



# URBAN WATER QUALITY STRATEGY FOR OTAGO

Caring for Otago's environment: Enabling communities to thrive



# CONTENTS

---

Water quality in Otago	3
About this strategy	4
Who is involved	4
Otago's vision for water quality	6
Delivering water quality	7
Key issues	8
Pride in our region	9
Looking after our water	10
Water quality for community wellbeing	13
Urban water quality strategy	15
Key methods	16



# WATER QUALITY IN OTAGO

---

**Otago’s vision for water quality is: Otago will enjoy safe and healthy water resources which everyone can use and appreciate.**

Otago’s lakes, rivers, wetlands, estuaries, and coastal water are fundamental to Otago’s identity and Water is fundamental to Otago’s identity and our pride as a region. Ki uta ki tai (from the mountains to the sea), water quality affects us all.

The people of Otago want:

- Water of a good or excellent quality
- Water for everyone, including future generations
- Water supporting healthy ecosystems and communities
- Water that Otago can take pride in
- Water that supports a wide range of values and opportunities

Otago’s water is a taonga (treasure) to tangata whenua, and to our whole community. Residents and visitors enjoy the beauty and recreational

opportunities offered by Otago’s waterbodies. Along with our aquifers, they support healthy ecosystems, and provide us with drinking water, water to grow food, to generate electricity and for many other activities.

This strategy for urban water quality is about people working together: the regional council, the city and district councils, government agencies, education providers, businesses, community groups and individuals. Working together we each play our part in maintaining and improving the quality of our lakes, rivers, wetlands, estuaries, and coastal water for generations to come.

This strategy is part of a wider vision, led by the Otago Regional Council, to better manage the region’s resources to achieve our regional vision: “Caring for Otago’s environment: enabling communities to thrive”.

# ABOUT THIS STRATEGY

---

The Urban Water Quality Strategy sets out the management approach and principles for dealing with the specifically urban water quality issues, especially the management of stormwater and wastewater, to achieve the vision for water quality in Otago. It is consistent with what has been put into place for rural areas.

In order to achieve this, the approach needs to be integrated, co-ordinated and cost effective. There are three key goals to the strategy;

- 1. Pride in our water quality**
- 2. Looking after our water**
- 3. Water quality for community wellbeing**

This strategy has been designed to define an effective approach to managing water quality. It indicates how collaboration between local government, communities and individuals can play a part in water quality, particularly in urban areas.

