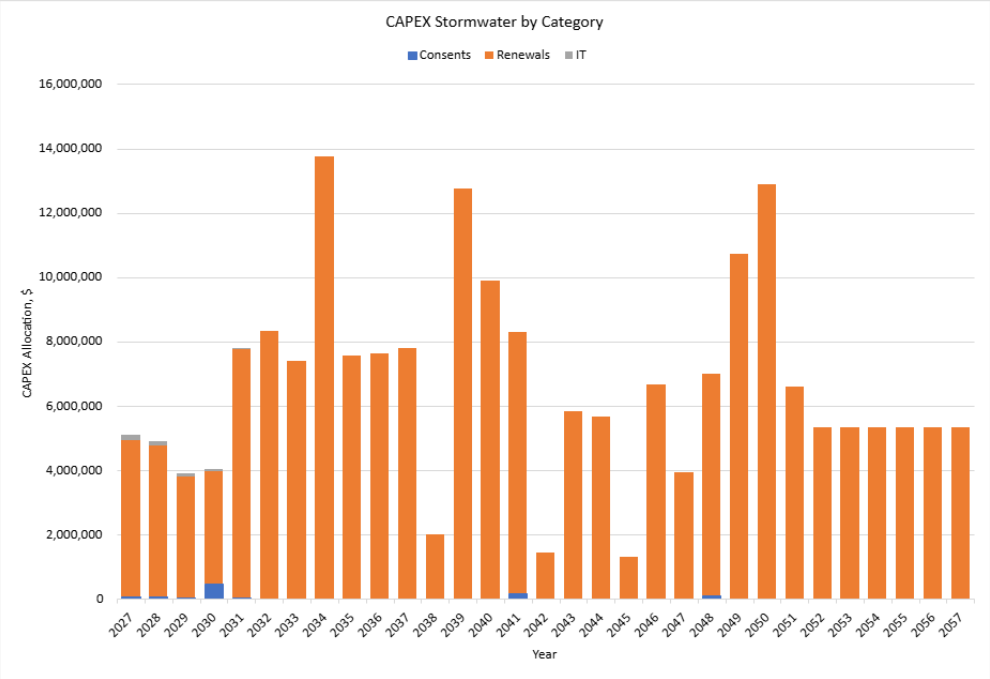


Figure 8-1: Stormwater CAPEX Projections

The stormwater renewals projects can be further broken down between the pipe network assets, pump station assets and treatment assets, refer Figure 8-2. Much of the funding allocated to renewals is planned for pipe network renewals, reduce the risk of failure and improve the service reliability. The rest of the funding is allocated to pump station renewals. In 2034 there is a $6,300,000 one-off CAPEX allocation to relocate stormwater pumping assets to enhance the seismic resilience and improve continued service delivery following seismic events. Although listed as a CAPEX renewal item, stormwater treatment does not have a separate CAPEX budget for renewals or enhancements.

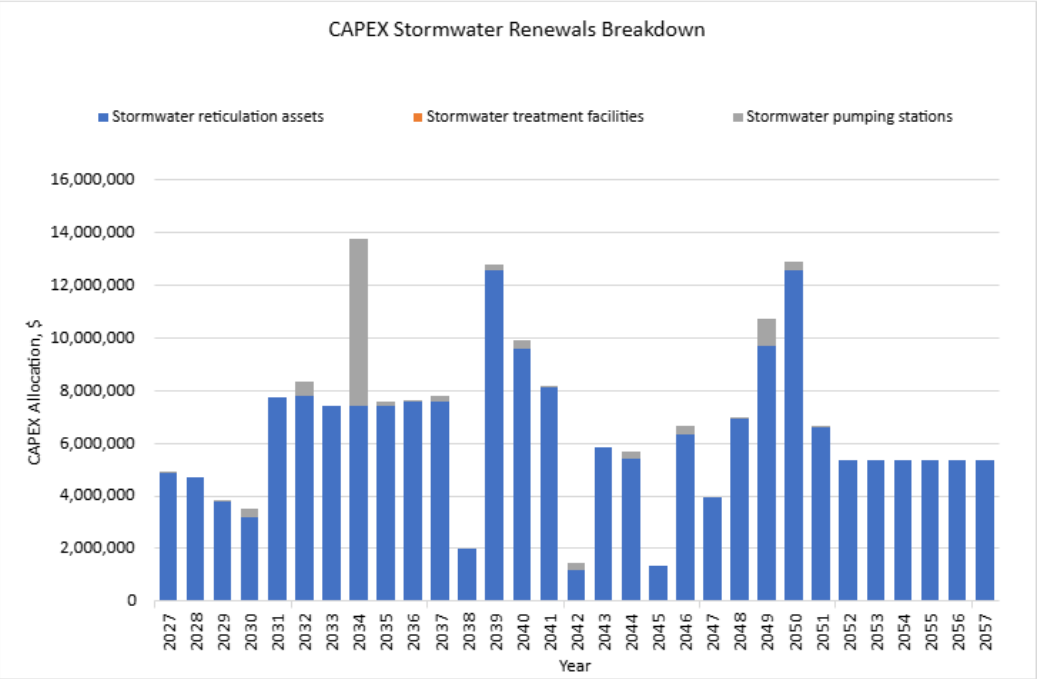


Figure 8-2: Stormwater Renewals Funding Breakdown

8.4 Critical Asset Resilience Improvements

The WSBU has identified a number of critical stormwater assets that are essential for maintaining service continuity, managing flood risk, and protecting public safety. While these assets are recognised within the criticality framework, there is currently no formal linkage between critical asset assessments and the capital investment programme.

Future updates of this AMP will seek to strengthen this connection by explicitly linking critical assets, risk assessments, renewal needs, and resilience initiatives to planned investment activities. This will support more transparent prioritisation of expenditure and provide a clearer line of sight between identified risks, resilience outcomes, and investment decisions. As the WSBU continues to improve its asset information systems and digital asset registers, the intention is to implement functionality that enables critical assets to be directly linked to renewal and capital investment programmes, supporting more robust risk-based planning and investment decision-making.

8.5 Summary of Key Projects

The key projects included in the 30 year capital funding programme for the stormwater activity are listed below in Table 8-2.

Table 8-2: Key Projects for the Stormwater Activity

Investment	Asset Management Objective(s)	Description	Intended Outcome
IT - Hydraulic Model Development	Manage affordability while investing for the future	Implementation and calibration of hydraulic network modelling systems to support stormwater network	Improved investment decisions and flood vulnerability predictions.

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Stormwater Asset Management Plan
8 Asset Improvements and Enhancement Programme

Investment	Asset Management Objective(s)	Description	Intended Outcome
	Lift asset management maturity.	planning, analysis, and optimisation.	
Stormwater Renewals – Pumping Stations	Sustain core infrastructure over the long term.	Business-as-usual programme for stormwater pumping station capacity upgrades based on revised design flow requirements.	Improved service reliability.
Stormwater Renewals – Pipe Network	Sustain core infrastructure over the long term.	Business-as-usual programme for stormwater network capacity upgrades based on revised design flow requirements.	Reduced failure risk.
Stormwater Renewals – Stormwater Treatment	Sustain core infrastructure over the long term. Maintain safe, complaint and efficient stormwater services.	Allowance for stormwater treatment on all new renewals projects. No capex allocation, funding is tied into renewals allocation.	Improved environmental outcomes.
Stormwater Renewals – Seismic Resilience	Sustain core infrastructure over the long term. Improve resilience to climate and natural hazards.	Relocation of stormwater pumping station to enhance seismic resilience and ensure continued service delivery following seismic events.	Improved resilience to natural hazards and the changing climate.
Consents – Global Stormwater Discharge Consent AUTH-20168843	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for stormwater discharge (current AUTH - 20168843). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater Outfall AUTH-204735	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for Fox Street Stormwater Outfall(AUTH-204735). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater Outfall AUTH-205672	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for Marine Parade Bluff Stormwater Outfall (AUTH-205672). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.

Stormwater Asset Management Plan
8 Asset Improvements and Enhancement Programme

Investment	Asset Management Objective(s)	Description	Intended Outcome
Consents – Stormwater Outfall AUTH-302475-01	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for Beatrice Street Invercargill Stormwater outfall (302475-01). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater AUTH-20232835-01	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for Russell Street Stormwater Outfall at North Road (AUTH-20232835-01). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater AUTH-204383	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for Ascot Height Stormwater (AUTH-204383). This investment ensures continued regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater Outfall AUTH-	Maintain safe, complaint and efficient stormwater services.	Application for new resource consent for stormwater discharge into the coastal marine area. This investment ensures regulatory compliance for stormwater operations.	Improved environmental outcomes and regulatory compliance.
Consents – Stormwater and Leachate Discharge to Land AUTH-20136275-V2	Maintain safe, complaint and efficient stormwater services.	Resource consent renewal for sewerage Sludge storage leachate discharge at station Road (currently Auth - 20136275-V2). This investment ensures continued regulatory compliance for wastewater operations.	Improved environmental outcomes and regulatory compliance.

The planned capital investment programme for the stormwater activity is focused on the following five areas:

- Sustaining service delivery
- Reducing asset risk
- Improving resilience
- Maintaining regulatory compliance
- Supporting informed investment decision-making.

These investments address five of the WSBU's asset management objectives and provide a clear pathway for maintaining levels of service and managing future challenges. While there is currently no dedicated funding allocated to initiatives focused on asset management maturity or enabling the planned succession of assets, these remain important organisational priorities and will continue to be progressed through the WSBU's improvement programme, asset information initiatives, and future AMP updates.

9 How We Manage the Activity

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C9
This chapter should demonstrate	Governance, capability, asset-information lifecycle, systems, integration, confidence, monitoring and review.

9.1 Governance and Accountability

ICC retains responsibility for the governance and delivery of the stormwater activity through the in house WSBU. The WSBU provides organisational separation, financial ring fencing and dedicated leadership for water services while remaining part of ICC.

A dedicated Water Committee, comprising elected members and an independent technical professional member, provides governance oversight of water services. The Committee oversees service performance, regulatory compliance, risk and delivery of the investment programme within its delegations.

The WSBU implements approved programmes and provide the asset, cost, condition, risk, and performance information required for planning and decision-making. ICC's corporate functions provide supporting financial, digital, customer, procurement, legal, and communications services. Contractors and consultants provide delivery capacity and technical expertise where required.

