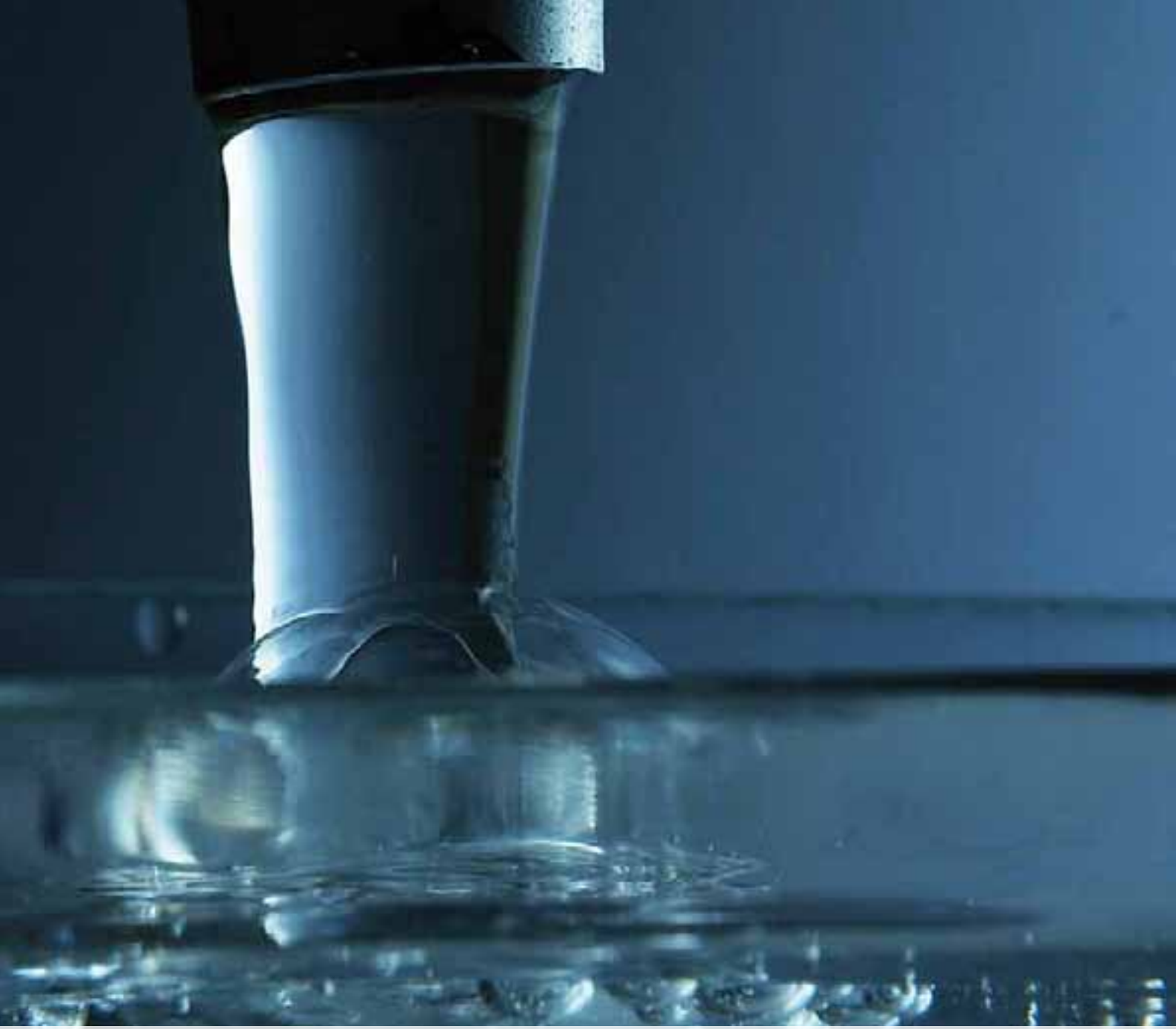


Christchurch City Council

Water Supply Strategy 2009-2039

Ōtautahi/Christchurch and Te Pātaka o Rākaihautū/Banks Peninsula*

Christchurch City Council

* These names have not been approved by the New Zealand Geographic Board. However, they are commonly used. For simplicity, the term Christchurch City Council District will refer to Ōtautahi/Christchurch and Te Pātaka o Rākaihautū/Banks Peninsula unless otherwise noted.

