



NOTICE OF MEETING

Notice is hereby given that Hearings for Water Backflow Prevention to be held in the Council Chamber, First Floor, Civic Theatre, 88 Tay Street, Invercargill on Tuesday 5 November 2024 at 1.00 pm

Cr R I D Bond
Cr T Campbell
Cr G M Dermody
Mrs P Coote - Kaikaunihera Māori - Awarua

MICHAEL DAY
CHIEF EXECUTIVE

Hearings for Water Backflow Prevention

05 November 2024 01:00 PM

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BACKFLOW PREVENTION POLICY AND AMENDED WATER SUPPLY BYLAW HEARINGS AND DELIBERATIONS

To: Hearing Panel

Meeting Date: Tuesday 5 November 2024

From: Russell Keen, Manager- Three Waters Operations and Rhiannon Suter, Manager Strategy, Policy and Engagement

Approved: Erin Moogan - Group Manager - Infrastructure Services

Approved Date: Thursday 31 October 2024

Open Agenda: Yes

Purpose and Summary

This report provides the Hearing Panel with the submissions to the proposed Draft Backflow Prevention Policy, the amended Water Supply Bylaw and the details of the submitters who wish to be heard.

Recommendations

That the Hearings panel:

1. Receives the report "Backflow Prevention Policy and Amended Water Supply Bylaw Hearings and Deliberations".
2. Receives the submissions.
3. Notes the submitters to be heard.
4. Notes the summary of submissions (A5569313).
5. Agrees to receive the following late submission:
Submission 010- Alex Cunningham (Russell Cunningham Properties) (A5606816)
6. **Agrees/ disagrees** with the following proposed changes to the Policy and the amended Bylaw:
 - a. Backflow Prevention Policy:
 - i. Updated wording of the location parameters where exemption applies under the boundary prevention device installation section of the proposed policy.
 - ii. Amendments to the Appendix 1 Risk Hazards Categories to establish alignment with the G12/AS1 design requirement of the Building Code.
 - iii. Strengthened the wording on air gaps.
 - iv. Addition of clarity that boundary backflow prevention measures are an addition to the backflow measures within a property.

- b. Amended Water supply Bylaw:
 - i. Addition of a purpose statement to the bylaw.
 - ii. Corrections to the names of regulation.
 - iii. Addition of the following definitions:
 - Air gaps.
 - Drinking water.

Recommends to Council:

7. To adopt the draft Backflow Prevention Policy and the amended Water Supply Bylaw with the changes as agreed in resolution 6.

Background

The Infrastructure and Projects Committee adopted the proposed draft Backflow Prevention Policy and the amended Water Supply Bylaw for consultation on 3 September 2024. The Committee delegated hearings and deliberations to a Hearings Panel made up of Cr Campbell, Cr Dermody, Cr Bond and Mrs Coote.

The Water Services Act 2021 (the Act) and Taumata Arowai (the water regulator of New Zealand) requires Council (a water supplier) to create and implement a backflow prevention programme to protect its water supply from contamination from a backflow event.

The proposed Backflow Prevention Policy 2024 (proposed policy) will detail how Council will fulfil its obligations under the Act and Taumata Arowai's Drinking Water Quality Assurance Rules 2022 and it will be enabled through Council's Water Supply Bylaw.

The amended Water Supply Bylaw (amended bylaw) that was adopted for consultation included the following updates:

1. Addition of definitions of:
 - **Backflow prevention device** means a valve installed on a water supply to prevent backflow from occurring and safeguard the water supply system,
 - **Essential Works** means work required to be done under urgency and which is necessary for the continued and/or safe operation and protection of the public water supply, and
 - **Potable** means water that is safe to drink and that complies with the drinking water standards.
2. Replacement of references to the Health Act 1956 with the Water Services Act 2021 in section 8.10 of the Bylaw to reflect legislative change.
3. Addition of amendments to section 8.10 of the Bylaw to facilitate the application of the proposed Backflow Prevention Policy 2024.
4. Amendment to section 9.1 of the Bylaw to enable better coverage of the backflow prevention compliance requirements.

Further background information on the proposed policy and the amended bylaw was provided to the Infrastructure and Projects Committee (3 September 2024) at the time of adoption of the amended bylaw for consultation.

The proposed draft policy and the amended bylaw was placed for consultation between 16 September 2024 and 18 October 2024.

Submissions could be made online through letstalk.icc.govt.nz, via email, by post, or dropped into Te Hīnaki Civic Building, the Public Library, and Bluff Service Centre. An event was held with the Southland Master Plumbers group on 10 October 2024. Additional targeted communications were held with the Southland – Otago Local Water Done Well - Backflow prevention group and the Water New Zealand Backflow Committee.

Nine submissions were received during the consultation period. One submission was submitted once the consultation had closed. One submitter has requested to speak to their submission.

Issues and Options

Analysis

Council received three submissions that support the proposed Backflow prevention policy, another three expressed support noting further amendments are required and two spoke against the proposed policy. One submission did not indicate either support or opposition to the proposed policy.

Likewise, for the amended Water Supply Bylaw, five submissions supported the amendments proposed to the Water Supply Bylaw, two expressed support noting further amendments are required and one spoke against it. One submission did not indicate either support or opposition to the amended bylaw.

It is to be noted that the late submission received (A5606816) has indicated support for the proposed policy noting the need for further amendments.

Cost to Customers

Submissions raised concerns regarding the cost to customers (or property owners) in relation to the installation of boundary backflow prevention devices.

One submission in particular questions the rationale for requiring boundary backflow prevention devices along property boundaries if backflow prevention devices are already installed and paid for as part of the building consent process.

Another one recommended that Council consider cost-incentive measures to support customers with the installation of boundary backflow prevention devices.

Officer Response

The proposed policy presented for consultation provided the following approach for funding ownership for backflow prevention device installation, maintenance and testing:

- a. Council may install the backflow prevention device itself and may undertake maintenance and ongoing testing and seek to reimburse the cost from customers, or
- b. Council may require the customer to install, maintain and test a backflow prevention device as advised by Council, or
- c. Council may use a hybrid of the two options above to achieve suitable protection of its water supply and the ongoing testing and maintenance of boundary backflow prevention devices.

This approach is in accordance with the Act, and will be utilised on a case-by-case approach at a property level dependent on the level of risk category identified under Appendix 1 - Risk Hazards Categories of the proposed policy.

Given the financial responsibilities to the customer, Council will consider the economic and financial nature of the work required and will work with all parties involved, this may involve Council incurring the costs on the customer's behalf, ensuring cost recoverability through appropriate debt recovery mechanisms.

It is recommended to retain this funding approach as this is directed by section 27 of the Act, therefore no changes to the draft policy are proposed as a result of this feedback.

If Council wishes to review this proposed approach and cover costs for building owners it would require additional budget to be allocated in the Annual Plan. It is important to note that Council itself will have responsibilities under the new regulations in relation to its buildings and other assets, particularly property and parks.

Right of Refusal

A submission suggests amendments to the proposed policy to give customers the first right of refusal for two options:

- a. The option to own and install backflow prevention equipment on their private property at the boundary.
- b. The option to relocate existing backflow prevention equipment to the boundary, provided that it meets the required specifications.

Officer Response

The ownership model of the proposed policy allows Council to own boundary backflow prevention devices located outside the private property boundary on public land, devices on private property will be owned by the customer(s). This model allows Council to approach/require the customer(s) to install devices first and it will only intervene if the customer(s) is unable to undertake the required work to ensure water safety. The same principle applies to the relocation of existing devices.

Moreover, it creates an issue if the owner refuses to take ownership of boundary backflow prevention devices inside their property boundary as it would have to become a Council owned asset on private property which is not recommended. This would create administration issues for Council in relation to accessibility, maintenance, testing etc, of devices.

Under such circumstances Council will evaluate the risk and mitigation needed on a case-by-case bases and may install the device outside the property boundary if it offers a viable solution. However, installation and initial commissioning costs for those devices in public places connected to the customer's water supply will remain with the customer(s).

It is important to note that installation, relocation or any modification to a backflow prevention device must be approved by Council.

No changes to the draft policy are proposed as a result of this feedback.

Hairdressers and boundary backflow devices

Some concerns were raised during the consultation process regarding how beauty salons and hairdressers will be impacted by the proposed policy.

Officer Response

Beauty salons and hairdresser activity types are high-risk categories under the proposed policy as per the guidance of the Drinking Water Quality Assurance Rules 2022 and the New Zealand Building Code. This means that this activity type offers a high risk of backflow contamination entering public water supply network, linked to the dangerous nature of the chemicals involved in the industry. Therefore it is necessary to install a boundary backflow prevention device at the point of supply to prevent a backflow event.

A boundary backflow prevention device installation will be in addition to the backflow prevention device that already exists within properties as part of the current building consent process. This is because boundary backflow prevention devices offer the best and the only form of protection to safeguard the public water supply from backflow contamination from properties that are high and medium-risk categories under the proposed policy. The section "Council and Customer Responsibilities" has been amended to clarify that the boundary backflow prevention device is an addition to any existing point of use backflow prevention device which may be inside a building, installed for the purposes of protecting building users.

It is important to note that the new Building Code design requirement will be effective from 1 November 2024. The new requirement will require backflow prevention both within the building and at the boundary as appropriate as part of the building consent process.

The Three Waters Operations Team will organise an information session with hair and beauty businesses following the adoption of the policy to continue targeted communication on water safety and legislative compliance.

No further change to the policy or bylaw is recommended as a result of this feedback.

Appendix 1 – Risk Hazards Categories

The submission made by Health New Zealand Te Whatu Ora recommended amendments to the Appendix 1 – Risk hazards categories of the proposed policy on the following:

- a. Beauty salons and hairdresser's back wash basins to be referred as hair washing basins,
- b. To cover mobile services that pose a potential risk of backflow,
- c. To cover activities where hand held dispensers are used.

Another submission recommended that Appendix 1 be consistent with the framework of MBIE and be consistent with other regulations.

Officer Response

Officers agree with the recommendations and changes are proposed to the Appendix 1 of the proposed policy.

Proposed Policy and Amended Bylaw Document Administration

Health New Zealand Te Whatu Ora made recommendations to general document administration of the proposed policy and the amended bylaw. The recommendations are largely on the addition of definitions, Part 8 - Condition of Supply, Part 9 – Offences and Breach.

Officer Response

In response to the submission, officers have updated the key definitions, names of regulations and addition of the purpose of the Bylaw.

The recommendation to Part 8 - Condition of Supply are on the bylaw document administration. The recommendation does not trigger any change in wording or formatting of Part 8. Therefore amendments to Part 8 is not recommended, however the recommendation will be taken into consideration during the development of a combined Three Waters Bylaw scheduled for 2025.

The recommendation to Part 9 – Offences and Breach in relation to ensuring quality of drinking water and restricting (or reducing) water supply to a party where a breach persists are covered under sections 8.6 – Levels of Service and 8. 8 Liability; and Part 9 of the bylaw with which the proposed policy will be administered. The concern in relation to the restricting (or reducing) water supply creating potentially insanitary building conditions will be addressed in a manner that does not contravene Section 193 of the Local Government Act 2002 and Council's Dangerous, Affected and Insanitary Buildings Policy to ensure a insanitary (or unsanitary) building conditions occur as a result.

No changes to Parts 8 and 9 of the amended by are recommended as a result of this feedback.

Communication

Feedback received from the Southland Master Plumbers Group has recommended that Council engage and educate the customers affected by the implementation of the proposed backflow prevention policy.

Officer Response

Council will take a risk based and education led strategy for implementation of the policy.

An initial survey of all testable backflow prevention devices on public places and private property to identify those in high and medium risk categories will be undertaken.

The survey is scheduled to occur between 2025 - 2030, and during this period officers will further communicate with the affected parties to improve awareness of backflow prevention legislative requirements and public water safety.

To support the further communication intent officers are working on creating a backflow prevention page on Council's website with all the information that the customers will need to know along with legislative requirements. This will include a range of additional supplementary information recommended as useful by submitters through the consultation process.

Other Feedback

Council received several queries during consultation from concerned parties enquiring the implications of the proposed policy to them.

In response to a query received a further wording change is recommended to the location parameters for boundary backflow prevention devices under the exemption criterion provided under Boundary Backflow Installations section of the proposed policy.

The amendment reads as "*Boundary backflow prevention devices shall not be located more than one metre inside the property boundary and be downstream of the water meter where one is installed. The exception being on residential properties with a non-testable dual check valve where it will be located outside the property, in the berm, other exceptions may apply based on location-specific practical limitations will be considered on a case-by-case basis.*"

Queries from businesses and feedback Master plumbers have also triggered a need to amend Appendix 1 Risk hazards Categories. The amendments to medium and high risks in Appendix 1 are in line with the G12/AS1 design requirement of the Building Code, which will be effective from 1 November, and the Water New Zealand Code of Practice

This amendment creates consistency within the operational side of the building consent process and backflow prevention requirement; and with the approach of master plumber utilise for backflow prevention.

Next Steps

Following the deliberations of this committee, the proposed policy and amended Bylaw will be finalised and brought to the Council for adoption.

Attachments

Appendix 1 - Summary of Submissions (A5569313).

Appendix 2 - Submissions to be Heard and not be Heard

Appendix 3 - Draft Backflow Prevention Policy (A5446243).

Appendix 4 - Water Supply Bylaw Draft Amendments for consultation August 2024 (A5473216).

Hearings for Water Backflow Prevention - Backflow Prevention Policy and Amended Water Supply Bylaw Hearings and Deliberations (A5569..