9.2 Service Delivery Model

The WSBU delivers the stormwater activity through a combination of WSBU staff, contractors and consultants. The WSBU retains accountability for service performance, regulatory compliance, asset management, investment planning, and risk management.

The WSBU staff operate and manage the network, treatment, and pumping assets, and monitor discharge stormwater quality and network operational performance. Network maintenance and fault response are led and coordinated by the WSBU and delivered through contracted services. A 15 year term maintenance contract is currently held with Downer, who will undertake maintenance and repair work that cannot be managed by the WSBU's in-house resources. A separate 15 year contract for electrical systems is to be renewed in December 2026 with Wallace Murray Electrical.

Asset management and investment planning is also led by the WSBU. Contractors and specialist consultants provide additional capacity and expertise for condition assessment, engineering investigations, design, construction and capital works delivery.

A summary of the delivery approach for stormwater activities is presented in Table 9-1.

Table 9-1: Stormwater Activity Delivery Approach

Activity / Function	Delivery Approach
Network operations, maintenance and fault response	Led and coordinated by the WSBU. Contractors undertake specialised maintenance as required.
Asset management and investment planning	Led by the WSBU (asset information management, performance and risk assessment, lifecycle planning, renewal prioritisation and investment programme development). Specialist consultant support is used where required.
Capital works delivery	Led by the WSBU and delivered with contractors and specialist consultants.

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Customer requests and responses	Delivered by the WSBU staff, call centre and the maintenance contractor.
Emergency response and recovery	Delivered through the WSBU operational arrangements, maintenance contractors, Environment Southland and the Emergency Management Southland Group.
Hydraulic and network modelling	Undertaken by ICC and specialist consultants using ICM InfoWorks. The hydraulic model for the stormwater activity is still under development.
Environmental laboratory services	Delivered by ICC's IANZ accredited laboratory for stormwater (and wastewater and water supply activities). Heavy metal testing for stormwater is done by an external laboratory.
Specialist investigations	Delivered by the WSBU, specialist consultants and contractors, including ground survey, LiDAR, imaging and CCTV investigations.
SCADA System Support	Automation for Industry (AFI) provides software monitoring, problem resolution, application changes, new installations, and after hours call out support.

9.3 Asset Information Systems

Reliable asset information supports the operation, maintenance and long-term management of the stormwater activity. The WSBU uses asset, spatial, financial, operational, compliance, customer and document-management information to understand asset location and characteristics, monitor service and asset performance, manage work, assess risk, forecast lifecycle needs and support investment decisions.

Figure 9-1 provides a schematic of the WSBU's wider telemetry and communications environment, including the links supporting the stormwater pump stations. The diagram also includes water supply and wastewater facilities because elements of the communications network support multiple water services. The system monitors and or controls 67 of the 75 WSBU sites (33 Water, 34 Wastewater and 8 Stormwater). These sites range from treatment plant and pump stations, down to water reticulation pressure sensors. The remaining 8 sites are very small and are inspected weekly.

The radio system is digital, and access to the remote sites is either via fibre, radio or cellular networks.

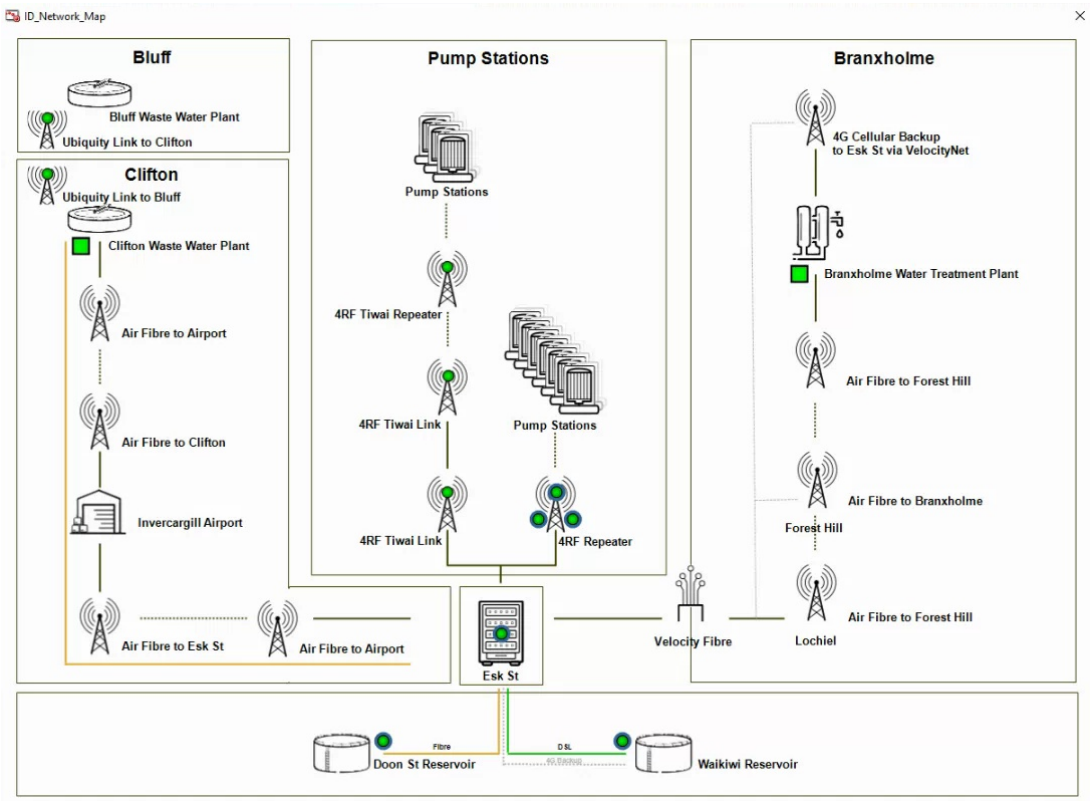


Figure 9-1: Schematic of the 3 Waters Operational Environment

9.3.1 Asset Software

Asset information is collected and updated throughout the asset lifecycle using various software systems. Information is recorded and maintained across the WSBU's document management systems. The principal software systems and their uses are summarised below in Table 9-2.

Table 9-2: Asset Information Systems and their Purpose

System or Information Source	Primary Purpose
Infor Public Sector (IPS)	Asset inventory and job management information used to support maintenance and asset planning.
TechOne (Enterprise Asset Management)	Asset register, work management, inspections, maintenance history and asset-data capture. IPS is being replaced by TechOne.
TechOne Enterprise	Financial and asset valuation information used for asset accounting, financial reporting and investment planning.
ESRI - ArcGIS	Spatial asset information used to publicly display, map, locate and analyse the stormwater network.
AVEVA Plant SCADA	Operational information used to monitor and control pumping assets.
ICM InfoWorks	Network information used to assess capacity, flow scenarios and the effects of proposed infrastructure changes.

Microsoft database	Rainfall data administered by ICC and provided by Environment Southland
Environment Southland website	Flooding infrastructure, rainfall and water quality information is available publicly and used to inform the stormwater activity.
Pathway	Customer service requests, faults and complaints used to support operational response and performance reporting.
Ostendo	Asset database scheduling for plant equipment only (TechOne may replace this function).

9.3.2 System Integration and Decision Support

Information from the WSBU's document-management systems is used collectively to support:

- Operational monitoring, control and fault response
- Regulatory LoS and compliance reporting
- Condition, performance and criticality assessment
- Maintenance and renewal planning
- Network capacity and demand assessments
- Asset valuation, depreciation and expenditure forecasting
- Risk assessment and investment planning.

Information is exchanged between systems through a combination of system interfaces, established business processes and staff-led verification and reconciliation. This enables information from the various sources to be considered together when planning and prioritising work. However, there are no processes in place to link all available asset data from the various data sources, and some data can only be assessed through specific software. This can restrict visibility of the necessary information to make holistic decisions regarding the stormwater activity.

9.3.3 Data Standards

Consistent data standards support informed decision-making throughout the asset lifecycle. Reliable and well-structured asset data improves confidence in operational, maintenance, renewal and investment decisions, supports regulatory reporting, and enables information to be shared effectively between systems and business processes.

The Three Waters Asset Data Standard (3W ADS) is currently under development and was published by Water New Zealand in January 2026. The standard provides a nationally consistent framework for classifying and describing water supply, wastewater and stormwater assets. The standard includes common asset classes, attributes and data structures intended to improve interoperability, reporting, and asset management practices across the New Zealand water sector.

The WSBU intends to progressively align its stormwater asset information with the applicable 3W ADS requirements. The current extent of alignment has not yet been formally assessed. Implementation will need to consider:

- Asset classification and hierarchy structures
- Alignment between the asset register and GIS
- Common asset identifiers across multiple systems
- Information requirements for new, renewed and vested assets
- Management of legacy, incomplete, and non-standard records
- Data quality, validation, and migration processes
- Information required to support operational, financial, regulatory and asset management reporting.

The scope, timing and priority of any future alignment activities remain subject to further review and organisational priorities.

Taumata Arowai, the Water Services Authority, is developing National Engineering Design Standards (NEDS) to promote greater consistency in the planning, design and delivery of water infrastructure across New Zealand. The proposed standards are intended to apply to water supply, wastewater and stormwater infrastructure managed by councils and water organisations, including new infrastructure that connects to or becomes part of those networks. The WSBU will continue to monitor the development of NEDS and any associated national guidance, codes of practice or asset information requirements. All relevant requirements will be considered as part of future updates to engineering standards, asset information processes and systems.

Alignment will be implemented progressively and coordinated with the transition to TechOne Enterprise Asset Management. Existing asset information will be mapped and validated before migration to minimise the risk of losing or maintaining incorrect information.

9.3.4 Appropriateness of Asset Information and Systems

The WSBU's asset information and systems are assessed as partially appropriate. There are limitations in data completeness and visibility across multiple software systems, resulting in varying data confidence across the stormwater asset portfolio. The main gaps are limited condition information for buried pipes, incomplete component-level information for complex assets, and incomplete asset records. Complex assets include pump stations and some treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, or telemetry equipment. These gaps affect confidence in making appropriate planning and investment decisions.

The implementation and commissioning of TechOne Enterprise Asset Management represents the first step in a change in the WSBUs asset information capability. The transition provides an opportunity to establish a more standardised asset data system, and stronger links between the various sources of information.

Current improvement priorities are to:

- Complete the implementation and commissioning of TechOne EAM and components;
- Complete asset data migration and validation to TechOne
- Improve asset data collection (including component level condition data);
- Document information handlers roles and responsibilities.