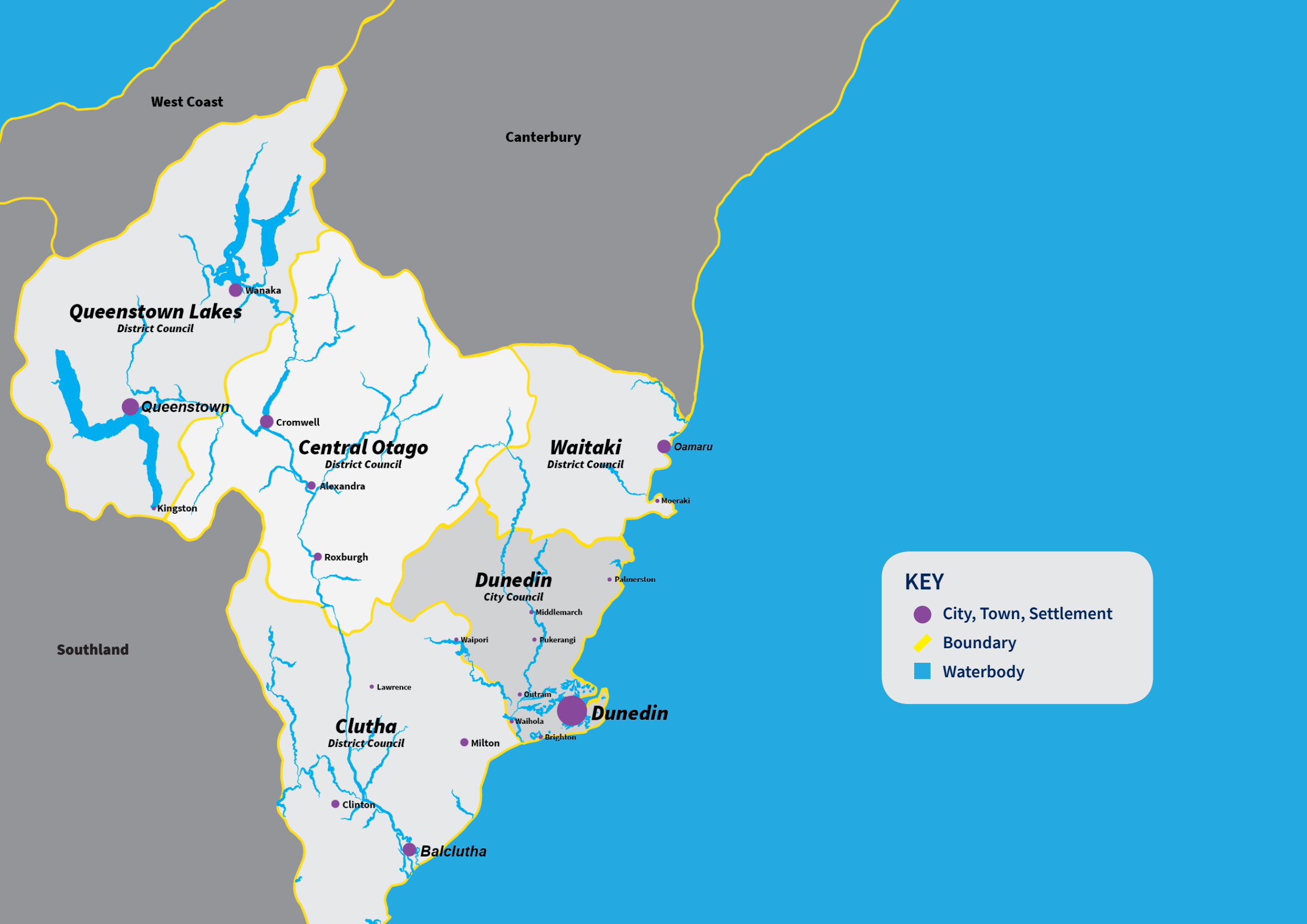
# WHO IS INVOLVED

---

Collaboration is the key to achieving the outcomes of this strategy. Everyone has a role to play, from city, district and regional councils to businesses, institutions and individuals.

Together we contribute to the state of our water quality. Our water bodies receive all the pollutants which have not been treated, or filtered by our soil, whether they are sourced from urban or rural areas. We all have a role to play in managing our impact on water: city dwellers, people in rural areas, businesses, and also all the institutions who can assist with the management of water.

Integrating our approach to regulation, monitoring and information-sharing is important to achieving a successful long-term strategy.