A5569313

Submission No.	Full Name	Organization	Do you want to stay up to date on other Council consultation and engagement?	Would you like to speak on my submission	Do you support the Draft Backflow Prevention Policy?	What is your feedback on the draft Backflow Prevention Policy?	Do you support the proposed changes to the Draft Water Supply Bylaw?	What is your feedback on the draft Water Supply Bylaw?	Submission Summary	Officer Response (if required)
001	Brian Robert Nicholson			No	Yes	The submitter supports the draft policy if the devices are installed properly.	Yes	The submitter supports the changes made if it is done properly as per the Water Service Act 2021 and Taumata Arowā.	The submitter indicated support for the draft policy and amended bylaw.	
002	Adam de Pass		Yes	No	Yes	The submission supports making the city safer but raises concerns about who will pay for it. The submitter doubts property owners will accept the costs, especially if they believe their current systems work well, and suggests that increasing rates would be difficult. If property owners are required to pay, there should be incentives, such as discounts on rates, to encourage compliance with the installation of backflow prevention devices.	Yes		The submission supports the proposed policy and the amended bylaw but has indicated that there would be some frustration with requiring customers to pay for backflow prevention device installation. Recommendations are made to have incentives to support customers with device installation and promote compliance.	The cost to customers is likely to be one of the biggest risks or barriers to achieving protection of the public water supply due to the high cost of the supply and installation of the devices. A review of the proposed costing approach of the proposed policy will be dependent on Council and if a change in approach is determined as amended it needs to be considered as part of the annual planning process, noting budgetary consideration needs to be made.
003	Jason Gerken		Yes	No	No	The submission criticizes the requirement for installing two backflow prevention systems, arguing that it's illogical and contradictory. The submitter, a business owner who installed a backflow system at their own expense three years ago, is frustrated by the need for an additional device and the inconsistent guidance from Council officers. They highlight practical challenges, such as restricted access to the water mains and potential damage to landscaping. The submitter objects to paying for consent when the installation is mandated and warns that costs will ultimately be passed on to customers. They also expect the council to enforce the requirements equally across all businesses, including those not currently compliant. Finally, they question the status of the Three Waters reform.	No		The submission speaks against the proposed policy and the amended bylaw. It opposes the requirement for an additional boundary backflow prevention system, calling it illogical when they have installed a backflow prevention system as part of their building consent process. The submitter also indicates that if they are required to install a new boundary backflow system it will restrict access to their water mains and will damage their landscaping and they also object to the customer pay approach.	The need for two backflow prevention devices being required is a result of two separate pieces of legislation. The first being the NZ Building Code which required the submitter's dwelling water supply to be protected from the huddersiding side. This means individual point of use protection was required at the salon to prevent contamination to the house fixtures. The second piece of legislation is the Drinking Water Quality Assurance Rules 2022 which now additionally requires boundary protection to protect the public water supply in addition to individual protection required elsewhere. The submitter is unhappy that they weren't made aware of this during the consenting stage however their application predates these rules. Of note the NZ Building Code design requirements are changing as of 1 November 2024 to now require both individual and boundary backflow prevention which will address the risk of inconsistent guidance that the submitter raised.
004	Kevin Silcock		Yes	No	Yes		Yes		The submitter supports the proposed policy and the amended bylaw.	
005	Sweha James		Yes	No	Yes with amendments	Cost of back flow should be paid either by ICC or property	Yes	Cost of back flow should be paid either by ICC or property owners.	The submitter wants the cost of backflow prevention devices to be either paid by Council or the customer (or property owner).	
006	Wayne McCallum			No	Yes with amendments	The submission suggests amendments to the proposed policy to give customers the first right of refusal for two options: <ul style="list-style-type: none"> The option to own and install backflow prevention equipment on their private property at the boundary. The option to relocate existing backflow prevention equipment to the boundary provided that it meets the required specifications. 	Yes		The submission suggests amendments to the proposed policy to give customers the first right of refusal for two options: <ul style="list-style-type: none"> The option to own and install backflow prevention equipment on their private property at the boundary. The option to relocate existing backflow prevention equipment to the boundary, provided that it meets the required specifications. 	The proposed policy assigns ownership of backflow prevention devices based on their location: devices outside the private property boundary on public land will be owned by Council, while those on private property will be owned by the customer. Council will require customers to install these devices and will only intervene if the customer is unable to ensure water safety. However, if a customer refuses to take ownership of a device within their property boundary, it would become a Council asset on private land, leading to challenges in terms of access, maintenance, and testing. In such cases, Council will evaluate the risk and appropriate mitigation on a case-by-case basis, potentially opting to install the device outside the property boundary if it provides a viable solution. However, installation and initial commissioning costs for these devices in public places connected to the water supply of their property will remain with the customer(s). It is important to note that any installation, relocation, or modification of a backflow prevention device requires Council approval but the cost responsibility will remain with the customer.
007	Avril Datzel		Yes	No	Yes with amendments	The submission from Childcare Invercargill enquires whether Council will check each property to assess whether a backflow prevention device is needed. They indicate budget concerns if they are required to install a boundary backflow prevention device under the proposed policy.	Yes with amendments	The submission from Childcare Invercargill enquires whether Council will check each property to assess whether a backflow prevention device is needed. They indicate budget concerns if they are required to install a boundary backflow prevention device under the proposed policy.	The submission from Childcare Invercargill enquires whether Council will check each property to assess whether a backflow prevention device is needed. They indicate budget concerns if they are required to install a boundary backflow prevention device under the proposed policy.	Assessments will be desk-top based and onsite investigations on building use, existing backflow prevention recorded on the BWG or Officer knowledge of a building. Where there is a dispute a customer may have a backflow prevention survey carried out and put forward for our consideration. In the case of childcare centres most of these, if not all, do contain hazard and internal backflow prevention devices and so will require backflow prevention devices at the boundary due to the risk they pose.
008	Roxy Robertson		Yes	Yes	No	The submission points out that the policy fails to recognize other regulatory frameworks that may apply to certain businesses. It does not consider scenarios where a customer already has a backflow prevention device required by other industry-specific regulations. Additionally, the policy does not address situations where both a backflow prevention device and an air gap are present, raising questions about whether the maintenance and assessment requirements would still apply when an air gap is already in place, potentially meeting the policy's intent.	Yes with amendments	The submission points out that the policy fails to recognize other regulatory frameworks that may apply to certain businesses. It does not consider scenarios where a customer already has a backflow prevention device required by other industry-specific regulations. Additionally, the policy does not address situations where both a backflow prevention device and an air gap are present, raising questions about whether the maintenance and assessment requirements would still apply when an air gap is already in place, potentially meeting the policy's intent.	The submission highlights that the policy overlooks other relevant regulations and does not address cases where a customer has a backflow device required by industry standards, or where both a backflow device and an air gap are present, which might already meet the policy's intent.	In response to the submission, officers have made changes to Appendix 1- Risk Hazards Categories of the policy to cover MBIE regulations. This aligns with the new design requirements of the Building Code.


Hearings for Water Backflow Prevention - Backflow Prevention Policy and Amended Water Supply Bylaw Hearings and Deliberations (A5569...

009	Glynn O'Rourke	Health New Zealand Te Whatu Ora	No	Health New Zealand Te Whatu Ora made recommendations to general document administration of the proposed policy and the amended bylaw. The recommendations are largely on the addition of definitions, Part 8 - Condition of Supply, Part 9 - Offences and Breach. It also covers recommendations to improve Appendix 1 risk hazards categories of the proposed policy.	Health New Zealand Te Whatu Ora made recommendations to Health New Zealand Te Whatu Ora made Officers agree with the recommendations made in relation to the addition of key general document administration of the proposed policy and the recommendations to general document definitions, names of regulations, addition of the purpose of the Bylaw and Appendix 1 of amended bylaw. The recommendations are largely on the addition administration of the proposed policy and the the policy. The recommendations proposed to Parts 8 and 9 of the bylaw are already of definitions, Part 8 - Condition of Supply, Part 9 - Offences and amended bylaw. The recommendations are largely covered in the current wording, so change is not recommended. Breach. It also covers recommendations to improve Appendix 1 risk on the addition of definitions, Part 8 - Condition of Supply, Part 9 - Offences and Breach. It also covers hazards categories of the proposed policy. recommendations to improve Appendix 1 risk hazards categories of the proposed policy.
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Late submission

010	Alex Cunningham	Russell Cunningham Properties Ltd		<p>The submission addresses several concerns regarding the "Backflow Prevention Policy and Draft Amendments to the Water Supply Bylaw" and its potential impact on property owners, particularly commercial properties. Here's a summary of the main points:</p> <p>1. Scope of Required Installations: The draft policy states that Council may require the installation of backflow prevention devices if there is a potential risk of backflow, even in low-risk properties. The submitter accepts the need for immediate action in high- or medium-risk situations but objects to this provision being applied to low-risk commercial properties. They argue that some low-risk commercial properties (e.g., small retail spaces) have similar risks to residential properties and suggest clarifying that the requirement applies only to medium- or high-risk properties.</p> <p>2. Prioritization of Risk Categories: The submitter notes that the draft bylaw prioritizes installations in high-risk properties and those connected to certain water supply lines. While they do not object to the requirement for new commercial buildings to have backflow prevention devices, they oppose a blanket policy that could enforce installations for low-risk properties on an "as-required basis."</p> <p>3. Authority of Council and Cost Responsibility: The policy allows Council to install a backflow prevention device at the property boundary and requires the customer to cover costs. The submitter is concerned about Council's authority to proceed with installations. They request that property owners be given the option to install the device themselves before Council intervention.</p>	<p>1. Scope of required installations: Certain building types do pose less risk to the water supply in terms of a public health risk and these are recognised by being given the classification of low risk. While not necessarily a risk to health these premises do have fixtures or appliances that may still cause issues to the public supply if a backflow incident was to occur, these are issues such as a change in colour, odour or taste which are not acceptable in the public supply and therefore need protecting against.</p> <p>2. Prioritization of Risk Categories: As noted above low risk properties still require protection. The Drinking Water Quality Assurance Rules 2022 require water suppliers to primarily focus on medium and high risk properties first and this is our proposed approach. Low risk still requires attention and will be addressed after medium and high risks and as they are encountered either via new connection requests or when called for maintenance purposes.</p> <p>3. Authority of Council and Cost Responsibility: The Water Services Act 2021 provides the authority for water suppliers to require the customers to pay for the installation if carried out by the water supplier or to require the customer to carry out the installation and pay for it. Officers will work with and offer advice to customers as appropriate for them to have the work carried out by their contractors. Customers will be given the first option to do the installation which is in line with what the submitter has asked for.</p> <p>4. Consideration for Existing Devices in Multi-Tenanted Buildings: The policy acknowledges existing backflow prevention devices that are onsite as a result of other legislative requirements and notes that these are for the purpose of protecting internal building users only and not the public supply. The provision of boundary protection is in addition to these devices and is for the primary purpose of protecting the public water supply from what may occur on private property.</p>
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A5601434

	Respondent No: █	Responded At: Oct 18, 2024 14:18:43 pm
	Login: Anonymous	Last Seen: Oct 18, 2024 14:18:43 pm
	Email: n/a	IP Address: n/a

Q1. **Full name:** Roxy Robertson

Q2. **Email:** [REDACTED]

Q3. **Contact Phone:** [REDACTED]

Q4. **Postcode:** 3288

Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** Yes

Q6. **Would you like to receive emails about future consultations?** Yes

Q7. **Do you support the Back Flow Prevention Policy?** No

Q8. **What is your submission on the Back Flow Prevention Policy?**

The Policy does not appear to acknowledge other regulatory regimes (i.e. that may relate to specific businesses). It also does not contemplate situations where a customer has both a backflow device (for non-council related purposes) that is required by other industry regulations. The Policy also does not contemplate situations where there is a backflow device and an air gap, and therefore whether the maintenance and assessment provisions would apply if there were already an airgap that would satisfy the policy intension.

Q9. **Do you support the Water Supply Bylaw?** Yes with amendments

Q10. **What is your submission on the Water Supply Bylaw?**

The Bylaw does not appear to acknowledge other regulatory regimes (i.e. Ministry of Primary Industry Regulations). Further, it also does not contemplate situations where a customer has both a backflow device (for non-council related purposes) that is required by other industry regulations. The Policy also does not contemplate situations where there is a backflow device and an air gap, and therefore whether the maintenance and assessment provisions would apply if there were already an airgap that would satisfy the policy intension.

Make a submission

letstalk.icc.govt.nz



Back Flow Prevention Policy and Water Supply Bylaw 2024



Personal details

Full name: Brian Robert Nicholson (Required)

Email: No Email (Required)

Contact Phone: [Redacted] (Required) Postcode: 9810 (Required)

1. Do you wish to present your submission to the Mayor and Councillors in person? Yes No

2. Do you support the Back Flow Prevention Policy?

Yes Yes with changes No

3. What is your feedback on the draft Back Flow Prevention Policy?

Yes it installed properly

4. Do you support the proposed changes to the Water Supply Bylaw?

Yes Yes with changes No

5. What is your feedback on the draft Water Supply Bylaw 2024?

If done properly - yes - Water Act 2021/ Taumata-Arowai.

Would you like to receive emails about future consultations? Yes No

only by DX Couriers (mail) Hard Copies.

Please attach extra sheets of paper if required

How do I make a submission on the Back Flow Prevention Policy and Water Supply Bylaw 2024? →

The easiest way is to submit online using the survey form at letstalk.icc.govt.nz

Alternatively, you can pick up a submission form and drop one off at Te Hinaki Civic Building at 101 Esk St, the Invercargill Public Library or the Bluff Service Centre.


You can also email the Policy team at policy@icc.govt.nz



Submissions are due by 4pm, 18 October 2024.

Post: Submission – Back Flow Prevention Policy and Water Supply Bylaw 2024
Invercargill City Council
Private Bag 90104
Invercargill 9840



	Respondent No: █	Responded At: Oct 14, 2024 17:15:01 pm
	Login: Anonymous	Last Seen: Oct 14, 2024 17:15:01 pm
	Email: n/a	IP Address: n/a

Q1. **Full name:** Adam de Pass

Q2. **Email:** ██████████

Q3. **Contact Phone:** ████████

Q4. **Postcode:** 9810

Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** No

Q6. **Would you like to receive emails about future consultations?** Yes

Q7. **Do you support the Back Flow Prevention Policy?** Yes


Q8. **What is your submission on the Back Flow Prevention Policy?**

I agree and the time has come no time like the present to make the city a safer and healthier risk free place but my main concern is who is going to pay for it? I highly doubt the owner of the property's will enjoy being told they have to pay for this when in their view it's all working fine and why change something that has been working fine for years. And an increase in rates to accommodate this would be very tough. This needs to be funded some if not all of the cost involved as no doubt some installs will be a lot easier and cheaper than other ones to installs - and if they have to pay there would need to be an incentive to book in and get the backflow devices installed on their property perhaps a discount on their rates

Q9. **Do you support the Water Supply Bylaw?** Yes

Q10. **What is your submission on the Water Supply Bylaw?**

not answered

	Respondent No: [REDACTED]	Responded At: Oct 14, 2024 18:15:48 pm
	Login: Anonymous	Last Seen: Oct 14, 2024 18:15:48 pm
	Email: n/a	IP Address: n/a

Q1. **Full name:** Jason Gerken

Q2. **Email:** [REDACTED]

Q3. **Contact Phone:** [REDACTED]

Q4. **Postcode:** 9810

Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** No

Q6. **Would you like to receive emails about future consultations?** Yes

Q7. **Do you support the Back Flow Prevention Policy?** No


Q8. **What is your submission on the Back Flow Prevention Policy?**

It is ludicrous to think that two of the same systems are needed, I am a responsible business owner who at cost installed a back flow prevention system at startup of business three years ago at cost might I add, now you are saying two of the same device is needed??? That is not logical, and even after one of your own team said I maybe able to use parts of my existing system to be integrated into the new one!, Now this is contradictory and confusing, I have the conversation on record, shortly afterwards I was informed there had to be two. Good luck trying to get access now after my portacom which is the business is built near to 1 meter of the boundary where access to the water mains is required. I also have landscaping and gardens it the exact spot which will be required to dig. Why do I have to pay for consent when you are demanding I do it. Your ratepayers (clients) will be paying for all costs incurred to me and I will tell them all about why, when times are tough their prices are going up for their hair when they have already received increases in their rates. It will be insult to injury. Also I expect that council will also enforce these systems on a the hairdressers flying under the radar of council and I would expect there to be quite a few. Also to finish isn't three waters no more? Or under review?


Q9. **Do you support the Water Supply Bylaw?** No

Q10. **What is your submission on the Water Supply Bylaw?**


Most rainfall this September since 1973 or something like that. I see water running past our salon in the drains backing up due to poor council maintenance.