9.3.5 Cyber and Access Security

ICC's IT Services team manages the servers supporting stormwater information systems. System access and changes are controlled through individual user credentials. The policies, procedures, functional descriptions, and service agreements governing SCADA access and cybersecurity require confirmation. SCADA alarm priorities are operational controls and are documented separately to this AMP.

There is a growing risk of ransomware attacks on government infrastructure, and the potential for the WSBU to be locked out of the SCADA systems and lose automatic control of various equipment, which would then have to be manually operated. A Cyber Security Risk Assessment is included in the improvement plan to better understand these risks.

9.4 Asset Information Lifecycle

Asset information is created, maintained and used throughout the asset lifecycle. The lifecycle comprises the following stages:

- create or acquire
- capture and validate
- operate and maintain
- monitor performance

- assess risk
- plan investment; and
- renew, enhance or retire.

Information generated at each stage is used in subsequent decisions, creating a continuous cycle of information capture, review and improvement.

9.4.1 Create or Acquire Assets

Asset information is created when assets are constructed, renewed, modified or vested in the WSBU. Information is obtained through design, consenting, construction, inspection, testing, commissioning and project handover.

For subdivision and land development works, the WSBU reviews engineering information and proposed infrastructure through the consent and technical approval process. The survey plan is certified under section 223 of the Resource Management Act 1991 when it conforms with the approved subdivision consent. Certification under section 224(c) confirms that the subdivision consent conditions have been met to the satisfaction of the WSBU, or otherwise addressed through an applicable statutory mechanism.

Before new infrastructure is vested or accepted, the required inspections, testing, commissioning and handover information are completed in accordance with the consent conditions and the Code of Practice. Handover information includes, where applicable:

- Approved as-built drawings
- Asset location, configuration and attributes
- Inspection and test results
- Commissioning and compliance records
- Operation and maintenance documentation
- Ownership and asset status
- Capital cost and valuation information

Accepted information is provided to the relevant WSBU teams so that the asset, GIS, document, and valuation records can be created or updated.

9.4.2 Operate and Maintain

Operational and maintenance activities generate information about asset condition and performance. Information is obtained through a variety of sources including operational monitoring, inspections, planned and reactive maintenance, faults, investigations, customer requests, and renewal activities. SCADA and telemetry provide operational information and alarms for the pumping assets.

Asset information and attribute data is updated when activities result in a material change to an asset, including:

- Maintenance or repair
- Replacement of an asset or component
- Changes to condition or operating status
- Changes to asset configuration or function
- Identification of a fault or recurring failure
- Inspection, testing or investigation results.

Relevant changes are reflected in the asset register, GIS, document-management, and valuation records, where applicable. The lifecycle management activities informed by this information are described in Section 7.

9.4.3 Monitor Performance and Assess Risk

Asset performance is monitored using all available sources of data. This information is reviewed to identify and monitor:

- Changes in asset condition or performance
- Recurring faults and failure trends
- Capacity or service constraints
- Compliance issues
- Changes in asset criticality or risk
- Emerging maintenance, renewal or improvement needs

Material findings are recorded in the relevant asset, work-management, risk and planning records. Where an assessment identifies missing or uncertain information, the limitation is recorded and may result in further inspection, investigation, monitoring or data improvement.

9.4.4 Plan Investment

Asset information is used to identify maintenance, renewal and improvement needs. These needs are assessed and prioritised through the WSBU's planning processes and inform:

- Maintenance and renewal programmes
- This Asset Management Plan
- The Investment and Delivery Plan
- Business cases and option assessments
- Capital and operational budgets
- Expenditure and valuation forecasts

The quality and completeness of the underlying information affect confidence in the scope, timing and cost of proposed investment. Assumptions, data limitations, and forecast confidence are recorded where they affect investment decisions.

Detailed investment priorities and improvements are described in Section 8 and the IDP. The prioritisation framework and lifecycle decision-making methodology are established in the SAMP.

9.4.5 Asset Retirement/Reuse

Assets may be retired when they are no longer required to support the agreed LoS. The retirement approach considers the asset's condition, material, location, residual function, safety and environmental risks, potential for reuse, and the cost and practicability of removal.

When an asset is retired, its operational status and any continuing function are recorded in the asset register and spatial records. Relevant valuation and supporting document records are also updated. Project managers and maintenance contractors provide the information required to update these records following renewal, replacement, modification or decommissioning work. This maintains traceability between the retired asset and any replacement asset.

Retired above ground plant and equipment is removed or disposed of where practicable. Equipment with a residual market value may be sold, while other items may be recycled or disposed of as scrap. Significant civil assets may be demolished, retained or replaced depending on the future requirements of the site. Historically, income from stormwater asset disposals has been considered insignificant.

Disused pipes may be:

- Removed as part of renewal or other construction work
- Disconnected, sealed and left in place
- Abandoned and filled (or otherwise stabilised) where required to manage structural or ground subsidence risks
- Retained for possible future recommissioning or rehabilitation
- Repurposed as a conduit where appropriate



Where a pipe remains in the ground, its status, material, location, and residual function remain identifiable in the asset register and GIS. If an asset is reused or its function changes, the asset record is to be updated so its history and relationship to the network remain traceable.

Particular care is required for abandoned asbestos-cement pipes because future removal can be a health and safety risk, and costly to dispose of. The WSBU's earlier planning documents identify pipe disposal as an unresolved issue and note that disused pipes have historically been disconnected and left in the ground. They also identify filling with a low-strength material or removal to an approved landfill as possible treatments.

9.5 Service and Asset Monitoring

The WSBU monitors the stormwater activity to confirm that levels of service are being achieved, assets and systems are performing as intended, and emerging operational, maintenance, and investment needs are identified. The following services and asset activities are monitored:

- Treatment, storage, pumping, and network performance
- Discharge stormwater quality and compliance
- SCADA and telemetry alarms
- Flooding events
- customer requests and complaints
- Asset faults, failures, and service interruptions
- Inspection and maintenance outcomes
- Asset condition and performance

Stormwater quality and receiving environment compliance is demonstrated through the number of breach notices the WSBU receives annually. SCADA and telemetry provide real-time operational monitoring and alarms for the extreme and major criticality pumping stations. This includes flow and pressure monitoring of the pumps.

Monitoring information is recorded within asset-information systems and is used to:

- Respond to faults and abnormal operating conditions
- Identify recurring failures and deteriorating performance
- Initiate inspections, investigations, and maintenance
- Update condition and risk assessments
- Assess achievement of levels of service
- Support renewal planning
- Comply with discharge consent reporting requirements
- Inform future investment decisions.

9.6 Asset Management Capability

Effective management of the stormwater activity depends on having sufficient people with the appropriate skills, knowledge, systems, and authority to operate assets, maintain regulatory compliance, manage risk, plan investment and deliver improvement programmes.

The WSBU delivers these functions through a combination of Water Services staff, other Council teams, contractors and specialist advisers. Current capability includes network operations and maintenance, in-house engineering services, asset management, compliance monitoring, customer response, and capital delivery. External providers supplement internal capability for specialist investigations, condition assessments, hydraulic modelling, design, construction, and technical support.

Operational capability is supported by experienced staff and established contractor arrangements. Network maintenance and fault responses are led and coordinated by the WSBU with contracted support. Specialist providers also support SCADA, environment compliance information, laboratory services and other technical functions.

Asset management capability is continuing to develop. Current limitations include reliance on the knowledge of key individuals, incomplete asset and condition information and limited system integration. The transition to TechOne provides an opportunity to improve asset information governance, data consistency, work and inspection records, and decision traceability.

The WSBU's approach is to progressively strengthen internal capability while continuing to use external expertise where specialist skills or additional delivery capacity are required. Improved systems, documented processes, defined responsibilities, and knowledge-management practices will also help reduce reliance on individual staff knowledge and support decisions.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED
Insert current governance, roles, contracts, system architecture, data lifecycle, asset-data standards, integration controls, reporting and review arrangements.

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10 Continuous Improvement

COMMERCE COMMISSION ID REFERENCE	
Primary clauses	C15
This chapter should demonstrate	Current / target maturity, assessment results, detailed improvement plan, innovation and next assessment.

10.1 Improvement Basis

Known gaps should be acknowledged and addressed through a committed improvement plan rather than overstating maturity. The improvement plan should include each action, benefits, indicators and timeline.

10.2 Asset Management Maturity Assessment

ICC's asset management maturity objective is to achieve and maintain an intermediate level of asset management practice across the WSBU. This reflects the complexity of water services assets, increasing regulatory expectations and the need for evidence based decision-making to support service delivery, risk management, and long term investment planning.

The most recent formal asset management maturity assessment available to the WSBU was undertaken in 2017 using the International Infrastructure Management Manual (IIMM) Asset Management Maturity Framework. The assessment was completed internally and evaluated key elements of asset management practice including service planning, lifecycle management, risk management, financial planning, and continuous improvement. The results are illustrated in Figure 10-1.

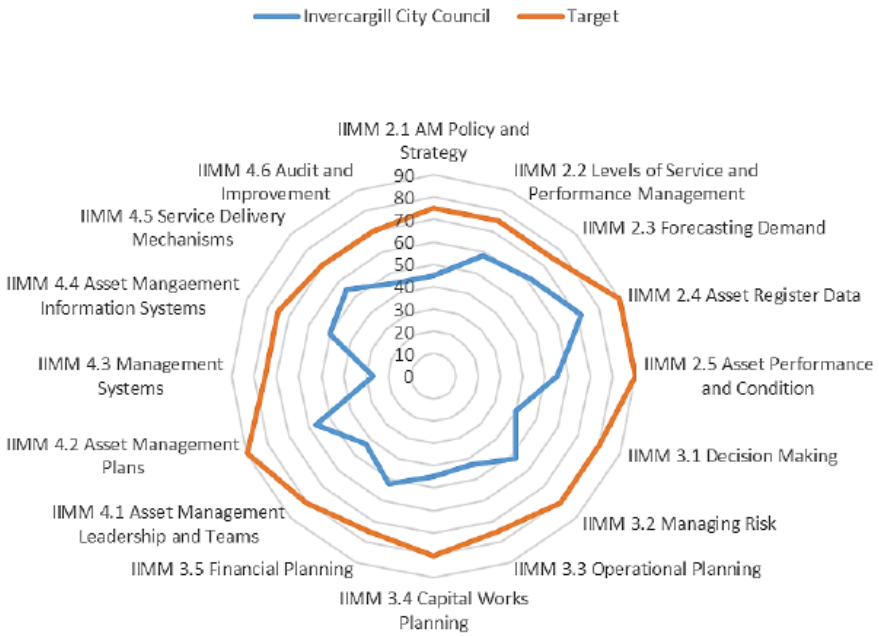


Figure 10-1: Asset Management Maturity Assessment Results (2017)

The assessment indicated that ICC's three waters activities were generally operating at an Intermediate level of maturity. An independent review of the 2020 Stormwater Asset Management Plan reached the same conclusion.