West Coast

Canterbury

**Queenstown Lakes**  
District Council

Wanaka

Queenstown

Cromwell

Kingston

**Central Otago**  
District Council

Alexandra

Roxburgh

**Waitaki**  
District Council

Oamaru

Moeraki

**Dunedin**  
City Council

Palmerston

Middlemarch

Pukerangi

Waipori

Lawrence

Outram

**Clutha**  
District Council

Waihola

Brighton

Milton

**Dunedin**

Clinton

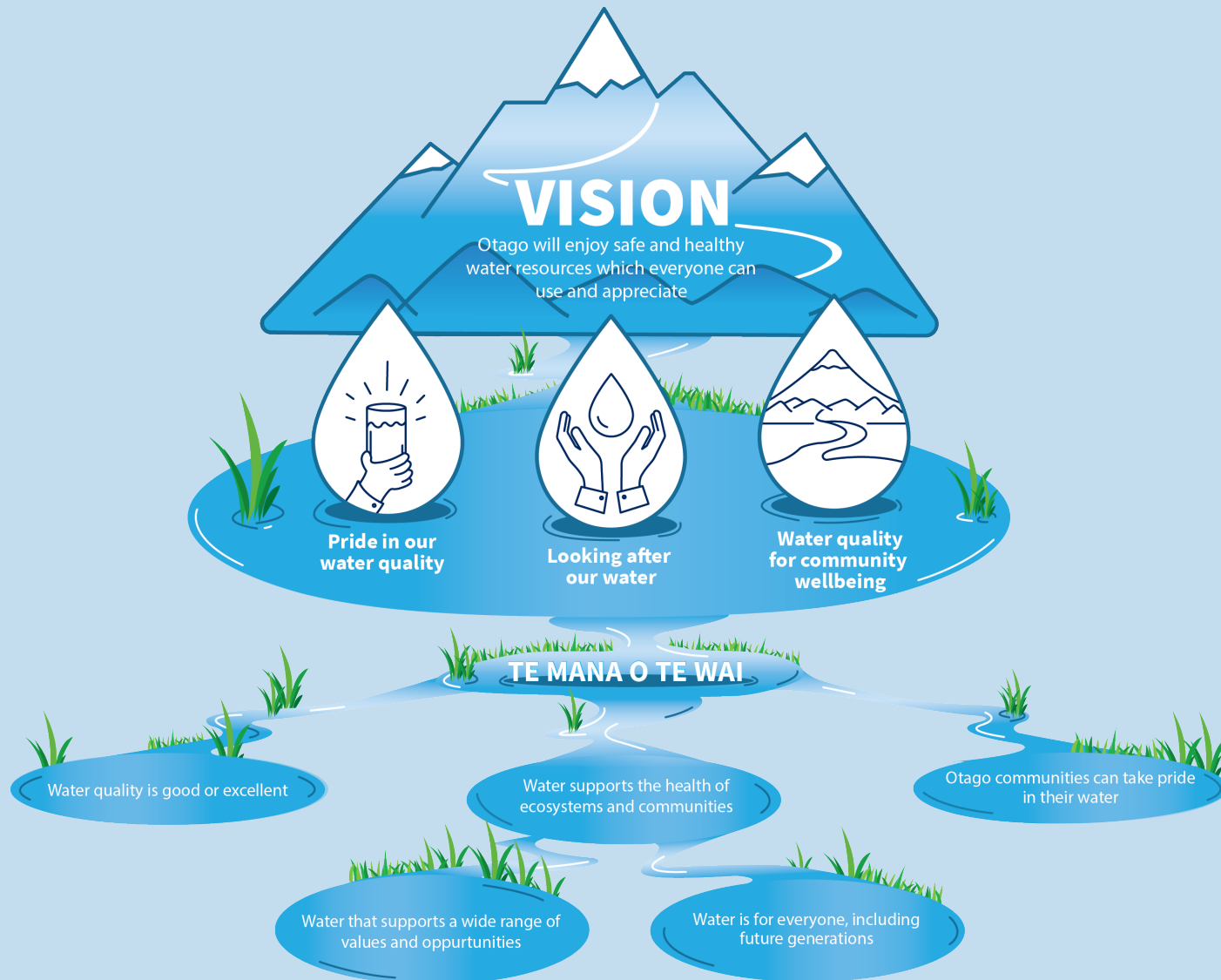
Balclutha

Southland

**KEY**

- City, Town, Settlement
- Boundary
- Waterbody

# OTAGO'S VISION FOR WATER QUALITY



# DELIVERING WATER QUALITY

To have water quality that achieves our vision we must use a range of approaches.



# KEY ISSUES

## Issue

## Consequence

### Cumulative effects

- |   |   |
|---|---|
| <b>1.</b> At times the everyday action of people degrades the quality of water of our communities.  | Some waterbodies have degraded water quality and there are others that are showing degrading trends.  |
| <b>2.</b> Development around waterbodies with outstanding water quality could cause localised degradation.                                    | This risk could become a problem if not addressed. This threatens what we value about Otago.  |
| <b>3.</b> Some historical discharge practices have led to significant contamination of water.   | These legacy problems may be expensive to fix and remediation may take a long time.   |
| <b>4.</b> The cumulative effect of discharges from many activities may degrade water quality in urban streams, lakes, estuaries and aquifers. | <p>Some drinking water supplies risk being contaminated. Freshwater, estuarine, and marine ecosystems may be harmed. The amenity of those waterbodies may be reduced. Cultural values may be damaged; mahika kai opportunities may become limited.</p> <p>Estuaries are especially sensitive to cumulative effects, as they are at the receiving end of all water pollution in the catchment.</p> |

### Complex environment

- |   |  |
|---|--|
| <b>5.</b> New forms of contamination are emerging, including from pharmaceuticals and pesticides. | There may be time lags before adverse effects are identified and remedial action can be taken. |
| <b>6.</b> Many people and agencies and legislation are involved with managing water quality.      | This can make it difficult to respond in a timely manner.                                      |

### Infrastructure and funding

- |  |  |
|--|--|
| <b>7.</b> When septic tanks are used in towns, or in sensitive environments, or when they are substandard, they may create problems. | We can experience impacts on drinking water, human health, recreation, and ecology because of contamination of ground and surface waters.                          |
| <b>8.</b> In Otago, stormwater from urban areas, or from roads, is discharged to water bodies with minimal or no treatment.          | Substandard infrastructure results in localised contamination of our waterways. This threatens public health, what we value about water, and the life it supports. |
| <b>9.</b> Necessary improvements for water quality may cost residents and businesses more.   | Conventional ways of financing may seem unaffordable. It may be necessary to consider alternative funding, or quite different ways of addressing the problem.      |





# 1. PRIDE IN OUR REGION

---

Our lakes, rivers, streams and estuaries form a critical part of our pride in Otago. Having good or excellent water quality and high amenity values makes Otago a prosperous and sustainable region that is an attractive and healthy place to live, do business and visit.