	Respondent No: [REDACTED]	Responded At: Oct 15, 2024 08:36:58 am
	Login: Anonymous	Last Seen: Oct 15, 2024 08:36:58 am
	Email: n/a	IP Address: n/a

- Q1. **Full name:** Kevin Silcock
-
- Q2. **Email:** [REDACTED]
-
- Q3. **Contact Phone:** [REDACTED]
-
- Q4. **Postcode:** 9876
-
- Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** No
-
- Q6. **Would you like to receive emails about future consultations?** Yes
-
- Q7. **Do you support the Back Flow Prevention Policy?** Yes
-
- Q8. **What is your submission on the Back Flow Prevention Policy?**
not answered
-
- Q9. **Do you support the Water Supply Bylaw?** Yes
-
- Q10. **What is your submission on the Water Supply Bylaw?**
not answered
-

	Respondent No: [REDACTED] Login: Anonymous Email: n/a	Responded At: Oct 15, 2024 19:07:27 pm Last Seen: Oct 15, 2024 19:07:27 pm IP Address: n/a
---	--	---

- Q1. **Full name:** Sweta James
-
- Q2. **Email:** [REDACTED]
-
- Q3. **Contact Phone:** [REDACTED]
-
- Q4. **Postcode:** 9810
-
- Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** No
-
- Q6. **Would you like to receive emails about future consultations?** Yes
-
- Q7. **Do you support the Back Flow Prevention Policy?** Yes with amendments
-
- Q8. **What is your submission on the Back Flow Prevention Policy?**
Cost of back flow should be paid either by ICC or property owners.
-
- Q9. **Do you support the Water Supply Bylaw?** Yes
-
- Q10. **What is your submission on the Water Supply Bylaw?**
Cost of back flow should be paid either by ICC or property owners.
-

	Respondent No: [REDACTED]	Responded At: Oct 16, 2024 08:59:12 am
	Login: Anonymous	Last Seen: Oct 16, 2024 08:59:12 am
	Email: n/a	IP Address: n/a

Q1. **Full name:** Wayne McCallum

Q2. **Email:** [REDACTED]

Q3. **Contact Phone:** [REDACTED]

Q4. **Postcode:** 9810

Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** No

Q6. **Would you like to receive emails about future consultations?** Yes

Q7. **Do you support the Back Flow Prevention Policy?** Yes with amendments


Q8. **What is your submission on the Back Flow Prevention Policy?**

Currently McCallums Group owns, maintains and tests backflow prevention equipment installed for the sole reason to prevent the risk of contamination of the council water mains. To prevent the risk of duplication of equipment and/or a loss of control of this critical asset I request consideration of an amendment to the policy to allow for the following:- The customer is offered first right of refusal to the following options to own and install back flow prevention equipment on private property at the boundary. to relocate existing back flow prevention equipment to the boundary provided it meets the required specifications.

Q9. **Do you support the Water Supply Bylaw?** Yes


Q10. **What is your submission on the Water Supply Bylaw?**

not answered

	Respondent No: █	Responded At: Oct 16, 2024 12:30:58 pm
	Login: Anonymous	Last Seen: Oct 16, 2024 12:30:58 pm
	Email: n/a	IP Address: n/a

Q1. Full name:	Avril Dalzell
Q2. Email:	██
Q3. Contact Phone:	██████████
Q4. Postcode:	9810
Q5. Do you wish to present your submission to the Mayor and Councillors in person?	No
Q6. Would you like to receive emails about future consultations?	Yes
Q7. Do you support the Back Flow Prevention Policy?	Yes with amendments
Q8. What is your submission on the Back Flow Prevention Policy?	Will each site be checked individually to see if there is a need for the back flow on the site? We don't believe that we are industrial and trade water focused, or that we use hazardous chemicals or harmful microbiological substances, or use equipment that uses recycled or re-circulated. Will the council make check to see if sites actually come under the conditions that require back flow? We would also be concerned about the impact this might have in our already stretched budget.
Q9. Do you support the Water Supply Bylaw?	Yes with amendments
Q10. What is your submission on the Water Supply Bylaw?	As above

A5601434

	Respondent No: █	Responded At: Oct 18, 2024 14:18:43 pm
	Login: Anonymous	Last Seen: Oct 18, 2024 14:18:43 pm
	Email: n/a	IP Address: n/a

Q1. **Full name:** Roxy Robertson

Q2. **Email:** [REDACTED]

Q3. **Contact Phone:** [REDACTED]

Q4. **Postcode:** 3288

Q5. **Do you wish to present your submission to the Mayor and Councillors in person?** Yes

Q6. **Would you like to receive emails about future consultations?** Yes

Q7. **Do you support the Back Flow Prevention Policy?** No

Q8. **What is your submission on the Back Flow Prevention Policy?**

The Policy does not appear to acknowledge other regulatory regimes (i.e. that may relate to specific businesses). It also does not contemplate situations where a customer has both a backflow device (for non-council related purposes) that is required by other industry regulations. The Policy also does not contemplate situations where there is a backflow device and an air gap, and therefore whether the maintenance and assessment provisions would apply if there were already an airgap that would satisfy the policy intension.

Q9. **Do you support the Water Supply Bylaw?** Yes with amendments

Q10. **What is your submission on the Water Supply Bylaw?**

The Bylaw does not appear to acknowledge other regulatory regimes (i.e. Ministry of Primary Industry Regulations). Further, it also does not contemplate situations where a customer has both a backflow device (for non-council related purposes) that is required by other industry regulations. The Policy also does not contemplate situations where there is a backflow device and an air gap, and therefore whether the maintenance and assessment provisions would apply if there were already an airgap that would satisfy the policy intension.

18 October 2024

Invercargill City Council
101 Esk Street
Private Bag 90104
INVERCARGILL 9840

Tēnā koutou

Submission on Invercargill City Council's Backflow Prevention Policy and the Water Supply Bylaw 2024

1. Thank you for the opportunity to submit on the Draft Backflow Prevention Policy and the proposed Water Supply Bylaw. This submission has been compiled by the National Public Health Service (NPHS) Te Waipounamu region, Health New Zealand – Te Whatu Ora. NPHS Te Waipounamu services the South Island including the Southern District.
2. NPHS recognises its responsibilities to improve, promote and protect the health of people and communities of Aotearoa New Zealand under the Pae Ora (Healthy Futures) Act 2022 and the Health Act 1956.
3. Pae Ora requires the health sector to protect and promote healthy communities and health equity across different population groups by working together with multiple sectors to address the determinants of health.
4. NPHS is focused on the achievement of equitable health outcomes. We use the Ministry of Health's definition of equity:

In Aotearoa New Zealand people have differences in health that are not only avoidable, but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes.¹

¹ Ministry of Health – Manatū Hauora (2024, July 2). Achieving equity. <https://www.health.govt.nz/about-ministry/what-we-do/achieving-equity>

5. This submission responds to the draft Backflow Prevention Policy 2024 and the proposed updates to the Water Supply Bylaw.
6. This submission sets out matters of interest and concern to NPHS Te Waipounamu, and information included is based on evidence about public health and equity.

General Comments

7. We welcome the opportunity to comment on the Draft Backflow Prevention Policy and the Water Supply Bylaw.
8. Health and wellbeing are influenced by a wide range of factors beyond the health sector. These factors are often referred to as the 'social determinants of health', and can be described as the environmental, economic and social conditions in which people are born, grow, live, work and age.²
9. The diagram³ below shows how these determinants of health are complex and interlinked. Initiatives to improve health outcomes and overall quality of life must involve organisations and groups beyond the health sector, such as local government, if they are to have a collective impact.⁴

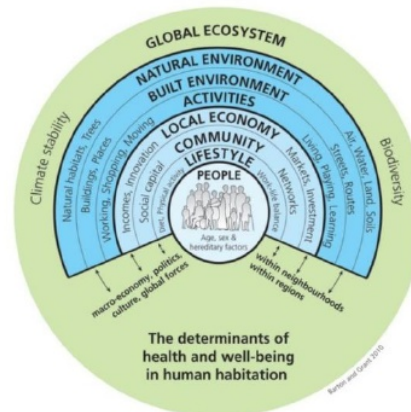


Figure 1: Social determinants of health

² Public Health Advisory Committee. (2004). *The Health of People and Communities. A Way Forward: Public Policy and the Economic Determinants of Health*. Public Health Advisory Committee.

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³ Barton, H. & Grant, M. (2006). A health map for the local human habitat. *The Journal of the Royal Society for the Promotion of Health*, 126(6), 252-253.

<https://journals.sagepub.com/doi/10.1177/1466424006070466>

⁴ McGinnis J.M., Williams-Russo P. & Knickman JR. (2002). The case for more active policy attention to health promotion. *Health Affairs*, 21(2), 78-93.

<https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.21.2.78>

10. NPHS Te Waipounamu commends Invercargill City Council (ICC) for developing these documents. We also support the transparent approach that ICC has taken during the consultation process, including providing the list of related FAQs on the Council's website.

Specific Comments

The table below contains specific comments on the draft documents:

Backflow Prevention Policy 2024

Reference	Context	Comment	Outcome suggested
Non-compliance with the backflow requirements	In the event of a breach under Part 9 of the Water Supply Bylaw	Section 25(7) of the Water Services Act allows a drinking water supplier to restrict supply if a customer has unpaid accounts.	Add a reference to Section 25(7) of the Water Services Act (WSA).
		Section 25 of the Water Services Act states that a drinking water provider must ensure that that sufficient quantity is provided to each point of supply.	Add a reference to Section 25 of the WSA.
		The Ministry of Health has historically given guidance on the minimum amount of drinking water per day to achieve sufficient quantity for drinking water and sanitary needs while being restricted for unpaid accounts.	Check if Taumata Arowai has provided updated advice.
Appendix 1: Risk Hazard Categories	Beauty salons and hairdresser's sinks	Equipment included refers to "backwash basins".	Amend to "hair wash basins".
	Activities such as mobile dental clinics and/or home birthing pools	Mobile services that pose a potential risk are not included in the activity examples.	Consider including mobile services.
	Activities where hand- held dispensers such as weed sprays or cleaners are used.	Hand-held sprays that are attached to hoses (without vacuum breaks) are not included in the activity examples.	Consider including hand-held dispensers/sprays.

Water Supply Bylaw

Reference	Context	Comment	Outcome suggested
4. Scope	Relevant Codes and Standards 4(b)	The Water Services (Drinking Water Standards for New Zealand) Regulations 2022 are named incorrectly.	Amend so that the regulations are named correctly.
6. Definitions	Drinking water	Drinking water for domestic/ordinary use is not included in the definitions.	Add a definition e.g. from section 6 of the Water Services Act.

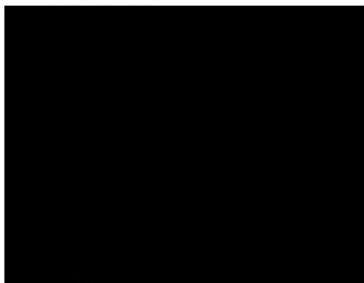
Clause 8.4.4.	Ordinary use	8.4.4. does not include drinking water or water used for sanitary purposes in the list of examples of what is 'ordinary use' in a domestic setting.	Expand the list of examples of 'ordinary use'.
Clause 8.5.	Metering	Clauses 8.3, 8.5 and 8.12 all refer to the expectations around meters and metering.	Consider grouping these separate (but related) clauses under one heading.
Clause 8.7.4.	Emergency restrictions	Both Council and Taumata Arowai provide advice on managing water in emergencies.	Consider providing links to water saving tips and emergency advice.
		Taumata Arowai has powers to declare emergencies under the Water Services Act 2021.	Consider referring to that legislation or those powers.
Clause 8.10.	Backflow Prevention	8.10.1. refers to the need to provide an adequate air gap to prevent backflow, but this is not defined in the Bylaw.	Add a definition or refer to the Backflow Prevention Policy.
Clause 9.1.	Breaches of Conditions of Supply	Section 25(7) of the Water Services Act allows a drinking water supplier to restrict supply if a customer has unpaid accounts.	Add a reference to Section 25(7) of the WSA.
	In the event of a breach under Part 9 of the Water Supply Bylaw	Section 25 of the Water Services Act states that a drinking water supplier must ensure that sufficient quantity is provided to each point of supply.	Add a reference to Section 25 of the WSA.
		Restricted supplies should be sufficient to meet the minimum quantity required for drinking water and sanitary needs.	Check if Taumata Arowai has provided updated advice on the minimum amount of drinking water required per day.
	If the breach is such that the WSA is required to disconnect the supply for health or safety considerations	We note that cutting off a water supply then creates an insanitary building under section 123 of the Building Act 2004.	Consider how this process will not affect a consequent non-compliance under other legislation.
General comments			
Purpose	What is the purpose of the Bylaw?	There is no intended purpose documented.	Include a statement outlining the purpose of the Bylaw. Also consider including water conservation in the purpose of the Bylaw.
Greywater re-use	There is no mention of greywater re-use	Health NZ Te Whatu Ora has recently published guidance for domestic greywater ⁵ .	Consider including links to greywater re-use.

⁵ <https://www.tewhātuora.govt.nz/health-services-and-programmes/environmental-health/sewage/>

Conclusion

11. NPHS Te Waipounamu does not wish to be heard on this submission.

Ngā mihi



Vince Barry

Regional Director
National Public Health Service
Te Waipounamu Region

Contact details

Glynn O'Rourke
NPHS Te Waipounamu

Phone number: [REDACTED]

Email: [REDACTED]

Te Kāwanatanga o Aotearoa
New Zealand Government

Russell Cunningham Properties – Submission on Proposed Backflow Prevention Policy 2024

References:

1. Backflow Prevention Policy 2024
2. Backflow Prevention Policy and Draft Amendments to the Water Supply Bylaw for Consultation

As the owners of several commercial buildings, some of which contain existing backflow prevention devices, we were not directly notified of the proposed policy. One of our tenants (a dental practice) forwarded the call for submissions to us on the day they were closing, which prompted our request for an extension until 5 pm today. In their email, they asked whether they had a backflow prevention device in place. This highlights that many tenants do not understand the purpose of backflow devices or whether they even have one installed. In this instance, they do, but we believe the policy should include a provision to inform both the building owner and tenant, covering both situations where one or the other may own the backflow device. This would help avoid cases where tenants may ignore action requests, leaving the ICC to install a device themselves, with the cost inevitably falling back on us, the building owners.

1. Retrospective Installation for Low-Risk Properties

The “Backflow Prevention Policy and Draft Amendments to the Water Supply Bylaw for Consultation” (page 5) refers to [the Council taking immediate action to protect public health when aware of a high- or medium-risk backflow event or hazard](#). We understand and accept this. However, in the Backflow Prevention Policy 2024 draft (page 5), it states that [where there is a potential risk of backflow \(as per Appendix 1\), the Council may install or require the customer to install a backflow prevention device](#). If we understand this correctly, even if a commercial property is deemed low-risk, the ICC can still require the retrospective installation of a device. If so, we object to this approach.

For example, we have several retail-type tenancies that are located right on the footpath with no yard space and only a small kitchenette in the staffroom. In this case, we would argue that the risk is no more significant than that of a residential property. We suggest the policy clarifies that only commercial properties falling within medium- or high-risk categories will be required to install backflow devices into existing properties.