Foreword

Our public water supply is a precious resource for current and future generations, which is why the Christchurch City Council has developed this strategy to ensure safe drinking water is available to all customers of the public water supply.

A sustainable water supply secures industrial and economic growth while safeguarding the enviable quality of life we enjoy in Christchurch and on Banks Peninsula.

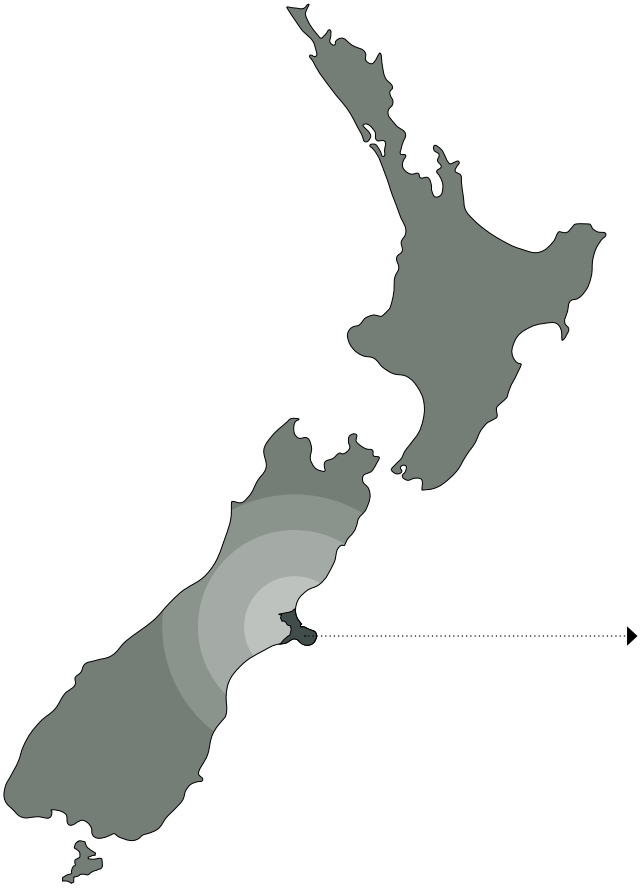
The Water Supply Strategy will guide future asset management and planning processes for the public water supply within the jurisdictional boundaries of the City Council, including urban Christchurch and Banks Peninsula.

The Strategy's aim is to ensure efficient, effective and sustainable management of the Council's water supplies for the next 30 years, in compliance with national and regional plans and standards.

By implementing the actions outlined in this document, the Christchurch City Council will continue to provide a high-quality, affordable and efficiently utilised water supply protected from contamination.

The Council will ensure sufficient quantities of drinking water sources are secured and/or identified for the future, for urban Christchurch and rural communities within the district.

Bob Parker
Mayor



CHRISTCHURCH CITY
A sustainable future for indigenous biodiversity is a responsibility that can only be provided for locally.


OUR WATER: A PRECIOUS
RESOURCE TOO GOOD TO WASTE.

Contents

Executive summary

The Christchurch City Council's Water Supply Strategy (the Strategy) will guide future asset management and planning processes for the public water supply. It will provide the framework for sustainably managing this valuable resource, to provide safe drinking water to all customers of the public water supply into the future.

The Strategy applies to the public water supply within the jurisdictional boundaries of the Christchurch City Council, including urban Christchurch and Banks Peninsula.

The Strategy's aim is to ensure efficient, effective and sustainable management of the Christchurch City Council's water supplies for the next 30 years, in compliance with national and regional plans and standards, to ensure that:

- the Council provides a high-quality, affordable and efficiently utilised water supply into the future
- the Council's public water supply is protected from contamination
- sufficient quantities of drinking water sources are secured and/or identified for the future, for urban Christchurch and rural communities within the district
- Christchurch City Council-managed community water supplies meet the Drinking Water Standards in line with timetables set out in current and future legislation.