These findings support the Intermediate maturity, with a focus on addressing identified gaps and embedding continuous improvement practices across all three water services.

A comprehensive baseline maturity assessment, including recommendations and an improvement roadmap, is planned for early 2027 to establish a current view of asset management performance and capability. The assessment will establish a current view of asset management performance, identify priority improvement opportunities and support future updates of the Water Services Strategy, Strategic Asset Management Plan, Asset Management Plans and Investment Delivery Plan.

10.3 Priority Improvement Programme

The Asset Management Improvement Plan provides a structured approach for continually improving ICC's asset management practices, information, systems, and decision-making processes. Improvement actions have been identified through development of this AMP, previous asset management maturity assessments, Commerce Commission Information Disclosure requirements, risk and resilience assessments, asset information reviews, condition assessments, and operational experience.

Improvement actions are prioritised based on their contribution to service delivery, risk reduction, regulatory compliance, information quality, asset management maturity and investment decision-making. The WSBU recognises that not all improvements can be delivered simultaneously and will progressively implement improvements having regard to organisational capacity, affordability, and deliverability.

Key improvement themes for the stormwater activity are:

- Improve hydraulic modelling and capacity understanding
- Increasing confidence in buried-asset condition, performance, and renewal planning
- Strengthening asset criticality, risk and resilience assessments
- Improving asset management capability and decision traceability
- Enhancing regulatory readiness and reporting capability
- Improving resilience planning and climate-change preparedness.

The key priorities for the stormwater improvement plan are summarised in Table 10-1.

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Stormwater Asset Management Plan
10 Continuous Improvement

Table 10-1: Summary of Priority Stormwater Improvement Items

Improvement	Description	Asset Management Objective	Benefit	Timeframe
Develop a Buried Asset Condition Assessment Programme	Limited buried asset condition information requires the development of a structured condition assessment programme for water reticulation assets, including targeted investigations, inspections and condition grading.	Enable planned succession of assets	Improves confidence in renewal timing and reduces the risk of unexpected failures.	Ongoing
Hydraulic Model Development	There is no comprehensive stormwater model, and overland flow path mapping and flood risk understanding is incomplete. WSBU has purchased a stormwater modelling package and will progressively improve the understanding of flood risks.	Maintain safe, compliant and efficient water services	Improve the understanding of where flooding occurs and will inform a CAPEX and OPEX programme.	2026/2027
Climate Risk and Adaption Planning	No detailed climate risk assessment has been completed for any of the three waters activities. Therefore consequence of failure, exposure and vulnerabilities are not well understood. Assess the vulnerability of the various stormwater assets to drought, flooding, storm events, earthquake and climate change impacts. Use findings to prioritise resilience improvements and future investment planning.	Improve resilience to climate and natural hazards	Enable risk-based asset investment and evidence to support climate risk investments.	Unknown
Lateral Ownership	Wastewater and Stormwater laterals are currently considered private property up to the wastewater main. However, the WSBU does renew and rehabilitate wastewater laterals up to the property boundary when undertaking renewal work on wastewater mains.	Enable planned succession of assets	The water committee is currently considering ownership of lateral assets to the boundary. If laterals remain private ownership, the property owner will be responsible for replacement when there is a fault.	
Asset Management Capability Development	Strengthen asset management knowledge and practices across the WSBU by embedding whole of life asset costs, risk-based decision making and continuous improvement into O&M and planning.	Lift asset management maturity	Builds asset management capability and ownership, improving consistency and confidence in decision making.	
Asset Information Standards Alignment	Implement a staged approach to aligning asset data, hierarchies (parent, child and component assets), classifications and attributes with the 3WADS	Lift asset management maturity	Improves data quality, consistency and traceability for reporting, planning and investment decisions.	
Asset Class/Cohort Planning	Parent/child relationship. Complex assets include pump stations and treatment facilities, which have multiple individual component-level assets within them such as pipework, pumps, plant and equipment or telemetry equipment etc. and some component-level assets are missing from the asset data. It is intended to improve the data capture and links between these assets as part of the move to the new TechOne data system.	Lift asset management maturity	Improving asset data quality and visibility or these assets will provide operators better information to manage the existing system and will improve the ability to make appropriate planning decisions for these assets.	
Asset Management Maturity Assessment	Undertake a formal asset management maturity assessment and develop an improvement roadmap aligned with the Strategic Asset Management Plan.	Lift asset management maturity	Targeted improvement and governance of water services.	
Functional Descriptions and Operation and Maintenance (O&M) Manuals	Most pump stations and treatment facilities have functional descriptions available through the SCADA system, but a small number are missing and need to be created and uploaded to the system. These should also be updated and available digitally.	Maintain safe, compliant and efficient water services	Having accurate and accessible functional descriptions and O&M manuals help operators to manage the applicable sites particularly if they experience complex issues that need to be addressed.	Unknown
Risk and Emergency Arrangements	There is no comprehensive stormwater model, and overland flow path mapping and flood risk understanding is incomplete	Maintain safe, compliant and efficient water services	Improve forecast confidence and constraints identification.	
Fault and failure data analysis	Analyse 3 waters network asset data including condition information, customer requests and maintenance records to identify failure trends, high-risk assets and renewal priorities. Integrate findings into risk assessments and renewal planning.	Maintain safe, compliant and efficient water services	Controlled and resilient environment.	
CCTV Condition Assessments Expansion	There is limited coverage of the network for CCTV condition assessments. The programme of CCTV assessments needs to progress to increase network coverage and improve understanding of the condition of the network.	Maintain safe, compliant and efficient water services	A better understanding of the condition of the network will enable more targeted investment decisions so the areas most in need of rehabilitation can be remediated first.	Ongoing

Stormwater Asset Management Plan
10 Continuous Improvement

Improvement	Description	Asset Management Objective	Benefit	Timeframe
Lifecycle Planning Improvement	Develop improved deterioration modelling, intervention strategies and renewal forecasting methodologies across major asset classes.	Reduce risk from ageing and critical assets	A better understanding of the condition of the network will enable more targeted investment decisions so the areas most in need of rehabilitation can be remediated first	
Use Additional Asset Data Points to Inform Renewal Programme	Integrate asset condition data, criticality, performance and risk information to support evidence and risk based decisions including renewal programme prioritisation.	Sustain core infrastructure over the long term	Supports long-term stewardship of assets and improves confidence in lifecycle investment forecasts.	
Three Waters Critical Asset Framework Development	Criticality mapping is incomplete and evidence requires validation. The 2017 Project Max criticality framework is focused mainly on asset types and does not provide a complete view of critical water supply assets. Expand criticality framework/register to include source, treatment, storage, pumping and SCADA assets. Ensure it is aligned with ICC's Risk Management Framework	Sustain core infrastructure over the long term	Directs investment towards assets with the highest risk and service consequences.	

10.4 Innovation

The WSBU team attend conferences and keep up with industry good practice. There are no specific innovations in place for the stormwater activity.

10.5 Review and Continuous Improvement

The WSBU will review this Stormwater AMP annually to keep it aligned with current service performance, asset risks, regulatory requirements and investment priorities. Regular data-quality reviews and continued condition-assessment programmes will improve confidence in asset information, particularly for buried pipes and other assets where condition evidence is limited. Review findings will be used to update asset records, risk assessments, renewal priorities and future AMP content.

Progress against the stormwater Priority Improvement Programme will also be monitored through the annual review process. Improvement actions will be updated as better information becomes available and will be informed by the planned 2027 asset management maturity assessment and improvement roadmap. This will support the progressive improvement of asset management capability, decision traceability, resilience planning and regulatory readiness across the stormwater activity.

DRAFTING GAP / WSBU CONFIRMATION REQUIRED
Add owner, date identified, target date, cost, resources, capability requirements and progress evidence for each action.
Identify any innovations in the stormwater activity.

Appendices

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Appendix A Schedule C Working Compliance Map

Clause	Primary location
C6	Chapter 1: Introduction and Plan Context Chapter 2: Strategic and Regulatory Context
C7	Chapter 3: Consumers and Level of Service
C8	Chapter 4: Asset Portfolio, Condition and Performance
C9	Chapter 9: How We Manage the Activity
C10	Chapter 3: Consumers and Level of Service
C11	Chapter 5: Future Demand and Impact of Drivers Chapter 8: Asset Improvements and Enhancement Programme
C12	Chapter 7: Lifecycle Management
C13	Chapter 4: Asset Portfolio, Condition and Performance Chapter 7: Lifecycle Management
C14	Chapter 6: Risk and Resilience
C15	Chapter 10: Continuous Improvement

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Internal Affairs
Te Tari Taiwhenua

January 2026

LOCAL WATER DONE WELL

Guidance: Planning, reporting, and accountability for council water service providers

This guidance provides information about the planning, reporting, and accountability framework that applies to council water service providers under the Local Government (Water Services) Act 2025 (the Act).

It is part of a package of factsheets and guidance material relating to the Act and the associated Local Government (Water Services) (Repeals and Amendments) Act 2025.

Together, these Acts set out the enduring settings for the new water services system. They are the third tranche of legislation in the Government's three-stage process for implementing Local Water Done Well.

This guidance informs water service providers[1] that are councils about the planning, reporting, and accountability framework that applies to them under the Local Government (Water Services) Act 2025 (the Act), and the key features of this framework. In particular, it explains:

- The planning and reporting cycle that relates to councils' roles and responsibilities as water service providers under the Act.
- The purpose, content, and processes associated with each of the key planning and reporting documents for council water service providers – covering:
    - water services strategies;
    - water services annual budgets;
    - water services annual reports.
- Intersections with related areas of the Local Government Act 2002 (LGA02), including council significance and engagement policies.
- Timeframes and transitional provisions – including the timing of the first water services strategy and water services annual report.