2. Priority of Installation & Council's Blanket Approach

On page 7 of the draft bylaw, it states that [the Council will prioritise high-risk properties, as well as those connected to the bulk supply lines between Branhholme and Invercargill or Invercargill and Bluff, followed by medium-, low-, and very-low-risk properties. The draft also allows for installations to be carried out on an “as-required basis” as maintenance or replacements are needed or when new connections are requested.](#)

For the record, we have no objection to backflow prevention devices being installed in any new commercial buildings going forward. However, we strongly object to a perceived blanket approach, which could enforce boundary backflow devices for low-risk commercial properties “on an as-required basis.”

3. Council's Power to Install & Costs Involved

On page 5 - [Where there is considered to be a potential risk of backflow \(as per Appendix 1\) into water supply, Council may, under this policy:](#)

- [install a boundary backflow prevention device and require the customer to reimburse Council for the cost of installation, maintenance and ongoing testing of the device; or](#)

The proposed policy allows the ICC to install a boundary backflow prevention device and require the customer to reimburse the Council for installation, maintenance, and testing costs. While we appreciate that the Council will likely try to place responsibility on the customer first, this clause appears to give the ICC full authority to proceed with installation. We would like the opportunity to install the device within our boundary in the first instance, should this situation arise.

4. Existing Multi-Tenant Buildings

Both documents refer to boundary backflow prevention devices and specify that they must [be located no more than one metre inside the property boundary](#). We own several multi-tenanted buildings, where one tenant may be identified by the ICC as medium- or high-risk (e.g. a dental practice) while others (e.g. offices) may be considered low-risk. In these cases, backflow prevention devices have already been installed at the water feed for the particular high-risk tenancy, are listed on the building's compliance schedule, and are tested annually.

There appears to be no provision in the proposed bylaw for this situation. It would be helpful if the policy allowed for existing backflow prevention devices of this nature to remain in place.

Summary:

In summary, we have no objection to the installation of backflow prevention devices in new commercial buildings, regardless of the risk category. During the design phase of a new build, these installations, while still costly, are more manageable and can be incorporated into the overall design for ease of future maintenance. Retrofitting devices into existing buildings, however, comes with significant and often impractical costs—particularly for commercial buildings that are deemed low-risk.

We ask that you please consider the above points in your review of the proposed policy.



A5446243

Backflow Prevention Policy

Effective 1 December 2024





Background

Backflow is the term given to the unintended flow of water from a customer's connection back into the public drinking water supply owned and administered by Invercargill City Council (or Council). A backflow event can occur due to back-pressure or back-siphonage within a water supply system.

Council is a water supplier for Invercargill City District. Council is required to implement a backflow prevention programme under the Water Services Act 2021 (the Act) and Taumata Arowai 's Drinking Water Quality Assurance Rules 2022 to protect Council's water supply against the risk of contamination. The Building Code clause G12, also requires Council to ensure the protection of its water supply from contamination that can cause death, injury and / or illness to the public.

Purpose

This policy outlines Council's commitment to the protection of its drinking water supply and how this protection will be achieved to meet the requirements of the Act, the compliance to the Drinking Water Quality Assurance Rules 2022, the Building Act 2004 and Council's Water Supply Bylaw.

Scope

This policy applies to all water supplies owned, operated and/or managed by Council and to those properties, companies and/or people who are supplied by or take water from Council's water supply, within Invercargill City District.



Legislative compliance

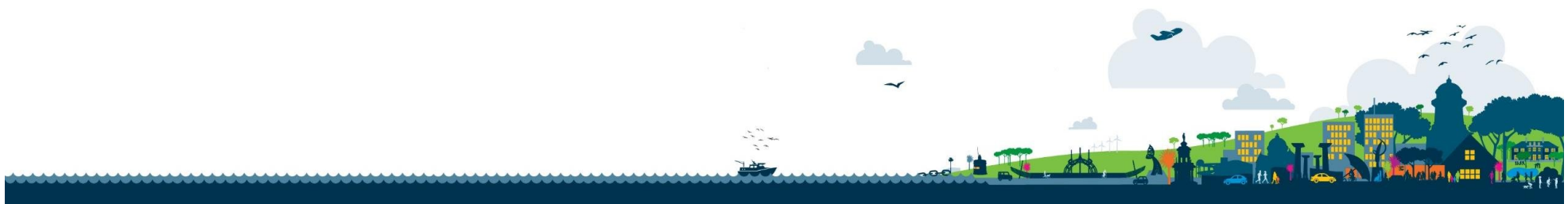
All backflow prevention activities must comply with:

- the Water Services Act 2021;
- the Drinking Water Quality Assurance Rules 2022;
- the Building Act 2004;
- the New Zealand Building Code; and
- Council's Water Supply Bylaw.

Definition

Air gap: This is a permanent separation, measured vertically, between the lowest point of the water supply outlet and the flood level of the equipment, tank or fixture into which the outlet discharges. The gap is required to be the greater of 25mm or twice the supply pipe diameter. A compliant air gap may be used instead of a boundary backflow prevention device. An air gap is registered with the Council when it is there for the purposes of boundary backflow prevention.

Backflow is an unintended condition which can allow drawn water to flow back into a water supply creating a pathway for contaminated or used water to enter the clean system. This can be caused by back pressure or back siphonage.





Backflow prevention device means a valve installed on a water supply to prevent backflow from occurring and safeguard the water supply. These include:

- dual check valves (non- testable);
- double check valves (testable); and
- reduced pressure zone devices (testable).

Back pressure refers to a situation where the pressure in the downstream (customer's) plumbing is greater than the pressure in the Council's water supply resulting in a reversal of normal flow direction and thereby possible contamination of water supply.

Back siphonage refers to a situation where the pressure in the Council's water supply is less than the pressure in the downstream (customer's) plumbing. This negative pressure results in a reversal of normal flow direction and potential contamination of water supply.

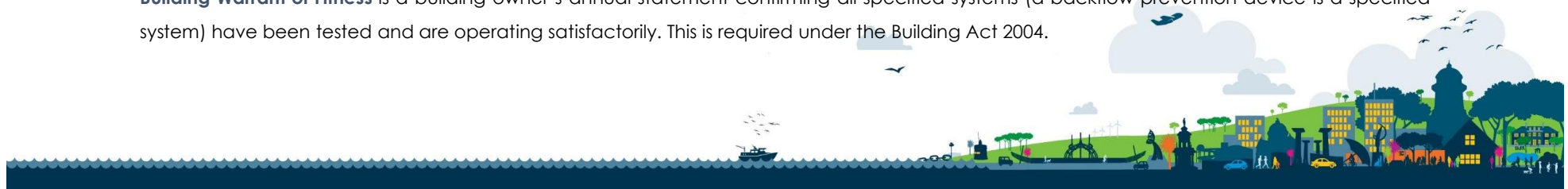
Backflow tester means any person(s) who is certified by the South Island IQP panel to test, repair, and maintain any backflow prevention devices.

Boundary means a line marking the outer limits of an area that may be a private property or a public place, comprising the entire or whole of the boundary and delimits and includes:

- Cross-lease subdivision, the line marking the limits of the exclusive covenant area, and/ or
- Unit title subdivision, the line marking the limits of the accessory unit associated with a particular principal unit.

Booster pump is a device used to increase water pressure as a way to increase flow.

Building Warrant of Fitness is a building owner's annual statement confirming all specified systems (a backflow prevention device is a specified system) have been tested and are operating satisfactorily. This is required under the Building Act 2004.





Customer refers to the owner or occupier of the property who is responsible for the purchasing and/or use of water supplied.

Council means the Invercargill City Council.

G12 - Water Supplies is the New Zealand Building Code clause which relates to the safe supply, storage, reticulation and delivery of hot and cold water.

Independent qualified person (IQP) is a person approved by the South Island IQP panel (of which the ICC is a member of) to carry out testing of specified systems such as backflow prevention devices.

Owner(s) means the registered proprietor of the land.

Potable means water that is safe to drink and that complies with the drinking water standards.

Private property means any parcel of land and/or building capable of being transferred, sold, rented, leased, or otherwise disposed of separately from any other parcel of land and/or building(s).

Public place means a place:

- that is under the control of Council; and/or
- that is open to, or being used by, the public, whether or not there is a charge for admission; and
- includes a road, whether or not the road is under the control of Council and
- any part of a public place.





Residential property is any property within a residential zone as defined under Council's district plan purposed around residential activities, recognising that there may be some non-residential activities associated with it.

Risk hazard categories are used to categorise individual properties in terms of the threat they pose to Council water supply should a backflow condition occur. This is based on things such as the use of the property, the use of chemicals and/or machinery on the property and any other factors which might contribute to their level of risk.

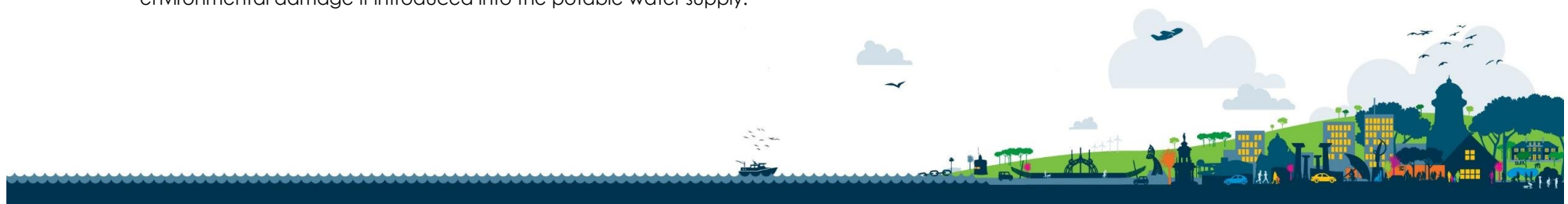
System designer for the purpose of this policy is a professional who specializes in creating systems to ensure the appropriate flow of water supply public places, private properties and residential properties in accordance with the Act, Drinking Water Quality Assurance Rules 2022, Building Act 2004 and Council's Water Supply Bylaw.

Taumata Arowai means Taumata Arowai—the Water Services Regulator established by section 8 of the Act of the Taumata Arowai—the Water Services Regulator Act 2020.

Water supply network means a network for reticulated distribution of potable water that is under the control of or maintained by Council.

Hazardous material are any substances that, if introduced into water supply through backflow, could pose a significant risk to health, safety, and the environment. These materials can contaminate potable water supply, making the water unsafe for consumption or use. These materials include but are not limited to chemicals, pharmaceuticals, industrial waste and by-products.

Toxic environment refers to conditions where the presence of hazardous material could result in severe health risks, contamination, and environmental damage if introduced into the potable water supply.





Council and Customer Responsibilities

Council is responsible for ensuring water supplies owned and administered by Council are protected against backflow. Council, where appropriate, will be responsible for installing backflow prevention devices, and / or requesting a customer(s) to install a boundary backflow prevention device (or a compliant air gap) to prevent any potential contamination of water supply from a backflow event.

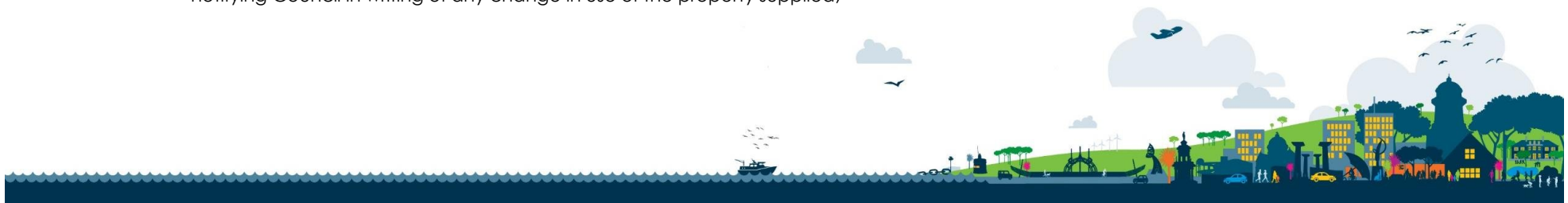
A boundary backflow prevention device is required to protect Council's reticulated drinking water supply from contamination caused by a backflow event within a property. This will mean a backflow prevention device is required to be fitted to the water supply at the boundary. This is in addition to any existing point of use backflow prevention device which may be inside a building and is installed for the purposes of protecting building users.

Where there is considered to be a potential risk of backflow (as per Appendix 1) into water supply, Council may, under this policy:

- install a boundary backflow prevention device and require the customer to reimburse Council for the cost of installation, maintenance and ongoing testing of the device; or
- require the customer to install, maintain, and test a boundary backflow prevention device that incorporates a verifiable monitoring system in accordance with any requirements imposed by the Council.
- use a combination or any hybrid of the two options above so as to achieve suitable protection of its water supply and the ongoing testing and maintenance of boundary backflow prevention devices.

In addition to the requirements of this policy, the customer must also ensure that the requirements of the Building Act 2004 are complied with for their property. This includes:

- notifying Council in writing of any change in use of the property supplied;





- obtaining building consent for plumbing work, including the installation or removal of any backflow prevention devices located within the private property; and
- maintaining and testing any backflow prevention devices within the private property in accordance with the compliance schedule/building warrant of fitness.

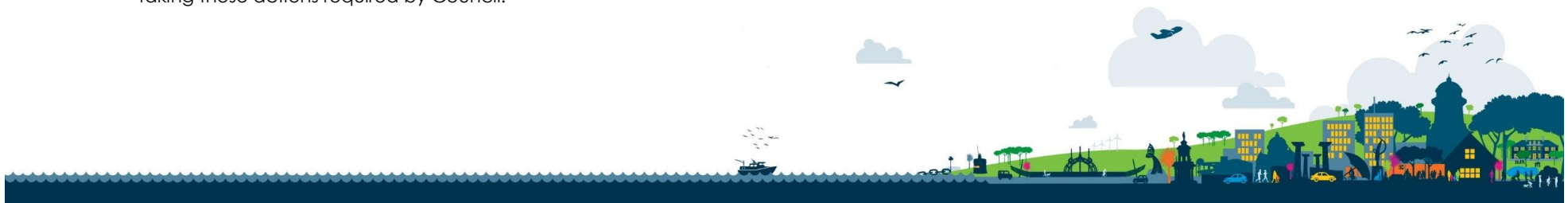
Responsibilities specific to a customer

Where a customer owns the boundary backflow prevention device or registered air gap, the customer must take responsibility for ensuring that it remains fully operational at all times and is made available to be tested annually or more frequently in accordance with the requirements of the Council.

The customer must ensure that any boundary backflow protection device is accessible at all times for inspection and maintenance purposes. Council reserves the right to charge a fee to the customers for any additional time spent making a device accessible if the customer has failed to do so.

The customer must not interfere with the device in any way. This includes raising the ground levels around the device that could compromise minimum clearances or access to test the device, or using the test ports as a bypass or temporary water supply.

There shall be no bypassing of any boundary backflow prevention device other than (with the Council's approval) with an equivalent device installed in parallel to ensure continuity of supply during testing or maintenance of the primary device. The customer must report leaks or any other problems observed upstream of the point of supply, or in the boundary protection device itself to Council as soon as practical but not exceeding 7 days. If Council requires the customer to undertake the work to remove any backflow risks, the customer must notify or inform Council prior to taking those actions required by Council.





The customer must report to Council any significant change or proposed change to which the water is to be used in relation to hazardous materials and toxic environments.