The Strategy provides a strategic direction for the sustainable management of the district's public water supplies. This will in turn feed into the development of an inter-district water supply strategy for managing cross-boundary water supply issues, which will be developed as part of implementing the Greater Christchurch Urban Development Strategy.

This Water Supply Strategy also links to the Canterbury Water Management Strategy programme developed by the Canterbury Mayoral Forum, and will reflect the particular strategic direction for providing a sustainable public water supply for district residents, within the wider regional water management context.

The Water Supply Strategy is one of several strategies developed under the Council's Healthy Environment Strategies Programme including:

- Sustainability Policy
- Energy Strategy
- Biodiversity Strategy
- Open Space Strategy*
- Surface Water Strategy*
- Climate Change Strategy*.

The Water Supply Strategy also takes into account the Council's Wastewater Management Plan (2004).

The Strategy's vision and goals are as follows:

- *Vision:*
  We value and protect our public water supply as a precious resource for current and future generations.
- *Key goals:*
  - We have clean, safe water.
  - The sources of our water are protected from harm.
  - The Council's water supplies meet the public's reasonable needs.
  - Water is used efficiently and sustainably.

Four key issues that must be addressed to achieve these goals include:

- availability – is the 'bucket' big enough to service our needs now and in the future?
- quality – how do we protect what we have?
- demand – how can we make our water resources last into the future?

** in development at the time of publication of the Water Supply Strategy*

- service, costs and regulation – how do we provide a reasonable level of service, value water appropriately and respond to a dynamic regulatory environment?

Actions for achieving the goals of this Strategy include:

- assessing alternatives such as rainwater harvesting
- a strong education component focusing on valuing water
- providing better information to the public about how they are using water
- protecting the right for future water takes for public water supply
- better managing the existing water supply network (such as pressure management)
- considering a direct charge on the public water supply, based on actual use (most frequently suggested is a base allocation funded by rates, with an excess use charge depending on actual usage)
- providing incentives for efficient use, e.g. subsidies for water-efficient devices, grants for rainwater tanks, rebates for use below a base allocation
- better practices at Council facilities, such as drought-resistant plantings in public space and use of non-potable water where practicable
- controlling growth where water resources are already significantly at risk.

These actions are summarised in the table overleaf, with proposed time frames for their implementation. In the table, the actions that have been included for consideration in the *Christchurch City Council Long Term Council Community Plan (LTCCP) 2009–2019* are denoted with a ***L*** symbol, while those actions which are not yet provided for in the LTCCP are denoted with a ***N*** symbol. Actions under consideration in the Capital Programme budget, which is a portion of the LTCCP budget planning process, are denoted by a ***C*** symbol.

The extent to which the Strategy is implemented will depend on decisions made in the LTCCP process. The *Local Government Act 2002* requires the Council to prepare, consult on and adopt an LTCCP, which is reviewed every three years. In the intervening two years, the Council can adopt changes to their LTCCP via annual plans. The LTCCP sets out the activities and services it proposes to deliver over the next 10 years. It is through the LTCCP that the projects identified in this Strategy will be balanced against other Council projects and services. Some timings and funding may change, but the Strategy will remain as a clear Council commitment to achieving the goals and objectives stated.

Christchurch is in an ideal position to set the path for how its public water supply will be managed. The implementation of this Strategy will ensure that current and future generations have access to a safe, sustainably managed public water supply.

"Till taught by pain,
Men really know not what
good water is worth."