[1] Water service providers is a term used in the Act that includes council providers and water organisations (including water services council-controlled organisations that became water organisations when the new legislation was enacted).

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This document applies where a council is a water service provider. A separate guidance document has been prepared to explain the planning, reporting, and accountability requirements that apply when a water organisation is the water service provider, and one or more councils are shareholders in the water organisation.

Responsibilities and accountability framework for council water service providers

Overview

Part 4 of the Act provides a comprehensive new planning and reporting framework for water services. This has been designed for the new water service delivery arrangements provided for in the Act, and to support and enable other aspects of the Act and new water services system. These include the objectives and financial principles that apply to water service providers (including financial 'ring-fencing' requirements), the range of service delivery models outlined below, and the new economic regulation regime for water services in the Commerce Act 1986.

In particular, Part 4 of the Act supports the accountability framework that applies to water service providers – either councils or water organisations. Accountabilities and responsibilities under the Act are as follows:

- Councils are directly accountable to communities, in accordance with the broader local government legislative framework.[2] Members are elected by these communities.
- Each council is responsible for ensuring water services are provided in its district in accordance with the Act, but may establish and/or become a shareholder in a water organisation and discharge its responsibility by entering into a transfer agreement with a water organisation. Where this occurs, the water organisation becomes the water service provider for the water services that have been transferred.
- Under the Act, councils also have a number of other ways for ensuring water services are provided, including:
    - providing water services directly (for example, through an in-house business unit of the council);
    - a contract with a person or body to provide water services on behalf of the council (see section 22);
    - a joint water service provider arrangement (see section 26).

[2] This Act is part of a broader suite of local government legislation, including the Local Government Act 2002, Local Government (Rating) Act 2002, Local Electoral Act 2001, and Local Government (Auckland Council) Act 2009.

- In all of these situations (except a transfer to a water organisation), the council is the water service provider under the Act, and is subject to all of the provisions that apply to water service providers.[3]

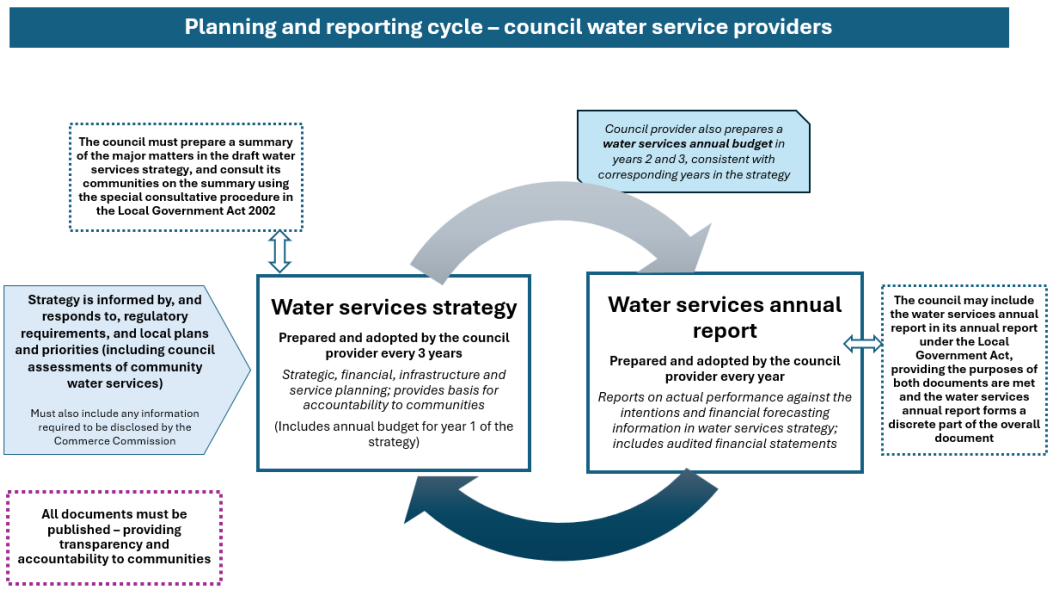
Councils continue to be subject to the general local government legislative framework (as water service providers or as shareholders in separate water organisations). Although the Act includes provisions that apply in addition to, or instead of, some of the usual provisions in the LGA02, this does not affect the basic premise of local government accountability to communities. Decisions are made in accordance with decision-making requirements and processes in the LGA02.

Overview of the planning and reporting cycle for council water service providers

Part 4 of the Act includes requirements for a several planning and reporting documents, for the water services that are the responsibility of a council water service provider. These documents provide a transparent basis for a continuous cycle of planning and performance for water service providers, and support accountability to their communities.

The Part 4 documents apply instead of there being extensive information about water services in council long-term plans, annual plans, infrastructure strategies, and annual reports under Part 6 of the LGA02.

The planning and reporting cycle for water services, and the main documents it comprises, are illustrated in the diagram below.



[3] As clarified in section 10 of the Act, if a council enters into a contract or joint water service provider arrangement, it continues to be responsible, as the water service provider under this Act, for ensuring the provision of the water services to which the contract or arrangement relates; and must ensure that the other party to the contract or arrangement performs and exercises all regulatory requirements associated with providing the water services to which the contract or arrangement relates.

The publication requirements for each document are set out in section 223 of the Act.

What happens if some – but not all – water services have been transferred to a water organisation?

In some situations, councils may have transferred some responsibilities to a water organisation, but have decided to retain other water services (such as stormwater services), or aspects of a water service (such as a small, rural water supply scheme). This means they continue to be the water service provider with respect to these services.

In most cases, the council[4] will need to prepare/adopt a water services strategy, water services annual budget, and water services annual report covering the services it has retained. This would apply if a council was providing stormwater services, for example (either directly or through a contract[5] for services with a water organisation or other third party).

However, these documents are not required if the council is only responsible for a "minor aspect" of a water service. (The other requirements and responsibilities in the Act continue to apply, though.)

Section 219 of the Act clarifies that a council that is responsible for providing only a minor aspect of a water service that is not connected to a water supply network, wastewater network, or stormwater network that is provided by another water service provider:

- need not prepare and adopt a water services strategy, a water services annual budget, or a water services annual report in respect of the minor aspect of the water service; but
- if it does not prepare and adopt all of those documents under Part 4 of this Act, the council must include information relevant to the minor aspect of the water service in its planning and reporting documents prepared under Part 6 of the LGA02, with appropriate modifications to reflect the minor nature of the aspect of the water service that it provides.

Examples of a minor aspect of a water service include wastewater services for a community facility, such as a campground, that is not connected to a wastewater network, and a water supply for a small number of rural homes that are not connected to a water supply network.

[4] Note that most of the references in the Act are to territorial authorities – but these also apply to regional councils where relevant (see section 43 of the Act for application and exceptions). In this guidance document, we have used the generic term 'council' for simplicity, but the Act is more specific.

[5] Instead of transferring responsibilities for stormwater services to a water organisation, a council may decide to enter into a contract with the organisation with respect to some or all of those services. If there is a contractual arrangement, the water organisation is not the "water service provider" and does not have the associated responsibilities or powers (such as the ability to charge consumers).

Water services strategies

Overview

Water services strategies are the core planning and accountability document for water service providers (councils and water organisations). For councils, they are equivalent to long-term plans and infrastructure strategies, with respect to all matters related to water services.

Council water service providers must prepare a water services strategy, and have a strategy in place at all times. Schedule 1 of the Act contains transitional arrangements for the timing of the first strategies. Further details are included at the end of this document.

A water services strategy:

- must be adopted before the start of the first financial year to which it relates;
- comes into force on the first day of the first financial year to which the strategy relates;
- continues in force until the end of the third consecutive financial year to which it relates; and
- must relate to a period of at least 10 consecutive financial years or such other period as is specified in Part 4 or Schedule 3 of the Act.

Each strategy incorporates several components – strategic, operational, and financial – and presents this information in a single, integrated document. It also covers multiple time horizons, with:

- pricing/charging and budgetary information for a three-year period;
- financial forecasting information over a 10-year period;
- long-range infrastructure and investment information, over at least 30 years.

Effect of adopting a water services strategy

The Act clarifies that the effect of a water services strategy adopted by a water service provider is to provide a formal and public statement of the provider's intentions in relation to the matters covered by the strategy.

However, a resolution to adopt a water strategy does not constitute a decision to act on any specific matter included in the strategy. No person is entitled to require a water service provider to implement the provisions of a strategy.

This approach is similar to the approach taken in the LGA02, regarding the effect of adopting a long-term plan.

Under section 233 of the Act, a water service provider may make a decision that is inconsistent with the contents of its water services strategy.

Inputs to the water services strategy – assessments of community water services

As with council long-term plans, the water services strategies will be informed by the wider regulatory landscape (including a range of other legislation, and national, regional, and district level plans that councils will be familiar with), asset management planning, and local priorities. They will also be informed by a couple of specific requirements in this Act.

Under section 69 of the Act, each council must inform itself about the access that each community in its district has to drinking water services by conducting an assessment of drinking water services.[6]

These assessments must consider the drinking water services[7] available to communities throughout the council's district, including private drinking water supplies and community-owned or community-operated drinking water supplies – but not including domestic self-suppliers.[8]

In addition, under section 71 of the Act, each council must assess the provision in its district of wastewater services and stormwater services. These assessments would cover the services available to communities throughout the district – but do not include assessing individual properties.

Sections 70 and 71(7) set out the obligations that apply to councils in relation to the completed assessments. These include that a council must consider the findings and implications of the assessments in relation to its water services strategy.[9]

The assessments must be undertaken every three years, and would be completed at least a year before the water services strategy is adopted. The intention is that the findings can inform the strategy – with respect to considerations about the need for new or improved services, for example.

The first assessment of drinking water services must be completed by 1 July 2026 – so should be able to inform the first strategies.[10] The first assessment of wastewater and stormwater services must be completed by 1 July 2029.

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[6] Section 69 includes a comprehensive list of the matters to be covered in each assessment.

[7] Section 68 of the Act defines drinking water services as "the supply of drinking water to communities to the point of supply of each dwelling house and commercial premises to which drinking water is supplied". This is different from the definition of water supply services that apply throughout the rest of this Act, and is based on the definition and scope of the assessments of drinking water services that were previously in the LGA02.

[8] Section 68 clarifies that domestic self-supplier has the same meaning as in section 10 of the Water Services Act 2021.