Ownership of boundary backflow prevention devices

The ownership and maintenance of all backflow prevention devices within Invercargill City District are as follows:

Council will own those boundary backflow prevention devices located outside the private property boundary on public land. Customers must pay the installation and initial commissioning costs for those devices on public places connected to the water supply of their property. Council will undertake annual testing and maintenance and charge the customer(s) for the work undertaken by Council as per Council's Fees and charges.

Boundary backflow prevention devices or air gaps on private property will be owned by the customer(s). The customer must obtain and pay for the necessary building consent, installation, required commissioning and ongoing maintenance. All backflow prevention devices inside the private property are required to be tested as part of the annual building warrant of fitness process. Air gaps are required to be registered with Council and verified annually.

Council will only intervene with backflow prevention matters on residential properties on request, or, if Council identifies or is notified that intervention is required to prevent any potential backflow event that is identifies as significant under Appendix 1 of this policy.





Council's risk assessment approach

Council will assess backflow risks in accordance with Appendix 1 to determine the Risk Hazard Category. The appropriate backflow prevention device to be installed will be based on the risk category a property poses.

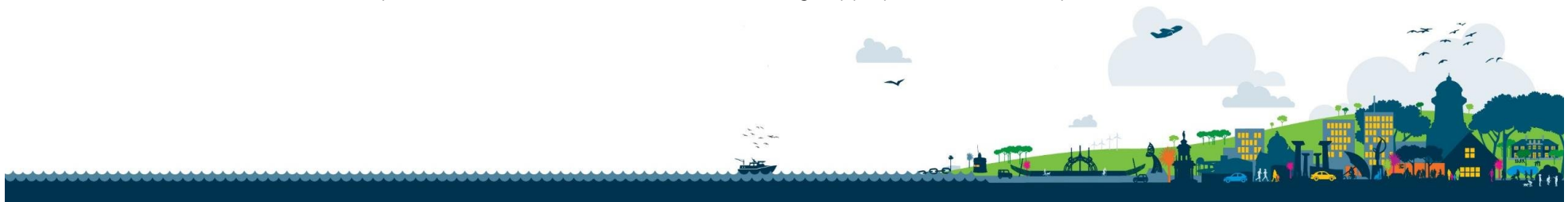
There are four risk hazard categories:

- **High Risk:** Any condition, device or practice which, in connection with the potable water supply system, has the potential to cause death.
- **Medium Risk:** Any condition, device or practice which, in connection with the potable water supply system, has the potential to injure or endanger health.
- **Low Risk:** Any condition, device or practice which, in connection with the potable water supply system, would constitute a nuisance, by colour, odour or taste, but not injure or endanger health.
- **Very Low Risk:** All household units (i.e. residences)

Council's approach for prioritisation and response

Council's approach under this policy will be to give priority to high risk properties, and those properties supplied by the bulk supply lines between Branxholme and Invercargill and Invercargill and Bluff, followed by medium, low and very low risk profile. They may also be done on an as-required basis as maintenance or replacement of connections on these is required or when new connections are requested.

If identified as high, medium and low risks Council will require customer(s) to install the necessary backflow prevention device(s). If the customer fails to undertake action within a reasonable timeframe, then Council will action the work required to remove the risk. The customer(s) will be liable for all cost incurred by Council. Council will recover such costs through appropriate debt recovery channels.





Residential household units are in the very low risk category and as such non-testable dual check valves are to be used for these. These will be installed by Council at the time of installation of a new or replacement of residential water connection(s) and incorporated into the normal charges for these.

The exception to the above will be where a residential property contains an identified or potential hazard or risk (including hazardous materials and toxic environments) in which case the level of protection will be determined by the risk hazard category. An example of this may be where there is a home-based business operating.

In the case of a residential development supplied by one water connection for multiple residences with a shared internal water supply, Council will supply one backflow prevention device on the incoming supply to protect the public water supply. It shall be the responsibility of each customer to provide backflow prevention for themselves to protect themselves from other users of the shared private supply within the property.

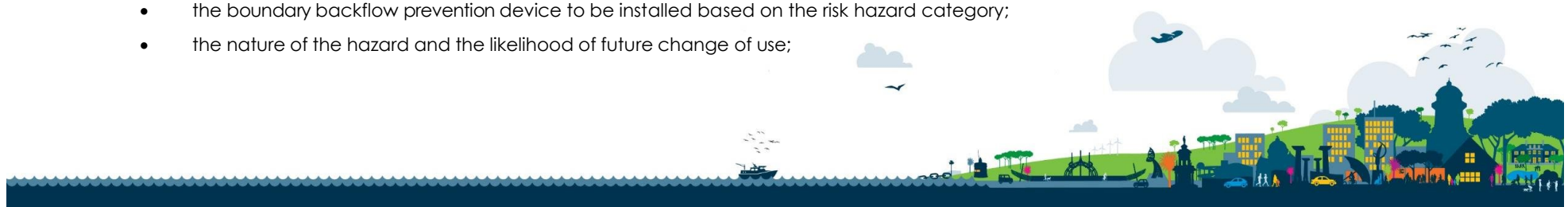
Periodic surveys of backflow risks to the water supply distributions system to determine medium and high-risk sites will be undertaken by Council at intervals of not less than five years to ensure the adequacy of backflow protection across the distributions system.

Boundary Backflow Installations

Council through this policy will be responsible for approving the type, location and size of all boundary backflow protection device installations.

The following installation details will be taken into consideration:

- the boundary backflow prevention device to be installed based on the risk hazard category;
- the nature of the hazard and the likelihood of future change of use;

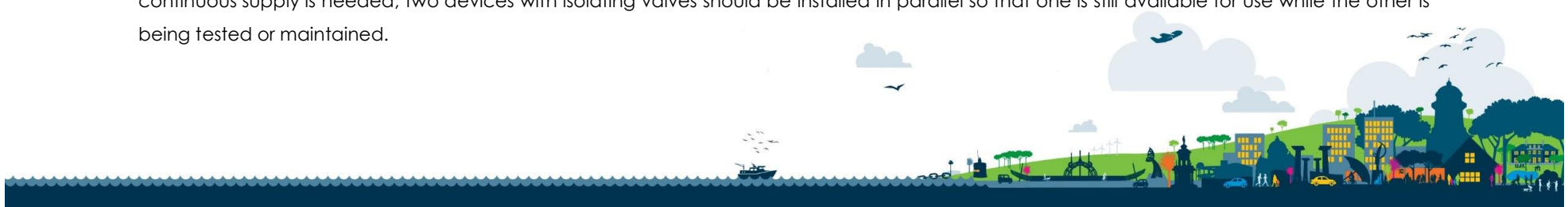




- accessibility in terms of accessibility to the device and not impeding pedestrian access;
- the metering arrangement (if applicable);
- the size of the connection to meet anticipated flow rates;
- head losses through the device;
- manufacturer's recommendations;
- protection against frost;
- the need for continuous water supply to the premises;
- access for checking, maintaining and testing the device;
- drainage requirements including size of drains;
- protection from traffic, underlying hazards, vandalism, etc.; and
- the point of supply beyond which customer responsibility begins.

Boundary backflow prevention devices shall not be located more than one metre inside the property boundary and be downstream of the water meter where one is installed. The exception being on residential properties with a non-testable dual check valve where it will be located outside the property, in the berm, other exceptions may apply based on location-specific practical limitations will be considered on a case-by-case basis. All boundary backflow prevention devices must comply with the current version (at the time of installation) of AS/NZS 2845.1 Water Supply - Backflow prevention devices Part 1: Materials, design and performance requirements, and Council may, at its discretion, consider or require other relevant standards on a case-by-case basis.

With the exception of fire suppression and/or hydrant lines (refer to fire suppression and hydrant system section for these) all boundary backflow prevention devices are to be installed with an isolating valve and line strainer upstream, and an isolating valve downstream of the device. Where continuous supply is needed, two devices with isolating valves should be installed in parallel so that one is still available for use while the other is being tested or maintained.





Reduced pressure zone backflow prevention devices must be installed above ground (minimum 300mm above flood level) and be protected from vehicular traffic, frost and vandalism. They should be installed in a securely fenced or caged area with a concrete base and a lockable access gate, where possible with the gate located parallel to the property boundary. Council will provide protection to boundary backflow prevention devices if it is located in public places. It is the customer's responsibility if it is located on private property.

Where double check valve devices are installed in an underground chamber, the design must allow for servicing by top entry and the chamber must be well drained. (For larger sized double check valve devices it is good practice to install these above ground, for ease of access and possible future upgrading to reduced pressure zone devices).

The boundary backflow device must be sited so that it can be readily maintained and tested in-line without compromising the health or safety of the individuals involved. It should be possible to access the device without the need to climb ladders or scaffolding or enter a confined space.

Installation, maintenance and testing of boundary backflow devices on public places must only be carried out only by persons authorised by Council. Where there is a need to undertake such work on devices on the customer's side of the point of supply that are covered by the Building Act 2004, this work must be carried out only by a certifying plumber licensed under the Plumbers, Gasfitters and Drainlayers Act 2006. Where testing or commissioning is being undertaken then this is to be done only by a person accepted as an IQP on the South Island IQP register.

On completion of the installation Council is to be provided with signed as-built drawings that clearly show detail about the boundary backflow protection device and the way it has been installed, together with the first test results. Where Council is not the owner of the device, the details of the owner and, where appropriate, their agent(s) are to be provided with the as-built information. Where there is a building consent in place this as-built information is to be supplied to the Building Services team at the time of inspection and a copy of this sent internally to the Council's Three Waters team for entering into their register.





Testing Requirements

Irrespective of ownership (by Council or the customer), all testable boundary backflow prevention devices shall be tested at least annually. Testing shall be carried out more frequently under special circumstances where required by Council and after any maintenance work is carried out on the device. All registered air gaps shall be inspected and verified annually. In the event of a suspected backflow incident, Council may require an additional test to be carried out.

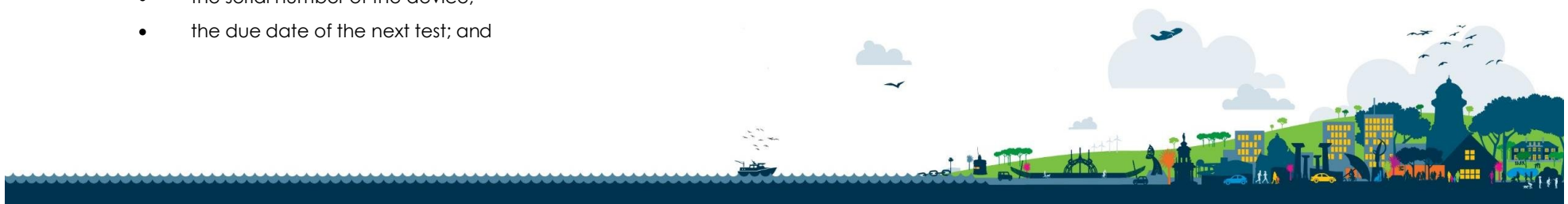
The testing shall be undertaken only by an Independently Qualified Person (IQP) approved for backflow prevention device testing (SS7) by the South Island IQP Panel. The inspection and verification of registered air gaps is to be done by an IQP or by someone approved by Council to do so. All testing must be carried out as per the New Zealand Backflow Testing Standard 2019: Field testing of backflow prevention devices and verification of air gaps or AS/NZS 2845.3.

Backflow testers involved with fire lines must understand the protocols of isolating fire protection systems. These protocols address the need to notify Fire and Emergency New Zealand, building owners, and insurers before a system is isolated. For this reason, all backflow prevention devices associated with fire protection systems are to be checked and maintained under the building's warrant of fitness.

The backflow test kit used must have a maximum working pressure of 1200 kPa and have separately coloured hoses to minimise mistakes being made during use. The test kit used must be certified/recertified every 12 months by an ISO registered laboratory and a copy of the test certification kept with the kit.

It is recommended that securely fastened test tags be attached to the device after testing showing as a minimum:

- the serial number of the device;
- the due date of the next test; and





- the name of tester and contact phone number.

Where a device fails its test, the backflow tester should attempt to repair the device while on site and retest. Where it is not possible to repair the device on site, an equivalent substitute device shall be installed (and tested). The failed test report shall be provided along with the subsequent pass test report.

The backflow tester is to provide a test certificate that meets the requirements of the nominated testing standard. Unless they are being supplied with a building warrant of fitness the results of all tests shall be sent to Council within five working days of the test.

In addition to annual testing, backflow prevention devices installed in dedicated fire systems must be tested immediately after a fire, and after each full flow test.

Where an internal boundary backflow prevention device is not yet subject to the compliance schedule/building warrant of fitness regime, due to the non-completion of other building consent work, but is being used to supply water, the customer is required to still test the device not less than annually and shall forward these results to Council for updating the register.

Requirements for fire suppression systems or hydrants

Backflow prevention devices associated with fire suppression systems or hydrants need to be appropriately designed and installed so as to not impede the correct operation of the system. They must comply with the building code and be appropriately sized and specified by the system designer.

A fire suppression backflow preventer shall be installed in the sprinkler or suppression system's valve house, or other secure environment as approved by the Council. Where Council requires the backflow device on a line serving a fire suppression or hydrant system to be located at the boundary (because for instance there is a significant distance between the boundary and the valve house), the backflow prevention device





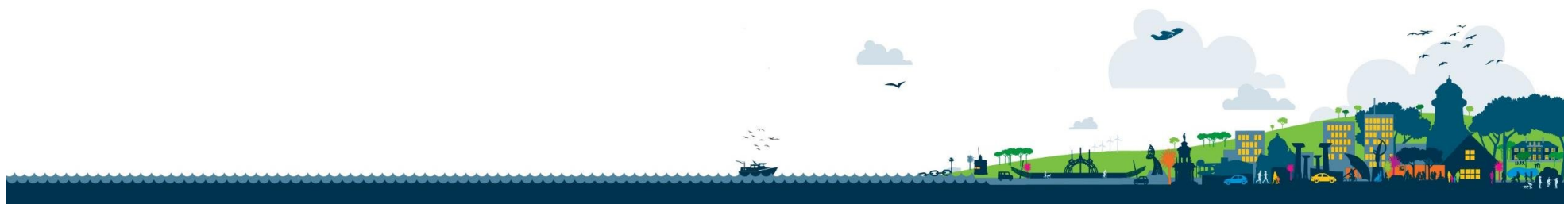
type, size, location and arrangement is required to be approved by the designer of the fire suppression system or hydrant before being proposed to Council.

Particular attention shall be paid in the design of the boundary installation to pressure losses associated with the boundary backflow device and its security. *(It is recommended that the boundary installation is located in a secured enclosure and that counter clockwise closing valves are incorporated, to minimise the possibility that the backflow isolation valve is deliberately closed, or left closed accidentally after testing of the boundary backflow device).*

In accordance with NZS 4541: Automatic Fire Sprinkler Systems, all valves on a connection serving a sprinkler system (other than a residential sprinkler system) shall be alarmed and/or monitored for unauthorised operation. It is the customer's responsibility to ensure this is in place and is monitored.

As per the Water New Zealand Code of Practice for boundary backflow prevention (2019) line strainers are not required to be installed upstream of backflow prevention devices installed on fire sprinkler lines with an expected demand of less than 2,300 litres per minute. When demand exceeds 2,300 litres per minute turbulence in the line could result in debris being transported and/or should Council deem it necessary due to high levels of debris in the water reticulation system, then only sprinkler system certifier listed strainers shall be fitted. This is to be approved by the sprinkler system designer.