Lord Byron, Don Juan

EXECUTIVE SUMMARY OF STRATEGIC ACTIONS

Action #	Ranking	Action	Rough order cost (-20% -to +50%)	Preferred time frame
1a	M	***N*** Benchmarking exercise to determine target economic level of loss	$50,000–$100,000	2009–10 to 2010–11
1b	M	***N*** Enhanced water loss reduction programme (if benchmarked economic level of loss less than current level of loss)	$unknown (depends on benchmarked level of loss – Action 1a)	2012–13 , if needed
2a	H	***L*** Pressure zone modelling to optimise equalised pressure management zones	$150,000	2009–10
2b	H	***N*** Infrastructure upgrades for new pressure management zones – feasibility study/cost benefit analysis	$130,000	2011–12 to 2012–13
2c	H	***N*** Infrastructure upgrades for new pressure management zones – Capital Programme	$ to be determined (TBD); depends on results of Actions 2a and 2b	2013–14 onwards
3	H	***C*** North West Zone – installation of UV disinfection systems (some locations in NW zone) and replacement of shallow wells with deeper wells (other locations in NW zone)	$8,600,000 (Capex) $80,000 (Opex, per annum)	2012–2015
4a	H	***L*** Rainwater as additional source for households – Banks Peninsula subsidy – cost-benefit study	$100,000	2009–10
4b	H	***N*** Rainwater as additional source for households – Banks Peninsula subsidy	$TBD depends on cost-benefit study (Action 18a)	2013–14
4c	M	***N*** Rainwater as supplementary source for households – urban Christchurch subsidy	$TBD depends on cost-benefit study (Action 4a)	2016–17
4d	M	***N*** Promoting retention of existing rainwater tanks	$TBD	As public water supply network introduced into new areas
5a	M	***N*** Analysis of total system costs for water-efficient devices	$20,000	2010–11
5b	M	***N*** Water-efficient devices rebate scheme	Up to $35,000 per year	2012–13
6a	H	***N*** Valuing water campaign – research study	$20,000–$50,000	2009–10
6b	H	***N*** Valuing water campaign	$20,000–$50,000 (development and rollout, yr 1) $20,000–$50,000/ yr Implementation (subsequent years)	2011–12 2012–13 onwards
7	M	***N*** Green Plumber	$20,800/yr	2012–13
8	M	***N*** Green Gardener	$31,200/yr	2012–13
9	M	***N*** Annual domestic meter feedback	$200,000	2012–13 onwards
10	H	***N*** Installation of water efficient devices in City Housing, as refurbishment and asset renewals occur	Included in City Housing asset renewal budget	2012–13 onwards
11a	M	***N*** Comprehensive economic and legal review of charging for water	$70,000	2011–12 to 2012–13
11b	M	***N*** Volumetric charging (depends on outcome of review) (may require separating shared connections)	$2,100,000 to $2,700,000 above current costs (Opex; costs would be recovered through charging structure)	2017–18
12	H	***N*** City Plan change to require rainwater system or rainwater/greywater combined system	$TBD	2014–15
13	H	***L*** Partnering and engagement, e.g. support for Variation 6 of the PNRRP	$staff time	2008–09 and onwards

EXECUTIVE SUMMARY OF STRATEGIC ACTIONS

Action #	Ranking	Action	Rough order cost (-20% -to +50%)	Preferred time frame
14a	H	***N*** Securing rights to additional water takes	$300,000	2009–10 to 2010–11
14b	H	Only if necessary, either development of Waimakariri River or Ellesmere well-field as new source ***N*** Waimakariri River development of new source 40 Ml/day (with treatment) OR ***N*** Waimakariri River development of new source 80 Ml/day (with treatment)	$67,000,000 Capex (based on 2005 data) $20,100,000 Opex (based on 2005 data OR $78,000,000 Capex (based on 2005 data) $36,700,000 Opex (based on 2005 data	2013–14 to 2014–15 (development) TBD (infrastructure)
14c		OR ***N*** Ellesmere well-field (treatment costs, if any, not included)	OR $59,000,000 Capex (based on 2005 data) $8,600,000 Opex (based on 2005 data)	
15	H	***N*** Acquire existing well rights as they become available	Up to $4,000,000 (over 30 years)	2015–16 and onwards
16	H	***N*** Water reuse as appropriate in new Council facilities or major refurbishments	To be integrated into project budgets where practical	Project by project basis
17	H	***C*** Wastewater Reuse Demonstration Project – Capital Programme	$3,200,000 (Capex) $145,000 (Opex. per annum)	2018–19 to 2019–20
18a	H	***N*** Rainwater as additional (adjunct) source for Council facilities – study for Council implementation	$50,000	2012–13
18b	H	***N*** Rainwater as additional (adjunct) source for Council facilities – Council rainwater use programme	$TBD depends on results of study (Action 17a)	2014–15

Notes:

- Each action has been given a priority ranking which is either high (H) or medium (M).
- The inclusion of a project within this document does not commit the Council to commence the project. All projects are contestable each time a new Long Term Council Community Plan is prepared.