[9] If a water organisation is the water service provider, council shareholders must consider the findings from the assessments in relation to the organisation's statement of expectations – which would inform the organisation's water services strategy.

[10] This is consistent with the date that had previously been in the LGA02.

The requirements for these assessments are not new, having previously been included in the LGA02 for many years. The requirements to undertake the assessments apply specifically to territorial authorities, not to water organisations (though they may be undertaken on an authority's behalf by another appropriate organisation). This is because territorial authorities are responsible for, and accountable to, all the communities across their districts – regardless of any role they (or a water organisation) have as a water service provider. Territorial authorities also have a broader duty to improve, promote, and protect public health within their districts under the Health Act 1956, and must consider the assessments in this context.

Process for preparing water services strategies

Water services strategies are prepared in relation to the water services that a council provides:

- directly; or
- through a contract with a third party; or
- through a joint water service provider arrangement; or
- through another type of arrangement under section 10(1)(f) of the Act.

Part 4 of the Act includes requirements relating to the processes for preparing water services strategies. There are different processes for water service providers that are councils and water organisations. These differences reflect the accountability arrangements that apply – with councils being directly accountable to communities, and water organisations being accountable to their shareholders (who are accountable to communities and consumers).

Section 235 of the Act describes the statutory processes to be followed by a council water service provider. These processes are similar to – though not identical to – the long-term plan processes that will be familiar to councils (and most of the surrounding business planning, processes, and inputs are also likely to be very similar).

A council water service provider must:

- prepare a draft water services strategy; and
- prepare a summary of the major matters in the draft strategy; and
- consult its communities on the summary, using the special consultative procedure under the LGA02 (see sections 83, 83AA, and 83A of that Act).

The summary document must:

- identify and explain the important issues and choices facing the council in relation to providing water services, and the consequences of those choices; and
- include information about the likely consequences of implementing the water services strategy on:
    - charges for providing water services;
    - rates collected under the Local Government (Rating) Act 2002;

- the debt of the council;
- the level of service provided by the council; and
- the council's ability to provide for urban development and housing in its district.

When using the special consultative procedure:

- each reference to a statement of proposal must be read as a reference to a draft water services strategy; and
- each reference to a summary of the information must be read as a reference to a summary of the draft strategy.

Consulting in parallel with a long-term plan

The Act recognises that a council water service provider may wish to consult its communities on the summary of the water services strategy at the same time as consulting on its long-term plan under the LGA02, or as part of any other combined or concurrent consultation under section 83A of the LGA02.

While this is permitted, the Act specifies that:

- the summary of the strategy must form a discrete part of the consultation material; and
- the approach to consultation, and any consultation material used, must be consistent with the purpose of the water services strategy in section 232 of the Act.

It is not intended that the summary of the strategy would be integrated into the long-term plan consultation document required under the LGA02, or subject to the requirements that apply to that document (including the detailed content and audit-related requirements that apply to long-term plan consultation documents).

Consultation on structural changes to the provision of water services, as part of the water services strategy

Sections 27 to 33 of the Act cover situations where a council is considering making a structural change to the provision of water services in its district, and the consultation and other obligations that apply.

Section 235 of the Act recognises that a council may wish to include a proposal to change how water services are provided in its district in its water services strategy, and to consult on that proposal as part of consultation on the strategy. If this does occur, section 235(5) specifies that:

- section 32 does not apply; and
- the information required to be made publicly available under section 32(1) must be included in a summary of the water services strategy prepared under subsection 235(1)(a).

Consultation requirements when amending a water services strategy – and links with LGA02 documents and processes

Under section 237 of the Act, a council water service provider may amend its water services strategy at any time.[11]

If the amendment is significant, the council must consult on a summary of the proposed amendment using the special consultative procedure under the LGA02. The council's significance and engagement policy may help to determine whether an amendment is significant. (Links with these policies is covered in further detail later in this guidance.)

A council must comply with the requirements for consultation set out in section 235 of the Act when proposing to amend a water services strategy – and, for these purposes, all references in section 235 to a draft water services strategy must be read as referring to the draft amendment.

Section 237 also recognises situations where a council may amend its water services strategy, and the amendment is relevant to its long-term plan. In these situations, the council may consequentially amend the long-term plan, but need not:

- use the special consultative procedure when amending the long-term plan (despite section 93(5) of the LGA02);
- comply with sections 93A and 93D of the LGA02 when amending the long-term plan;
- have the amendments to the long-term plan audited under section 94 of the LGA02.

Purpose of the water services strategy

The Act sets out the purpose of a water services strategy.[12] For a water service provider that is a council, the purpose is to:

- state publicly, for the period to which the strategy relates, the water services activities that it intends to carry out to achieve the objectives specified in section 17 of the Act and any other outcomes;
- provide a basis for accountability to the communities in its district for its performance in providing water services.

Part of the purpose is also to present, in one document, information that relates to a water service provider's provision of water services throughout its service area – to provide transparency about, and support decision making in relation to:

- the costs of, and investment associated with, providing water services;
- the provider's proposed charges, levels of service, and performance measures;
- financial forecasting; and
- long-term infrastructure and investment plans.

[11] This is similar to the ability to amend a long-term plan at any time, under the LGA02.

[12] Section 232 of the Act.

These provisions reflect a key part of the intent for water services strategies – that there be a single document for a provider's service area, which brings together all of the above components. However, a strategy may still include different information or proposals in relation to different parts of the service area.

Content of a water services strategy

The content of water services strategies is largely the same for all water service providers, but there are a few additional requirements that apply where the provider is a water organisation.

For council providers, a water services strategy must contain:

- the information specified in Schedule 3 of the Act (see below); and
- any information that they are required to publicly disclose in a water services strategy under subpart 4 of Part 4 of the Commerce Act 1986.

Information included in a water services strategy must be consistent with any applicable requirements or determinations issued by the Commerce Commission under Part 4 of the Commerce Act 1986.

All information that is included in a water services strategy must be prepared in accordance with generally accepted accounting practice, if that information is of a form or nature for which generally accepted accounting practice has developed standards. However, this does not apply:

- if Part 4 of the Commerce Act 1986 makes alternative requirements; or
- to a funding impact statement that is included in the strategy (see clause 5(2)(e) of Schedule 3).[13]

The general intent behind the legislative design of the content requirements of the strategy was for there to be consistency with similar documents required under the LGA02, where relevant and useful in the new water-related context. Many of the requirements are similar to and/or based on provisions in the LGA02, but have been modified to be appropriate for the new legislation and water services system.

One similarity is that a lot of the information in a water services strategy is broken down into groups of water services activities.[14] This provides transparency about, and supports accountability for, each of the groups of activities and the outcomes the council water service provider expects to achieve by providing the group of activities. For council providers, these outcomes would include any community outcomes relevant to providing water services.

[13] This is consistent with the approach that is also taken to the funding impact statements included in council documents under the LGA02.

[14] See clause 1 of Schedule 3 of the Act.

A "group of water services activities" means all of the water services activities provided by, or on behalf of, a water service provider as part of providing one of the following (as applicable to a provider's specific responsibilities):

- water supply services;
- wastewater services;
- stormwater services.[15]

Strategic matters[16]

For a council water service provider, the water services strategy must include:

- the provider's strategic priorities;
- the objectives, outcomes, and expectations that apply to the provider, including the objectives specified in section 17 of the Act;
- an overview of regulatory requirements;
- an explanation of how the provider intends to achieve or meet the matters referred to above (that is, the strategic priorities, objectives, outcomes and expectations, and regulatory requirements);
- the factors that the provider expects will have a significant impact on the provider, including:
    - any expected changes to the population and to the use of land in its service area, and the expected capital and operating costs required to address the expected changes;
    - any expected investment needed to meet objectives relating to housing growth and urban development;
- any other significant issues affecting the provider's ability to maintain existing levels of service to consumers and to meet additional demands for water services;
- information relating to a territorial authority's resource management planning and land use planning in the service area;
- a description of any stormwater service zones in the provider's service area and any proposals to change them.

The information referred to above must cover the period of **at least 10 consecutive financial years** to which the water services strategy relates (but not broken down individually for each financial year), or such other period as is specified in Schedule 3 or Part 4 of the Act.

In addition, a water services strategy must identify, for a period of **at least 30 consecutive financial years** any expected significant water infrastructure issues for the provider over that period, the principal options for managing any identified issues, and the implications of these options.

[15] Each of these services are defined in section 4 of the Act.

[16] Clause 2 of Schedule 3 of the Act.

Operational matters and performance information

Clause 3 of Schedule 3 of the Act sets out the content requirements for what are referred to as operational matters. This covers two main topics – proposed activities and levels of service information (including performance measures and targets).

This information must be included for each group of water services activities, and for the following time periods:

- in detail for each of the first three financial years covered by the strategy; and
- in outline for each of the subsequent financial years covered by the strategy.

The strategy must include information on the nature and scope of the main water services activities the water service provider proposes to undertake, and any significant work the provider proposes to undertake relating to those activities.

The strategy must also contain a statement of the provider's intended levels of service provision, which must include:

- the performance measures that apply to the group of water services activities, including as applicable:
    - the measures that the provider considers will enable the public to assess the level of service for major aspects of the group of water services activities; and
    - any intended levels of service that the provider is required to publicly disclose in a water services strategy in accordance with a section 52P determination under the Commerce Act 1986; and
    - if no similar requirements have been set under the Commerce Act (above), any performance measures specified in a rule made under section 261B of the LGA02 that are relevant to a group of water services activities; and
- the performance targets for each performance measure (referred to above); and
- any relevant quality standards or performance requirements in a section 52P determination under the Commerce Act 1986; and
- any intended changes to the level of service that the provider provided in the financial year before the first financial year covered by the water services strategy and the reasons for the changes; and
- the reasons for any material change to the cost of water services.

Regarding the information on performance measures, the intent is that this will incorporate any requirements set by the Commerce Commission (through what is referred to as a section 52P determination). However, if the Commission has not set requirements, then relevant measures in the "non-financial performance measures rules" made under the LGA02 would be included in the strategy. Over time, these rules are most likely to continue to be relevant for stormwater services, which are not regulated under the Commerce Act.

Financial matters[17]

Forecast financial statements

A water services strategy must include, for each year to which the strategy relates, a complete set of forecast financial statements for the provider that is prepared as if the council were a separate water service provider. This means that the forecast financial statements for a council as a water service provider are separate from the rest of the council's operations.