Where a booster pump or similar is to be fitted to a fire sprinkler system this needs to be approved by Council as these can cause issues in the public water supply through the pump's action reducing the pressure in the supply pipes which could create back siphonage issues elsewhere. Conversely, they can create a pressure differential when they increase the pressure on the sprinkler system thereby creating a back pressure risk.





A backflow prevention device incorporating a bypass meter (sometimes known as a detector check assembly) to provide backflow protection and to detect any inappropriate use or possible leakage of the fire line may be incorporated on dedicated lines for fire sprinkler systems. Such assemblies shall have a producer statement from the supplier confirming that the device has been built and tested in compliance with relevant standards.

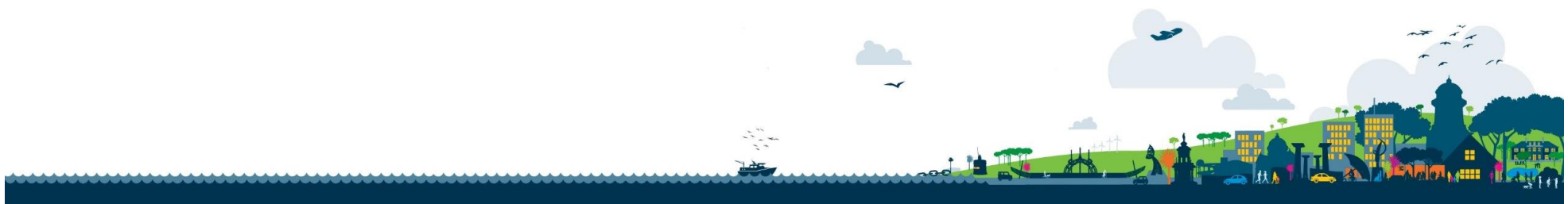
Due to the complexities associated with backflow prevention devices on fire suppression systems and the consequences if not installed or maintained correctly, the installation of these is to be done under a building consent obtained by the owner. The backflow prevention device is then to be included on the building's compliance schedule as an SS7 to ensure it is tested and maintained as part of the building's annual warrant of fitness administered by the building owner.

Mechanical flow meters shall not be installed on fire lines, as they could compromise flow under fire conditions.

Standpipe hydrant access

Access to a water network through the use of a standpipe is not permitted except by Fire and Emergency New Zealand, other emergency services, fire certifiers assessing the availability of fire flows, Council, or Council authorised contractors where it is necessary to access the network for operation of the drinking water supply.

Bulk water carriers shall only access the water supply through a Council approved filling station for which they have been granted authorisation. These filling stations will have onsite backflow prevention measures in place.





Non-compliance with the backflow requirements of the Water Supply Bylaw and this policy

In the event of a breach under Part 9 of Council's Water Supply Bylaw, Council shall serve notice on the customer(s) advising the nature of the breach and the steps to be taken to remedy it. If, after one week, the customer persists in the breach, Council reserves the right to reduce the flow rate of water to the customer without notice. In such an event the full service of the water supply shall be re-established only after payment of the appropriate fee and remedy of the breach to the satisfaction of Council.

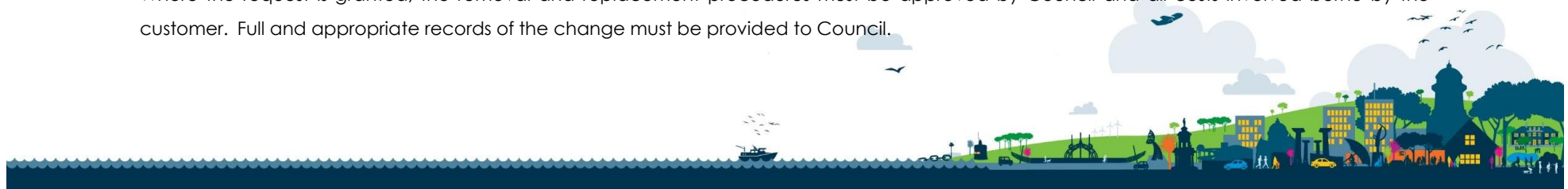
Backflow Prevention Device Register

Council will hold and maintain a register of all boundary backflow prevention devices including the locations, device types, assessed risk level and the test results of each device. Amongst other things, Council will use this to separate out those devices and registered air gaps it is responsible for testing or verifying and those which fall under the property's building warrant of fitness and are tested by owner's IQPs.

Removal of a Boundary Device

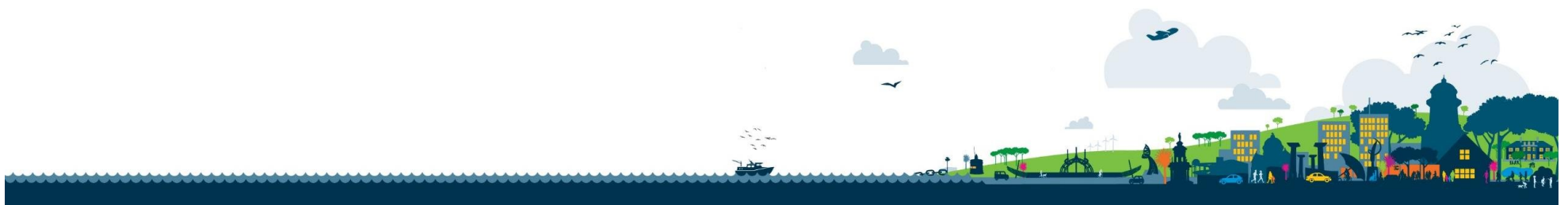
Where a customer considers that the type of boundary backflow prevention device in use is no longer necessary, they may put a request to Council by way of a building consent application for the device to be removed and another device type (e.g. a non-testable device) installed in its place.

Where the request is granted, the removal and replacement procedures must be approved by Council and all costs involved borne by the customer. Full and appropriate records of the change must be provided to Council.



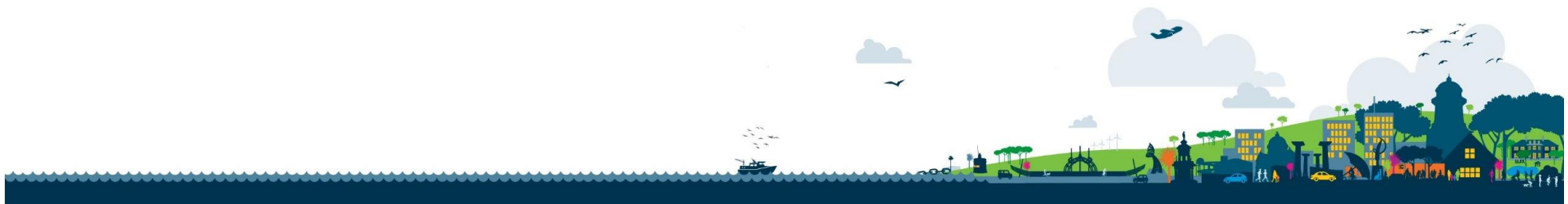


Alternatively, Council may require the device to remain in place to mitigate future risks and may agree to suspend testing with a specified periodic review.





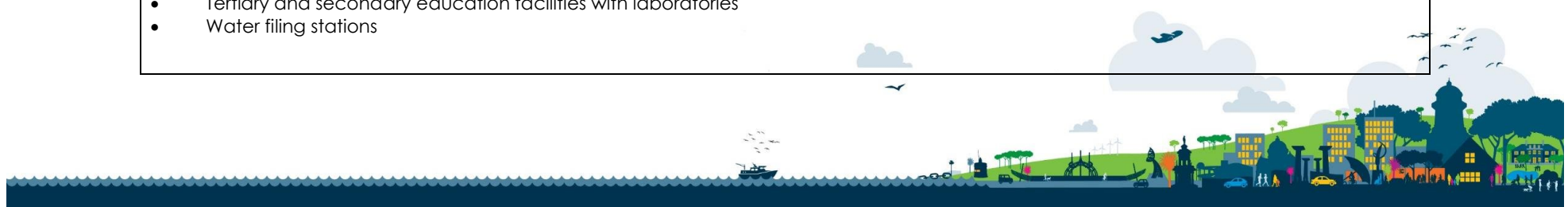
Revision History:	Nil
Effective Date:	1 December 2024
Review Period:	This policy will be reviewed every six (6) years unless an earlier review is required due to legislative change, or is warranted by another reason requested by Council.
New Review Date:	December 2030
Associated Documents / References:	
Supersedes:	Nil
Reference Number:	A5446243
Policy Owner:	Manager- Manager Three Waters Operations
Relevant roles:	Three Waters Operational Engineer





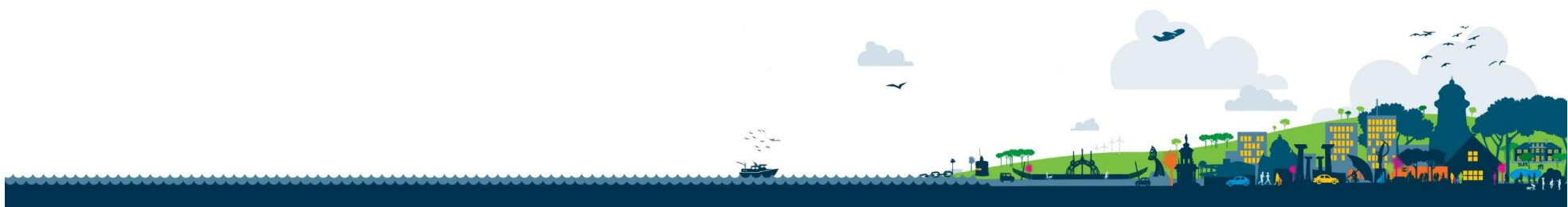
Appendix 1: Risk Hazard Categories

Hazard description	Acceptable devices
<p>High: <i>Any premises, condition, device or practice which, in connection with the potable water supply system, has the potential to cause death.</i></p>	<ul style="list-style-type: none"> • Reduced pressure zone device (RPZ) • Reduced pressure zone detector for fire systems • Registered air gap
<p>High hazard includes but is not necessarily limited to:</p> <p>Premises:</p> <ul style="list-style-type: none"> • Abattoirs • Vehicle and plant washing facilities • Chemical laboratories • Chemical plants • Commercial and industrial premises using, processing or manufacturing toxic chemicals • Hospitals • Laboratories • Dental surgeries • Mortuaries • Veterinary clinics • Petroleum processing plants, storage plants and service stations • Piers, docks, marinas and other waterfront facilities • Premises containing soil waste dump points, including stock truck effluent disposal sites • Sewage treatment plants and sewage lift stations • Tertiary and secondary education facilities with laboratories • Water filling stations 	



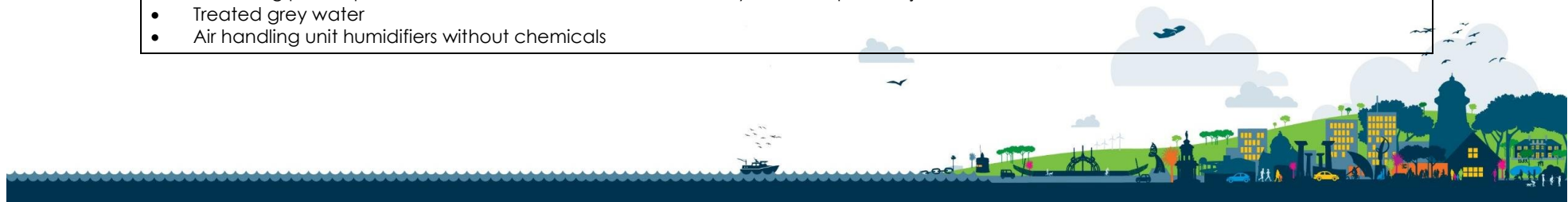
Conditions, devices or practices:

- Autoclaves and sterilisers
- Systems containing chemicals such as anti-freeze, anti-corrosion, biocides, or fungicides
- Beauty salon and hairdresser's sinks
- Boiler, chiller and cooling tower make-up water
- Chemical dispensers
- Chemical injectors
- Chlorinators
- Dental equipment
- Direct heat exchangers
- Fire sprinkler systems and fire hydrant systems that use toxic or hazardous water
- Hose taps associated with high hazard situations like mixing of pesticides and soil waste dump points
- Irrigation systems with chemicals
- Pest control equipment
- Photography and X-ray machines
- Piers and docks
- Sewage pumps and sump ejectors
- Sluice sinks and bed pan washers
- Livestock water supply with added chemicals
- Veterinary equipment
- Bidets and douche seats
- Handheld bidet hoses and WC trigger sprays
- Water connections for portable and mobile tankers
- Water connections for mobile dental clinics and/or home birthing pools
- Healthcare waste disposal equipment





Hazard description	Acceptable devices
<p>Medium: Any premises, condition, device or practice which, in connection with the potable water supply system, has the potential to injure or endanger health.</p>	<ul style="list-style-type: none"> • Reduced pressure zone devices (RPZ) • Double check valve • Double check detector for fire systems • Registered air gap
<p>Medium hazard includes but is not necessarily limited to:</p> <p>Premises:</p> <ul style="list-style-type: none"> • Caravan parks with no soil waste dump points • Food and beverage processing plants • Premises with fire-fighting water services • Premises with an alternative water supply • Public swimming pools <p>Conditions, devices or practices:</p> <ul style="list-style-type: none"> • Auxiliary water supplies such as pumped and non-pumped fire sprinkler secondary water • Connections for appliances, vehicles or equipment • Deionised water, reverse osmosis units and equipment cooling without chemicals • Fire sprinkler systems and building hydrant systems • Hose taps and fire hose reels associated with medium hazard situations • Irrigation systems with underground controllers • Irrigation without chemicals • Livestock water supply without added chemicals • Untreated water storage tanks • Water for steam cleaning • Water for equipment cooling • Drink dispensers with carbonators • Swimming pools, spas and fountains, other than those filled by a hose tap in conjunction with a household unit • Treated grey water • Air handling unit humidifiers without chemicals 	





Hazard description	Acceptable devices
<p>Low Any premises, condition, device or practice which, in connection with the potable water supply system, would constitute a nuisance, by colour, odour or taste, but not injure or endanger health.</p>	<ul style="list-style-type: none"> • Reduced pressure zone devices (RPZ) • Double check valve • Registered air gap
<p>Low hazard includes but is not necessarily limited to:</p> <p>Premises:</p> <ul style="list-style-type: none"> • Commercial premises not covered by medium and high with potential for change of use • Cafes, restaurants and other facilities used for the storage or preparation of food and beverages <p>Conditions, devices or practices:</p> <ul style="list-style-type: none"> • Drink dispensers (except carbonators) • Coffee machines • Auto vegetable peelers • Commercial dishwashers • Retractable hoses • Drinking fountains and bottle fillers • Hose taps, other than those associated with medium hazard or High hazard situations 	





Hazard description	Acceptable devices
<p>Very Low <i>Properties that constitute a very low risk of contamination but as they sit above the water reticulation could allow water to return back into the mains supply in the event of depressurisation of the network.</i></p>	<ul style="list-style-type: none"> • Non-testable dual check valve • Air gap
<p>Premises: Residential household units that contain standard sanitary fixtures and appliances protected by air gap separation.</p>	

Note: The examples of premises listed above are not an exhaustive list. Where there is doubt, boundary backflow protection shall be selected to match the highest risk hazard identified within the property by making comparison to the hazard descriptions.