In addition, the strategy must include, for each group of water services activities, each of the following statements for each financial year to which the water services strategy relates:

- a forecast statement of comprehensive revenue and expenses;
- a forecast statement of cash flow;
- a forecast statement of financial position.

All of the above provisions (as well as similar content requirements for the water services annual report, described later) help to support and demonstrate the application of the financial principles in section 18 of the Act, and the intent that water services would be 'ring-fenced'.

The strategy must also include the forecast financial statements that were prepared for the financial year immediately before the first financial year to which the strategy relates (except in situations where this is the first strategy). The previous year's financial statements must be presented in a way that allows the public to compare those statements with the forecast financial statements covered by the strategy.

Information on funding, revenue, and pricing

A water services strategy must contain the water service provider's intended approach to funding, revenue, and pricing. This must include – for each group of water services activities – detailed information on the following for the first three financial years to which the strategy relates:

- the intended approach to pricing the water services;
- the intended approach to charging consumers; and
- the intended sources of funding and revenue.

This information must be accompanied by:

- the intended schedule of prices and charges; and
- the methodologies that support the provider's prices and charges.

[17] Clause 5 of Schedule 3 of the Act.

The information relating to the intended sources of funding and revenue must include:

- the reasons for selecting each intended source of funding and revenue;
- an indication of the amount or level of funding or revenue expected from each intended source;
- an explanation of the intended funding mechanism for each intended source; and
- the reasons for selecting each intended funding mechanism.

The intended approach to funding, revenue, and pricing must be consistent with any requirements set by the Commerce Commission under Part 4 of the Commerce Act 1986.

Capital and operating expenditure

A water services strategy must include – for each group of water services activities – the amount of capital expenditure and operating expenditure that the provider has budgeted, in each financial year to which the water services strategy relates, for the purposes of:

- improving the level of service;
- meeting additional demand for the group of water services activities; and
- replacing existing assets in the water services infrastructure.

If capital expenditure is budgeted for two or all of the purposes in described above, the expenditure may be treated as if it were budgeted solely in relation to the primary purpose of the expenditure.

Funding impact statements

The strategy must include – for each group of water services activities – a funding impact statement for each financial year to which the strategy relates.

A funding impact statement must be in the prescribed form, and identify:

- the sources of funding to be used by the water service provider;
- the amount of funds expected to be produced from each source; and
- how the funds are to be applied.

The forms for the funding impact statement will be prescribed in regulations. These will be based on similar forms for groups of activities funding impact statements in the Local Government (Financial Reporting and Prudence) Regulations 2014 (which will cease to apply to water services groups of activities once the new regulations are in place).

Water services infrastructure[18]

A water services strategy must outline the most likely scenario for managing the water service provider's water services infrastructure assets over a period of at least 30 years and, in that context, must:

- include estimates of the projected capital and operating expenditure associated with managing those assets:
    - in each of the first 10 financial years covered by the strategy; and
    - in each subsequent period of 5 financial years covered by the strategy; and
- identify, for each period described above:
    - any significant decisions about capital expenditure the provider expects it will be required to make;
    - when the provider expects it will be required to make those decisions;
    - for each decision, the principal options the provider expects it will have to consider;
    - the approximate scale or extent of the costs associated with each decision.

Links with council infrastructure strategies under the LGA02

The above content of the water services strategy (as well as information on some of the assumptions described below) is similar to the information and time periods that were previously covered in council infrastructure strategies under the LGA02.

Information on water services infrastructure that is required to be included in a water services strategy cannot be included in council infrastructure strategies (under section 101B of the LGA02). However, a council infrastructure strategy may include general information on water services infrastructure if that information is part of, or desirable to support, an integrated approach to infrastructure planning in the council's district.

Information on forecasting assumptions and risks[19]

A water services strategy must, in relation to any forecast financial statements and financial estimates included in the strategy:

- identify all the significant forecasting assumptions and risks underlying the financial estimates, and (without limiting this) identify the following assumptions on which the financial estimates are based:
    - assumptions concerning the life cycle of significant water services infrastructure assets;
    - assumptions concerning sources of funds for the future replacement of significant water services infrastructure assets;

[18] Clause 7 of Schedule 3 of the Act.

[19] Clause 8 of Schedule 3 of the Act.

- in relation to the scenario referred to in clause 7 of Schedule 3, the assumptions about growth or decline in the demand for relevant services, and increases or decreases in relevant levels of service;

- in any case where significant forecasting assumptions involve a high level of uncertainty, identify the nature of that uncertainty, and include an outline of the potential effects of that uncertainty on the financial estimates provided.

Consumer feedback[20]

A water services strategy must include information about how the water service provider proposes to obtain feedback from consumers in relation to the water services that the water service provider provides to them. The results are then included in the water services annual report (see below).

As the wording of the provision indicates, the intent is that a council provider would have mechanisms and processes for gathering consumer feedback on the services they receive (in addition to complaints data) – and for addressing any significant matters raised in the feedback.

This is about understanding the consumer experience – not engagement with consumers or communities about the proposals in a water services strategy or other matters.

Audit of water services strategies

Under section 239 of the Act, a water service provider:

- **must** request a report from the Auditor-General on the provider's water services strategy if the Secretary for Local Government requires the provider to do so (by written notice);
- **may** request a report from the Auditor-General on the provider's water services strategy if the provider decides, on its volition, to do so.

If a water service provider requests a report from the Auditor-General, it must do so at least 12 months before the date by which the provider must adopt the water services strategy.

A report from the Auditor-General provided under this section:

- must comment on:
  - whether the strategy gives effect to the purpose of a water services strategy (see section 232); and
  - the quality of the information and assumptions underlying the forecast information provided in the strategy; but
- must not comment on the merits of the policy content of the strategy.

[20] Clause 4 of Schedule 3 of the Act.

If the Auditor-General provides a report to a water service provider, the provider must include the report in its water services strategy.

Water services annual budget[21]

For the first financial year of a water services strategy, the following documents must be treated as being the water service provider's water services annual budget adopted for that year:

- the forecast financial statements included in the provider's water services strategy under clause 5(1) and (2)(d) of Schedule 3:
- the funding impact statement included in the provider's water services strategy under clause 5(2)(e) and (9) of Schedule 3.

For each financial year that is not the first financial year to which the provider's water services strategy relates, a water service provider must:

- prepare a water services annual budget; and
- adopt that annual budget before the start of the financial year to which the budget relates; and
- publish the annual budget in accordance with section 223 of the Act.

As clarified in section 242 of the Act, water service providers are not required to consult on a water services annual budget.

Contents of water services annual budget

A water services annual budget must, for the relevant financial year, contain:

- the water service provider's proposed budget, including:
    - for a council provider, any rates proposed to be set under the Local Government (Rating) Act 2002;
    - fees and charges;
    - financial statements (as described in clause 5(1) and (2)(d)(i) to (iii) of Schedule 3); and
    - a funding impact statement (as described in clause 5(2)(e) and (9) of Schedule 3);
- any information that the water service provider is required to publicly disclose in the water services annual budget under Part 4 of the Commerce Act 1986; and
- an explanation of any significant variation between the information in the annual budget and the corresponding information in the water services strategy for the financial year.

[21] This part of this document relates to sections 240 to 242 of the Act.

The annual budget must be consistent with the provider's intended approach to funding, revenue, and pricing for the financial year, as set out in its water services strategy (see clause 5(2)(a) of Schedule 3 of the Act).

Information included in a water services annual budget must be consistent with any applicable requirements or determinations issued by the Commerce Commission under Part 4 of the Commerce Act 1986.

All information that is included in a water services annual budget must be prepared in accordance with generally accepted accounting practice if that information is of a form or nature for which generally accepted accounting practice has developed standards. However, this requirement does not apply:

- if Part 4 of the Commerce Act 1986 makes alternative requirements; or
- to a funding impact statement that is included in the budget (see clause 5(2)(e) and (9) of Schedule 3).

Water services annual report[22]

A council water service provider must, in relation to each financial year, prepare and adopt a water services annual report that reports on the council's water services operations during that financial year. As the statutory purpose of the report indicates, this is an important accountability document for the council and its communities.

The council provider must adopt the water services annual report, by resolution, no later than **four months** after the end of the financial year to which it relates.

Section 245(4) of the Act clarifies that a council provider may include its water services annual report in its annual report prepared and adopted under section 98 of the LGA02 if, in doing so:

- the purposes of both annual reports are met; and
- the content relating to providing water services forms a discrete part of the annual report.

Purpose of the water services annual report

The purpose of a council water service provider's water services annual report is:

- to compare the council's intended activities and intended performance levels for providing water services, as set out in its water services strategy for the financial year, with the actual activities and performance levels;
- to provide transparency of the council's activities, performance, and decisions in relation to providing water services; and

[22] This section of this document relates to sections 243, 246 and 247, and Schedule 4 of the Act.

- to promote the council's accountability to its communities in relation to the decisions it has made in the financial year that relate to providing water services.

Content of the water services annual report

A water services annual report for a financial year must contain:

- the information specified in Schedule 4 of the Act (see below);
- any information that the water service provider is required to publicly disclose in a water services annual report under subpart 4 of Part 4 of the Commerce Act 1986; and
- a report by the Auditor-General on:
    - the financial statements required by clause 2(1)(b) of Schedule 4;
    - the statement relating to budgeted and actual capital expenditure required by clause 4 of Schedule 4;
    - the funding impact statement required by clause 5 of Schedule 4; and
    - each statement of service required by clause 7 of Schedule 4.

Information included in a water services annual report must be consistent with any applicable requirements or determinations issued by the Commerce Commission under Part 4 of the Commerce Act 1986.

All information that is included in a water services annual report must be prepared in accordance with generally accepted accounting practice, if that information is of a form or nature for which generally accepted accounting practice has developed standards. However, this requirement does not apply:

- if Part 4 of the Commerce Act 1986 makes alternative requirements; or
- to a funding impact statement included in the annual report.

General information[23]

A water services annual report must contain information that will enable a person to make an informed assessment of the water service provider's operations and performance, including information that:

- compares the provider's intended activities and intended performance levels, as set out in the provider's water services strategy for the financial year, with the actual activities and performance levels; and
- explains any material differences between the provider's performance and the provider's water services strategy.

[23] Clause 1 of Schedule 4 of the Act.

A water services annual report must, in relation to each group of water services activities of the water service provider:

- identify the water services activities within the group of water services activities;
- identify the outcomes and objectives to which the group of water services activities primarily contributes (as referred to in the provider's water services strategy); and
- report the results of any measurement undertaken during the financial year of progress towards achieving those outcomes and objectives.

Financial statements[24]

A water services annual report must include the following information for the relevant financial year:

- a complete set of audited financial statements for the provider that is prepared as if the council were a separate water service provider;[25]
- for each group of water services activities:
  - a statement of comprehensive revenue and expense;
  - a statement of cash flows;
  - a statement of financial position;[26] and
- any other prescribed information (which must be in the prescribed form).

This information must be presented in a way that allows a person to compare the financial statements with the forecast financial statements for the financial year covered by the report (which were included in the provider's water services strategy or water services annual budget).

The report must also include the financial statements that were prepared for the financial year immediately preceding the first financial year to which the report relates.

Information on capital expenditure[27]

A water services annual report must include, for each group of water services activities, an audited statement that compares:

- the capital expenditure budgeted for the provider (as set out in the provider's water services strategy for the financial year); with
- the capital expenditure that the provider actually spent in the financial year.

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[24] Clause 2 of Schedule 4 of the Act.

[25] As noted earlier in this document in relation to the forecast financial statements contained in the water services strategy, this means that the financial statements for a council water service provider are separate from the rest of the council's operations.

[26] As a transitional measure, similar statements must be included in council annual reports under the LGA02, for the 2026/27 financial year – to help support the intent for 'ring-fencing' of each water service, and the financial principles in section 18 of the Act. These requirements are explained later in this guidance document.

[27] Clause 4 of Schedule 4 of the Act.

The statement must show separately the provider's budgeted expenditure, and the provider's actual expenditure:

- to meet any additional demand for a group of water services activities;
- to improve the level of service in relation to a group of water services activities; and
- to replace any assets that are part of the water services infrastructure.

If capital expenditure is budgeted for two or all of the purposes referred to above, the expenditure may be treated as if it were budgeted solely in relation to the primary purpose of the expenditure.

Funding impact statement[28]

A water services annual report must include, for each group of water services activities, an audited funding impact statement that:

- identifies the water service provider's funds produced by each source of funding;
- specifies how those funds were applied; and
- compares the information provided above with information included in the water service provider's water services strategy.

The funding impact statement must be in the prescribed form. As noted above in relation to the water services strategy, the forms for funding impact statements will be prescribed in regulations.

Statement of service – information on levels of service[29]

A water services annual report must include, for each group of water services activities, an audited statement of service that:

- compares the actual level of service provided in relation to each group of water services activities with the intended service level;
- specifies whether any intended changes to the service levels were achieved; and
- if there is a significant difference between the intended service level and the service level that was achieved, specifies the reasons for that difference.

Results of consumer feedback[30]

A water services annual report must include information relating to:

- the results of any feedback sought from the water service provider's consumers in relation to the water services provided to them, as referred to in the provider's water services strategy (see clause 4 of Schedule 3); and

[28] Clause 5 of Schedule 4 of the Act.

[29] Clause 7 of Schedule 4 of the Act.

[30] Clause 9 of Schedule 4 of the Act.

- how the provider addressed, or proposes to address, any significant matters raised in the feedback.

Insurance of assets[31]

A water services annual report must include the following information in relation to the water service provider:

- the total value of the assets in the water services infrastructure that are owned by the water service provider and that are insured;
- the maximum total amount for which those assets are insured;
- the total value of the assets in the water services infrastructure that are owned by the water service provider, and covered by a financial risk-sharing arrangement;
- the maximum total amount available to the water service provider under those risk-sharing arrangements;
- the total value of the assets in the water services infrastructure that are owned by the water service provider, and self-insured;
- the value of any fund that the water service provider maintains for the purpose of self-insuring those assets.

Statement of compliance[32]

A water services annual report must include a statement that all statutory requirements in relation to the water services annual report have been complied with.

The statement of compliance must be signed by the mayor and the chief executive of the council.

Links with council significance and engagement policies[33]

Under section 34 of the Act, a council must amend its significance and engagement policy (adopted under section 76AA of the LGA02) to suit the council's role, and any changes to its role, as:

- a water service provider; or
- a shareholder in a water organisation.

There are a number of aspects of the Act that are relevant to council significance and engagement policies. Where a council is a water service provider, its policy will need to be updated to cover these matters.

[31] Clause 6 of Schedule 4 of the Act.

[32] Clause 8 of Schedule 4 of the Act.

[33] Sections 34 to 38 of the Act, and section 76AA of the LGA02.

As noted earlier in this document, the significance and engagement policy may help a council water service provider to determine whether an amendment to its water services strategy is significant and warrants consultation.[34]

Under section 31 of the Act, a council must use its significance and engagement policy to help determine:

- whether an amendment to a change proposal is significant for the purposes of subsection 31(1)(b)(i);
- the significance of a change proposal for the purposes of subsection 31(3)(b);
- if the council has determined a change proposal to be significant under the policy, matters of engagement that support consultation requirements under this section and section 32; and
- for the purposes of section 28(1), whether:
    - an asset is a strategic water services asset; and
    - a proposed change to the level of service provided is significant.

In addition, a council's significance and engagement policy is relevant to considerations about whether:

- a proposed contract is a significant contract under section 24 of the Act;
- a proposed joint water service provider arrangement is a significant arrangement under section 27 of the Act.

The significance and engagement policy must address all matters necessary for determining whether a proposed contract or joint water service provider arrangement are significant, and how to undertake engagement in a way that is consistent with sections 31 and 32 of the Act.

With regard to contracts, the policy must contain all criteria needed for determining whether a proposed contract is a significant contract, and those criteria must include:

- whether the proposed contract is of high value relative to the revenue that the provider receives from providing the water service to which the contract relates;
- whether the proposed contract will create a public-private partnership;
- all matters that are essential to the provider's ability to meet its obligations under the Act in relation to the water service to which the contract relates;
- any relevant thresholds (for example, the value of the contract).

[34] Section 237 of the Act.

Timeframes and transitional arrangements

The provisions in the Act commenced on the day after Royal assent – and all of the obligations and requirements applied to council water service providers from that point (including the objectives and financial principles in sections 17 and 18 of the Act). However, this does not mean the new documents in Part 4 had to be prepared immediately.

As outlined below, transitional provisions in **Schedule 1 of the Act** set out the dates associated with the first water services strategy and water services annual report. These provisions apply to existing water service providers – that is, councils, Watercare, and any other CCOs that automatically became water service providers following enactment. (There are separate provisions in Part 4 for the first documents of any new water organisations established after the Act commences.)

Transitional provisions have also been inserted into **Part 10 of Schedule 1AA of the LGA02** to deal with the interactions with certain LGA02 documents during the interim period. For councils that automatically became water service providers under the new Act, these provisions mean:

- the consequential amendments to sections 93, 95, 101B, and Schedule 10 of the LGA02[35] do not apply to until they prepare/adopt their first water services strategy under the Local Government (Water Services) Act;
- council annual reports for the 2026/27 financial year will need to include specified financial statements for water services activities (described further below).

Timing of first water services strategy and annual report

Schedule 1 of the Act includes transitional arrangements that set out the timing of water service providers' first water services strategy and first water services annual report.

The transitional provisions apply to all council water service providers, and any water organisations that existed before the enactment of the Act in August 2025 (Watercare and any other former water services CCOs).

Under the provisions in Schedule 1, each water service provider must prepare and adopt its **first water services strategy** (under Part 4 of the Act) **no later than 30 June 2027** – but there is flexibility to accommodate situations where the provider wants the strategy to commence earlier.

The first strategy must come into force on the earlier of:

- 1 July 2027;
- a date determined by the water service provider when it adopts the strategy.

[35] These amendments reflect that most of the information on water services that had previously been included in council long-term plans, annual plans, and infrastructure strategies under the LGA02 are included in the water services strategy instead – and are intended to help manage the intersections between the two pieces of legislation.

Regardless of the commencement date of the first strategy, it must continue in force until 30 June 2030. This puts the timing of all providers' subsequent strategies on the same cycle – and aligns with council long-term planning cycles under the LGA02.

The **first water services annual report** corresponds with the first water services strategy.

If a water service provider's first water services strategy comes into force on or before 31 December 2026, the provider must prepare its first water services annual report for the period:

- starting on the date on which the water services strategy comes into force; and
- ending on 30 June 2027.

If a water service provider's first water services strategy comes into force on or after 1 January 2027, the provider must prepare its first water services annual report for the period:

- starting on the date on which the water services strategy comes into force; and
- ending on 30 June 2028.

Transitional provisions relating to financial statements – information to be included in council annual reports for 2026/27

As noted earlier, transitional requirements for "ringfenced" financial statements on water services apply to council annual reports adopted under section 98 of the LGA02 for the financial year ending on 30 June 2027.

These new requirements are contained in **clause 60 of Schedule 1AA of the LGA02**. They mean that, in addition to the information required by Part 3 of Schedule 10 of the LGA02, the annual report must include:

- a statement of comprehensive revenue and expense;
- a statement of cash flows; and
- a statement of financial position.

These statements must be included separately for each group of water services activities provided by the council, and aggregated for all water services provided by the council.

These transitional requirements apply to all council water service providers for the 2026/27 annual report, except where:

- a council is preparing a water services annual report for the period ending on 30 June 2027 under clause 6(2) of Schedule 1 of the Local Government (Water Services) Act – because the council decided to move to the new planning and reporting framework for water services in that Act ahead of the statutory deadline;[36] or
- they are not relevant because a council is not the water service provider for any water services for any part of the 2026/27 financial year. This could occur where a council has established a water organisation and transferred responsibilities for providing water services to that organisation – and the water organisation has a water services strategy and water services annual report for the 2026/27 financial year under Part 4 of the Local Government (Water Services) Act.

Further information

The Local Government (Water Services) Act 2025 and Local Government (Water Services) (Repeals and Amendments) Act 2025 are available at www.legislation.govt.nz.

For further information about Local Water Done Well, including guidance and information for councils, visit www.dia.govt.nz/Water-Services-Policy-and-Legislation

Questions? Contact wsdp@dia.govt.nz

[36] Clauses 5 and 6 of Schedule 1 of the Act provide for the timing of the first water services strategy and first water services annual report. The first strategy must be adopted by 30 June 2027 – to come into force on 1 July 2027. However, it may come into force earlier. If it does, the water services annual report (or reports) must cover the earlier periods.