Invercargill City Council

Water Supply Bylaw

2017



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1. Title

A Bylaw of the Invercargill City Council by way of Special Order pursuant to the provisions of the Local Government Act 2002 and all other Acts, powers and authorities enabling it in that behalf to make a Bylaw to be known as the Invercargill City Council Bylaw 2017/4 – Water Supply.

2. Commencement

This Bylaw shall be known as the Invercargill City Council – Water Supply Bylaw 2017 and shall come into force on 1 December 2024, (includes amendments on 1 December 2024).

This Bylaw replaces any other Water Supply Bylaws created by Invercargill City Council.

3. Purpose and Application of Bylaw

The purpose of this bylaw is to:

- a. enable Council to manage and provide public water supply services;
- b. protect the public water supply system from contamination, misuse, and interference;
- c. protect the health and safety of the public, customer(s) and person(s) using the public water supply; and
- d. provide direction and guidance on water restrictions.

This Bylaw shall apply to the Invercargill City Council.

4. Scope

This Bylaw is made under the authority of the Local Government Act 2002 for the supply of water to its customers by the Water Supply Authority (WSA). The supply and sale of water by the WSA is subject to:

- e. Statutory Acts and Regulations
 - i. Building Act 2004.
 - ii. Fire and Emergency Act 2017.
 - iii. Water Services Act 2021.
 - iv. Local Government Act 2002.
 - v. Local Government (Rating) Act 2002.
 - vi. Resource Management Act 1991.
- f. Relevant Codes and Standards
 - i. Water Services (Drinking Water Standards for New Zealand) Regulations 2022.
 - ii. BS EN 14154-3:2005 Water meters. Test methods and equipment.
 - iii. SNZ PAS 4509:2008 New Zealand Fire Service fire fighting watersupplies code of practice.
 - iv. Water New Zealand Good Practice Guide: Water metering of Customers on Reticulated Supplies

- v. Water New Zealand Boundary Backflow Prevention for Drinking Water Supplies 2019
- vi. Invercargill City Council Code of Practice for Land Development
- vii. Invercargill Water Safety Plan 2022
- viii. Taumata Arowai Drinking Water Quality Assurance Rules 2022

5. Interpretations

When interpreting this Bylaw use the definitions set out in Section 6 unless the context requires otherwise. If you see a reference to a repealed enactment read that as a reference to its replacement.

For the purpose of this Bylaw, the word "shall" refers to practices that are mandatory for compliance with this Bylaw, while the word "should" refers to practices that are advised or recommended.

6. Definitions

For the purpose of this Bylaw, unless inconsistent with the context, the following definitions apply:

Air gap: This is a permanent separation, measured vertically, between the lowest point of the water supply outlet and the flood level of the equipment, tank or fixture into which the outlet discharges. The gap is required to be the greater of 25mm or twice the supply pipe diameter.

Approved means approved in writing by the WSA, either by resolution of the Council or by any Authorised Officer of the WSA.

Backflow means the unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system.

Backflow prevention device means a valve installed on a water supply to prevent backflow from occurring and safeguard the water supply system.

Connection Box or "Meter Box" means the service valve, meter (when fitted) and associated fittings installed and maintained by Council on the service pipe.

Council means the Invercargill City Council or any officer authorised to exercise the authority of the Council and Council is the WSA.

Customer means a person who uses, or has obtained the right to use or direct the manner of use of, water supplied by the WSA.

Detector check valve means a check (non-return) valve which has a positive closing pressure and a metered bypass to measure flows typically associated with leakage or unauthorised use on a dedicated fire supply.

Drinking water is as per the definition provided in Section 6 of the Water Services Act 2021.

Essential Works means work required to be done under urgency and which is necessary for the continued and/or safe operation and protection of the public water supply.

Extraordinary supply means a category of on demand supply including all purposes for which water is supplied other than ordinary supply and which may be subject to specific conditions and limitations.

Fees and charges means the list of items, terms, and prices for services associated with the supply of water as adopted by the Council in accordance with the LGA 2002 and the Local Government (Rating) Act 2002.

Level of service means the measurable performance standards on which the WSA undertakes to supply water to its customers.

On demand supply means a supply which is available on demand directly from the point of supply subject to the agreed level of service.

Ordinary supply means a category of on demand supply used solely for domestic purposes.

Person means a natural person, corporation sole or a body of persons whether corporate or otherwise.

Point of supply means the point where the responsibility for ownership and maintenance of the service pipe passes from Council to customer. Where the connection box is on public land, the point of supply is where the service pipe crosses the property boundary. When the connection box is on private land:

- For connections off the Branxholme and Bluff supply mains, the point of supply is at the meter, or if none is fitted, the service valve.
- For connections off the urban distribution system, the point of supply is where the service pipe crosses the street property boundary.

Potable means water that is safe to drink and that complies with the Water Services (Drinking Water Standards for New Zealand) Regulations 2022.

Premises means to include the following:

- a. A property or allotment which is held under a separate certificate of title or for which a separate certificate of title may be issued and in respect to which a building consent has been or may be issued; or
- b. A building or part of a building that has been defined as an individual unit by a cross-lease, unit title or company lease and for which a certificate of title is available; or
- c. Land held in public ownership (e.g. reserve) for a particular purpose.

Public notice means as defined in the Local Government Act 2002.

Restricted flow supply means a type of water supply connection where a small flow is supplied through a flow control device, and storage is provided by the customer to cater for the customer's demand fluctuations.

Restrictor means a flow control device fitted to the service pipe to limit the flow rate of water to a customer's premises.

Roading authority means a territorial authority or Transit New Zealand.

Service pipe means the section of water pipe between a water main and the point of supply.

Service valve (Toby) means the valve at the customer end of the service pipe.

Storage tank means any tank having a free water surface.

Supply pipe means the section of pipe between the point of supply and the customer's premises through which water is conveyed to the premises.

Water Supply Authority (WSA) means the operational unit of the Council responsible for the supply of water.

Water supply system means all those components of the network between the point of abstraction from the natural environment and the point of supply. This includes but is not limited to: wells, infiltration galleries, intake structures, open raw water storage ponds/lakes, falling mains, treatment plants, treated water reservoirs, trunk mains, service mains, rider mains, pump stations and pumps, valves, hydrants, scour lines, service pipes, boundary assemblies, meters, backflow prevention devices and tobies.

Water unit means the basis of measurement for a restricted flow supply and equal to a volume of 365 m³ delivered at the rate of 1 m³ per day

7. Protection of Water Supply

7.1. Water Supply System

7.1.1. Access to System

No person other than the WSA and its authorised agents shall have access to any part of the water supply system, except to connect to the point of supply, subject to 8.1, and to operate the service valve.

7.1.2. No Person to Connect To, or Interfere with a Water Supply System

Except as set out in 7.1.1, 7.1.3 and 7.1.4, no person shall make any connection to, or otherwise interfere with, any part of the water supply system.

7.1.3. Fire Hydrants

Only the attending Fire Service/s shall gain access to, and draw water from fire hydrants for the purpose of fighting fires, training, and testing.

7.1.4. Other Uses

The right to gain access to, and draw water from the water supply for uses other than firefighting (for example, flow testing or pipe flushing) shall be restricted to:

- a. The WSA or its agents;
- b. Permit holders, being those persons who after having submitted an application to the WSA are subsequently approved to draw water from fire hydrants or tanker filling points. Such permits shall be valid only so long as the permit holder complies with the conditions endorsed on the permit. Without prejudice to other remedies available, the WSA may remove and hold any equipment used by an offender to gain access to, or draw water from a fire hydrant, and assess and recover the value of water drawn without authorisation and any other associated costs.

7.1.5. Working Around Buried Services

The WSA shall keep accurate permanent records ('as-builts') of the location of its buried services. This information shall be available for inspection at no cost to users. Charges may be levied to cover the costs of providing copies of this information.

Any damage which occurs to a WSA service shall be reported to the WSA immediately. The person causing the damage shall reimburse the WSA with all costs associated with repairing the damaged service, and any other costs the WSA incurs as a result of the incident.

8. Conditions of Supply

8.1. Application for Supply

8.1.1. Initial Application

Every application for a supply of water shall be made in writing on the standard WSA form accompanied by the prescribed charges. The applicant shall provide all the details required by the WSA.

On receipt of an application the WSA shall, after consideration of the matters in 8.4 and 8.5, either:

- a. Approve the application and inform the applicant of the type of supply, the level of service, the size of the connection and any particular conditions applicable; or
- b. Refuse the application and notify the applicant of the decision giving the reasons for refusal.

For the agreed level of service to the applicant, the WSA should determine the sizes of all pipes, fittings and any other equipment, up to the point of supply. The WSA shall supply and install the service pipe up to the point of supply at the applicant's cost or may allow the supply and installation of the service pipe to be carried out by approved contractors.

The applicant shall have the authority to act on behalf of the owner of the premises for which the supply is sought, and shall produce written evidence of this if required.

An approved application for supply which has not been actioned within six months of the date of application will lapse unless a time extension has been approved. Any refund of fees and charges shall be at the discretion of the WSA.

8.1.2. *Change of Use*

Where a customer seeks a change in the level of service or end use of water supplied to premises, and/or the supply changes from an ordinary to an extraordinary type (see 8.4) or vice versa, a new application for supply shall be submitted by the customer.

8.1.3. *Prescribed Charges*

Charges applicable at the time of connection may include:

- a. Payment to the WSA for the cost of the physical works required to provide the connection;
- b. A development contribution charge determined in accordance with the Local Government Act 2002;
- c. A financial contribution charge determined in accordance with the Resource Management Act 1991.

8.2. Point of Supply

8.2.1. *Responsibility for Maintenance*

The WSA shall own and maintain the service pipe and fittings up to the point of supply. The customer shall own and maintain the supply pipe beyond the point of supply.

8.2.2. *Single Ownership*

For individual customers the point of supply, unless otherwise specified, shall be where the service pipe enters the premises at its street frontage or defined right of way to street frontage. Other positions shall require specific approval.

For each individual customer there shall be only one point of supply, unless otherwise approved.

8.2.3. *Multiple Ownership*

For the different forms of multiple ownership of premises and/or land as described below:

- a. For Company Share/Block Scheme (Body Corporate) – as for single ownership;
- b. For Leasehold/Tenancy in Common Scheme (Cross Lease), Strata Title, Unit Title (Body Corporate) and any other form of multiple ownership – as for single ownership. They shall be treated collectively as one customer with one point of supply, unless otherwise proved.

8.3. Access

8.3.1. Rights of Access

Where a meter is on private property the customer shall allow the WSA access between 7.30 am and 6.00 pm on any day.

Outside these hours (such as for night time leak detection) the WSA shall give notice to the customer.

Where access is not made available for any of the above times and a return visit is required by the WSA, a rate may be charged as for 'Meter reading by appointment'.

Under emergency conditions the customer shall allow the WSA free access to, and about the meter at any hour.

8.3.2. Maintenance of Access

The customer shall maintain the area in and around the point of supply meter keeping it free of soil, growth, or other matter or obstruction which prevents, or is likely to prevent convenient access.

8.4. Types of Supply

8.4.1. General

Connections to WSA water supply system shall be granted according to "Connecting to Water Supply Statement of City Policy" adopted 17 September 1990.

Supplies shall be classified as either 'on demand' or 'restricted flow' and the use of water from the supply shall be either 'ordinary' or 'extraordinary'.

8.4.2. On Demand Supply

Every premises shall be entitled to an ordinary supply of water subject to the following conditions:

- a. The exclusion of its use for garden watering under any restrictions made by the WSA under 8.7.3;
- b. Payment of the appropriate charges in respect of that property;
- c. Any other charges or costs associated with subdivisional development; and
- d. Any other relevant conditions in section 8 of this Bylaw.

The WSA shall be under no obligation to provide an extraordinary supply of water (see also the provisions of 8.7 and 8.9.2).

8.4.3. Restricted Flow Supply

Restricted flow supply shall be available to premises within a designated area only, or under special conditions set by the WSA.

The water supply shall be restricted so as to deliver the agreed number of water units at a steady flow rate.

The WSA shall charge for the restricted flow supply by either:

- a. The volume passing through a meter; or
- b. The agreed number of water units.

8.4.4. Ordinary Use

Ordinary use is for domestic purposes (which may include use in a firesprinkler system to NZS 4517) and shall include:

- a. Washing down a car, boat, or similar;
- b. Garden watering by hand;
- c. Garden watering by a portable sprinkler (subject to the provisions of 8.7.3);

8.4.5. Extraordinary Use

Extraordinary use includes:

- a. Domestic – spa or swimming pool, fixed garden irrigation systems,
- b. Commercial and business;
- c. Industrial;
- d. Agricultural;
- e. Horticultural;
- f. Viticultural;
- g. Lifestyle blocks (peri-urban or small rural residential);
- h. Fire protection systems other than sprinkler systems installed to comply with NZS 4517;
- i. Out of district (supply to, or within another local authority);
- j. Temporary supply.

8.5. Metering

Currently the Invercargill City Council does not universally meter all water supplies and so:

An ordinary use of water shall not normally be metered (subject to the WSA reserving the right to fit a meter and charge where it considers water use is excessive, or for a meter to be fitted at the customer's request), and the cost of such use shall be as prescribed in the Local Government (Rating) Act 2002, sections 9, 15 to 19, and sections 101 to 103.

An extraordinary use shall normally be metered and charged for in accordance with 8.15. Where the extraordinary use is for fire protection only, this supply shall not normally be metered.

If Invercargill City Council does adopt a policy to universally meter all supplies then:

Both ordinary and extraordinary use of water shall normally be metered and levied at rates, as prescribed in the Local Government (Rating) Act 2002, sections 9, 15 to 19, and sections 101 to 103.

8.6. Levels of Service

The WSA shall provide water in accordance with the level of service contained in the Long Term Council Community Plan. For those periods where the level of service allows noncompliance with the specified value(s), the WSA should make every reasonable attempt to achieve the specified value(s).

8.7. Continuity of Supply

8.7.1. Supply

Due to practical and physical limitations the WSA cannot guarantee an uninterrupted or constant supply of water in all circumstances, or the continuous maintenance of any particular pressure, but shall do its best to meet the continuity of supply levels of 8.6, subject to the exemptions contained in 8.7.3 and 8.7.4.

Where works of a permanent or temporary nature are planned which will affect an existing supply, the WSA shall consult with, or inform or give notice to all known customers likely to be substantially affected.

8.7.2. Uninterrupted Service

If a customer has a particular requirement for an uninterrupted level of service (flow, pressure, or quality), it shall be the responsibility of that customer to provide any storage, back-up facilities, or equipment necessary to provide that level of service.

8.7.3. Demand Management

The customer shall comply with any restrictions (including garden watering) which may be approved by the WSA to manage high seasonal or other demands. Such restrictions shall be advised by public notice.

Even when such restrictions apply the WSA shall take all practicable steps to ensure that an adequate supply for domestic purposes is provided to each point of supply.

8.7.4. Emergency Restrictions

During an emergency the WSA may restrict or prohibit the use of water for any specified purpose, for any specified period, and for any or all of its customers. Such restrictions shall be advised by public notice. The WSA may enact penalties over and above those contained in these conditions to enforce these restrictions. The decision to make and lift restrictions, and to enact additional penalties, shall be made by the Council, or where immediate action is required, by the manager of the WSA subject to subsequent Council ratification.

8.7.5. *Maintenance and Repair*

Wherever practical the WSA shall make every reasonable attempt to notify the customer of a scheduled maintenance shutdown of the supply before the work commences. Where immediate action is required and notification is not practical, the WSA may shut down the supply without notice.

8.8. Liability

The WSA shall endeavour to meet the level of service requirements of 8.6, but shall not be liable for any loss, damage or inconvenience which the customer (or any person using the supply) may sustain as a result of deficiencies in, or interruptions to, the water supply. The WSA may, under certain circumstances and at its sole discretion, make payments for damage caused to equipment, appliances, processes, and materials as a direct result of a variation in the water supply, provided that any such equipment or appliances have been designed to cater for reasonable variations in the flow, pressure, and quality of the water supply.

8.9. Fire Protection Connection

8.9.1. *Connection Application*

Any proposed connection for fire protection shall be the subject of a specific application (on the standard WSA form) made to the WSA for approval. Any such connection shall be subject to the conditions specified by the WSA.

8.9.2. *Design*

It shall be the customer's responsibility to ascertain in discussion with the WSA and monitor whether the supply available is adequate for the intended purpose.

8.9.3. *Fire Protection Connection Metering*

Where the supply of water to any premises is metered the WSA may allow the supply of water for the purposes of firefighting to be made in a manner which bypasses the meter, provided that:

- a. The drawing of water is possible only in connection with the sounding of an automatic fire alarm or the automatic notification of the fire brigade; or
- b. A WSA approved detector check valve has been fitted on the meter bypass.

Any unmetered connection provided to supply water to a fire protection system shall not be used for any purpose other than firefighting and testing the fire protection system unless the fire protection system is installed in accordance with NZS 4517.

Where a fire connection has been installed or located so that it is likely or possible that water may be drawn from it by any person for purposes other than firefighting, the WSA may require the supply to be metered.

8.9.4. Fire Hose Reel

Where the supply of water to any premises is metered, fire hose reels shall be connected only to the metered supply, not to the fire protection system. The water supply to fire hose reels shall comply with the requirements of NZS 4503.

8.9.5. Charges

Water used for the purpose of extinguishing fires shall be supplied free of charge. Where the fire protection connection is metered and water has been used for firefighting purposes, the WSA shall estimate the quantity of water so used, and credit to the customer's account an amount based on such an estimate.

8.9.6. Ongoing Testing and Monitoring

Customers intending to test fire protection systems in a manner that requires a draw-off of water, shall obtain the approval of the WSA beforehand. Water used for routine flushing and flow testing does not constitute waste but the quantity of water used may be assessed and charged for by the WSA.

8.10. Backflow Prevention

8.10.1. Responsibilities and Obligations

The WSA's must oversee and ensure measures are in place to protect water supply arrangements against the risk of backflow under section 27 of the Water Service Act 2021. This involves either:

- a. The WSA installs a backflow prevention device and requires the Customer to reimburse the WSA for the cost of installation, maintenance, and ongoing testing of the device; or
- b. The WSA requires the Customer to install, maintain, and test a backflow prevention device that incorporates a verifiable monitoring system in accordance with any requirements imposed by the WSA.

The Customer must take all practicable measure under the WSA's Backflow Prevention Policy on the customer's side of the point of supply to prevent water which has been drawn from the WSA's water supply from returning to that supply. This includes but is not limited to:

- a. Backflow prevention either by providing an adequate air gap, or by the use of an appropriate backflow prevention device;
- b. The prohibition of any cross-connection between the WSA water supply and
 - i. Any other water supply (potable or non-potable)
 - ii. Any other water source
 - iii. Any storage tank
 - iv. Any other pipe, fixture or equipment containing chemicals, liquids, gases, or other non-potable substances.

At the WSA's request, the customer must provide any information about any use or activity at the customer's side of point of supply in relation to a backflow risk category, and/ or take any action(s) requested by the WSA in accordance with the WSA's Backflow Prevention Policy to ensure backflow prevention is achieved to the WSA's satisfaction.

Where there is a change of use or activity carried out at the Customer's side of the point of supply that may alter the risk hazard category¹, the customer must:

- a. notify the WSA in writing of any change of use or activity; and
- b. demonstrate how backflow prevention will be achieved in relation to the change, to the WSA's satisfaction; and
- c. install a backflow prevention device if one is required, or comply with any requirement made by the WSA under section 27 of the Water Services Act 2021.

A customer must not bypass any Backflow Prevention Device unless the bypass line is also fitted with a Backflow Prevention Device deemed the equivalent of the device being bypassed and / or appropriate for the same hazard risk category and has been approved by the WSA.

The WSA may charge the customer for, but is not limited, to site audits, applications for changes in hazard category classification, and any remedial work and / or essential work. The WSA may recover costs for installing, testing and maintaining backflow prevention devices from the customer(s) where appropriate and / or if the WSA undertook installation, testing and maintenance of backflow prevention devices on the customer(s)'s behalf.

8.10.2. *Unmanaged Risk*

Notwithstanding 8.10.1 the WSA may fit a backflow prevention device on the WSA side of the point of supply where the customer cannot demonstrate that the risk of backflow is adequately managed. This will be enabled in accordance with the guidance provided under the WSA's Backflow Prevention Policy.

8.11. WSA Equipment and Inspection

8.11.1. *Care of Water Supply System*

The customer shall take due care not to damage any part of the water supply system, including but not limited to pipework, valves, meters, restrictors, chambers, and backflow prevention devices.

8.11.2. *Inspection*

Subject to the provisions of the Local Government Act 2002, the customer shall allow the WSA with or without equipment, access to any area of the premises for the purposes of determining compliance with these conditions.

¹ Appendix 1 of the WSA's Backflow Prevention Policy

8.12. Meters and Flow Restrictors

8.12.1. Installation

Meters for on demand supplies, and restrictors for restricted flow supplies, shall be supplied, installed and maintained by the WSA, and shall remain the property of the WSA. Where on demand supplies are not universally metered, the WSA where it considers water use is unusually high, reserves the right to fit a meter at the customer's cost, and charge accordingly.

8.12.2. Location

Meters and restrictors shall be located in a position where they are readily accessible for reading and maintenance, and if practicable immediately on the WSA side of the point of supply.

8.12.3. Accuracy

Meters shall be tested as and when required by the WSA or as prescribed in ISO 4064. The maximum permissible error for the upper flow rate zone ($Q_2 < Q < Q_4$) is $\pm 2\%$, for temperatures from 0.3°C to 30°C and the maximum permissible error for the lower flow rate zone ($Q_1 < Q < Q_2$) is $\pm 5\%$. This accuracy shall be applied to all water meters with $Q_3 < 100$ m³/h and maybe applied to water meters with values of $Q_3 > 100$ m³/h. The flow restrictors shall be accurate to within $\pm 10\%$ of their rated capacity.

NOTE – Where Q is the flow rate:

Q1 is the minimum flow rate; Q2 is the transitional flow rate;

Q3 is the permanent flow rate; and

Q4 is the overload flow rate as defined in ISO 4064-1.

Any customer who disputes the accuracy of a meter or restrictor may apply to the WSA for it to be tested provided that it is not within three months of the last test. If the test shows non-compliance with the accuracy above, the customer shall not be charged for the test. If the test shows compliance, the customer shall pay a fee in accordance with the WSA current fees and charges.

Meters shall be tested as prescribed in ISO 4064-2 and the test report shall be made available as prescribed in ISO 4064-3.

The variation in the error curve shall not exceed 3% for flow rates in the lower zone and 1.5% for flow rates in the upper zone. For the purpose of determining these requirements the mean values of the errors (of indication) at each flow rate, shall apply.

The curves shall not exceed a maximum error of $\pm 6\%$ for flow rates in the lower zones and $\pm 2.5\%$ for flow rates in the upper zones.

Restrictors shall be tested by measuring the quantity that flows through the restrictor in a period of not less than one hour at the expected minimum operating pressure. A copy of independent certification of the test result shall be made available to the customer on request.

8.12.4. *Adjustment*

If any meter, after being tested, is found to register a greater or lesser consumption than the quantity of water actually passed through such meter, the WSA shall make an adjustment in accordance with the results shown by such tests, backdated for a period at the discretion of the WSA but not exceeding 12 months, and the customer shall pay a greater or lesser amount according to the adjustment.

Where a meter is under-reading by more than 20% or has stopped, the WSA reserves the right to charge for the amount of water assessed as having been used over the past billing period, taking into account any seasonal variations in demand.

Where a meter is over-reading, the WSA shall make appropriate adjustments to the customer's invoice(s), based on a period of similar use and backdated to when it is agreed the over-reading is likely to have occurred.

8.12.5. *Estimating Consumption*

Should any meter be out of repair or cease to register, or be removed, the WSA shall estimate the consumption for the period since the previous reading of such meter, (based on the average of the previous four billing periods charged to the customer) and the customer shall pay according to such an estimate. Provided that when by reason of a large variation of consumption due to seasonal or other causes, the average of the previous four billing periods would be an unreasonable estimate of the consumption, the WSA may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the customer shall pay according to such an estimate.

The customer shall be liable for the cost of water which passes through the meter regardless of whether this is used or is the result of leakage.

Where the seal or dial of a meter is broken, the WSA may declare the reading void and estimate consumption as described above.

8.12.6. *Incorrect Accounts*

Where a situation occurs, other than as provided for in 8.12.5, where the recorded consumption does not accurately represent the actual consumption on a property, the account shall be adjusted using the best information available to the WSA. Such situations include, but are not limited to, misreading of the meter, errors in data processing, meters assigned to the wrong account, and unauthorised supplies.

Where an adjustment is required, in favour of the WSA or the customer, this shall not be backdated more than 12 months from the date the error was detected.

8.13. Plumbing System

Quick-closing valves, pumps, or any other equipment which may cause pressure surges or fluctuations to be transmitted within the water supply system, or compromise the ability of the WSA to maintain its stated levels of service shall not be used on any piping beyond the point of supply. In special circumstances such equipment may be approved by the WSA.

8.14. Prevention of Waste

The customer shall not intentionally allow water to run to waste from any pipe, tap, or other fitting, nor allow the condition of the plumbing within the property to deteriorate to the point where leakage or wastage occurs.

The WSA provides water for consumptive use not as an energy source. The customer shall not use water or water pressure directly from the supply for driving lifts, machinery, eductors, generators, or any other similar device, unless specifically approved. The customer shall not use water for a single pass cooling system or to dilute trade waste prior to disposal, unless specifically approved.

8.15. Payment

The customer shall be liable to pay for the supply of water and related services in accordance with the WSA fees and charges prevailing at the time.

The WSA may recover all unpaid water charges as prescribed in the Local Government (Rating) Act 2002, sections 57 to 82.

8.16. Transfer of Rights and Responsibilities

The customer shall not transfer to any other party the rights and responsibilities set out in this Bylaw.

A supply pipe shall serve only one customer, and shall not extend by hose or any other pipe beyond that customer's property.

In particular and not in limitation of the above any water which the customer draws from the WSA supply shall not be provided to any other party without approval of the WSA.

8.17. Change of Ownership

In the event of a premises changing ownership the WSA shall record the new owner as being the customer at that premises. Where a premises is metered the outgoing customer shall give the WSA five working days notice to arrange a final meter reading.

8.18. Disconnection at the Customer's Request

The customer shall give 20 working days notice in writing to the WSA of the requirement for disconnection of the supply. Disconnection shall be at the customer's cost.

9. Breaches and Offences

9.1. Breaches of Conditions of Supply

The following are deemed breaches of the conditions to supply water:

- a. An incorrect application for supply which fundamentally affects the conditions of supply (section 8);
- b. Failure by the customer to meet and comply with the conditions of supply;
- c. Failure to meet any obligation placed on the customer under all current Acts and Regulations specified in section 4(a);
- d. Frustration of the WSA's ability to adequately and effectively carry out its obligations;
- e. An act or omission including but not limited to any of the following:
 - i. Failure to pay the appropriate charges by the due date
 - ii. Failure to repair a leak, or in any way wilfully allowing water to run to waste, or to be misused
 - iii. The fitting of quick-closing valves, pumps, or any other equipment which may cause pressure surges or fluctuations to be transmitted within the water supply system, or compromise the ability of the WSA to maintain its stated levels of service
 - iv. Failure to prevent backflow (see 8.10)
 - v. Failure to have a backflow prevention device fitted when required by the WSA.
 - vi. Tampering, modifying or circumventing any boundary backflow prevention device without written approval from the WSA.
 - vii. Failure to comply with water use restrictions or prohibitions introduced by the WSA for any specified purpose
 - viii. Using water or water pressure directly from the supply for driving lifts, machinery, eductors, generators, or any other similar device, unless specifically approved by the WSA
 - ix. Using water for a single pass cooling or heating system, or to dilute trade waste prior to disposal, unless specifically approved
 - x. Extending by hose or any other pipe a private water supply beyond that customer's property
 - xi. Providing water drawn from the WSA supply to any other party without approval of the WSA.

In the event of a breach, the WSA shall serve notice on the customer advising the nature of the breach and the steps to be taken to remedy it. If, after one week, the customer persists in the breach, the WSA reserves the right to reduce the flow rate of water to the customer without notice. In such an event the full service of the supply shall be re-established only after payment of the appropriate fee and remedy of the breach to the satisfaction of the WSA.

In addition, if the breach is such that the WSA is required to disconnect the supply for health or safety considerations, such disconnection should be carried out forthwith.

9.2. Interference with Equipment

Any tampering or interfering with WSA equipment, either directly or indirectly, shall constitute a breach. Without prejudice to its other rights and remedies, the WSA shall be entitled to estimate (in accordance with 8.12.5) and charge for the additional water consumption not recorded or allowed to pass where a meter or restrictor has been tampered with, and recover any costs incurred.

10. Offences and Penalties

Every person who breaches the Bylaw commits an offence and is liable on conviction to a fine, pursuant to Section 242(4) of the Local Government Act 2002.

11. Appendix

Referenced Documents

Reference is made in this document to the following:

New Zealand Standards

NZS 4503:2005	Hand operated fire-fighting equipment
NZS 4515:2009	Fire sprinkler systems for life safety in sleeping occupancies (up to 2000 square metres)
NZS 4517:2010	Fire sprinkler systems for houses
NZS 4541:2020	Automatic fire sprinkler systems
NZS 9201.1:2007	Model general bylaws - Introductory

International Publications

ISO 4064-1:2014	Water meters for cold potable water and hot water Part 1: Metrological and technical requirements.
ISO 4064-2:2014	Water meters for cold potable water and hot water Part 2: Test methods.
ISO 4064-3:2014	Water meters for cold potable water and hot water Part 3: Test report format.

Other Publications

Water New Zealand: Boundary Backflow Prevention for Drinking Water Supplies -Code of Practice 2019

Water New Zealand - Water metering of customers on reticulated supplies 2017

Related Document

AS/NZS 4020:2018	Testing of products for use in contact with drinking water
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