## 1.1 Sharing knowledge

### HAVING PRIDE IN OUR REGION MEANS:

We want those with information about Otago water bodies, attributes and values, to share their knowledge. We want businesses, and others promoting Otago's distinctiveness to use water quality as part of their marketing and promotional campaigns, to help sell our products, and attract people to the region.

Pride in our region means motivating organisations and people to protect and enhance water quality.

### BY WORKING TOGETHER WE CAN EXPECT:

That Otago is an attractive place to live, visit and do business in because the region is recognised as having a safe environment, high amenity values and distinctive landforms, due in part to good or excellent water quality.

Our approach to water management and the resulting water quality will generate pride in the region, helping motivate people to protect and enhance their water.

## 1.2 Leadership in water management

We need strong leadership in water management so that collaboration and integration can occur around the region and so that we can achieve our key outcomes.

### HAVING PRIDE IN OUR REGION MEANS:

Otago needs to be a leader in water quality management and the Otago Regional Council needs to provide a strong effective lead for us all.

### BY WORKING TOGETHER WE CAN EXPECT:

That the people of Otago have pride in their water quality and Otago is recognised as a leader in water management.



## 2. LOOKING AFTER OUR WATER

---

### 2.1 Meeting the needs and aspirations of Otago's people

Maintaining water quality as good or excellent, enables people to access and use water and ensures that the values of aquatic environments are protected. It is essential to protect key values of our water, including for drinking water, ecosystems, recreational opportunities, and amenity values.

#### LOOKING AFTER OUR WATER MEANS:

Promoting understanding of which water bodies have excellent or good water quality; and the ecosystems and community values of those water bodies is a necessary first step. Together we can then identify those water bodies that need rehabilitation. Individuals, corporates, Territorial Authorities, District Health Boards, non-governmental organisations, government agencies and communities take responsibility for their discharges and their effects on water values, ensuring that we keep water quality good or excellent, or enhance water quality where it has been degraded.

Everyone supports and enables individuals, corporates, and communities to take appropriate action to achieve the outcomes, encouraging other

to do the same. We also need to maintain shared information on water quality, which is accessible to all.

#### BY WORKING TOGETHER WE CAN EXPECT:

The people of Otago consistently act as good stewards of water, both now and in the future. That the community value of good or excellent quality water is recognised throughout the region.

### 2.2 Maintaining good or excellent water quality

#### 2.2.1 Ensuring no degradation of water quality

#### LOOKING AFTER OUR WATER MEANS:

The Otago Regional Council, in consultation with the community, defined desirable water quality for Otago waterbodies. The Otago Regional Council sets environmental limits and provides leadership to ensure no degradation of water quality by:

- Coordinating a systematic, robust process for collecting, reporting and using information on the values, risks and pressures to water quality, and on water quality trends.



- Empowering and supporting other organisations and groups to put in place measures that focus on at-risk and degraded or declining water.
- Working together with Territorial Authorities, using tools to encourage a focus on water bodies that are at-risk, or have declining water quality, or which the community would like to see restored;
- Setting appropriate discharge requirements in Regional Plans and discharge permits.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

Water quality which is excellent remains excellent; and water quality which is good remains good. This supports human and environmental health. Those waterbodies that have been rehabilitated or restored should remain in good condition with no further degradation.

### **2.2.2 Rehabilitating degraded waterbodies**

#### **TO LOOK AFTER OUR WATER WE NEED:**

Communities to decide how and when degraded waterbodies are rehabilitated, and who should partner in this rehabilitation. The strategy is about having a more tailored approach for those areas, which are adapted to their unique conditions. Rehabilitation will require an intensive effort with all parties working together to achieve an improvement over and above maintaining water quality.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

To meet community aspirations by restoring the quality of water bodies which have been degraded.

## **2.3 Managing discharges**

It is important to identify and address potentially damaging activities before they cause effects that are more than minor. Attention needs to be given to short and long-term effects, and to both localised and catchment-scale effects.

### **2.3.1 Managing the effects of individual activity**

#### **LOOKING AFTER OUR WATER MEANS:**

Establishing plans that:

- Enable activities that are not likely to damage the environment and that take into account the sensitivity of the waterbody to pollution and foreseeable changes to land uses in the catchment
- Effectively and efficiently address the effects of discharges on our water bodies
- Enable implementation that:
  - Detect when activities are causing effects that are more than minor or short-term
  - Operate systems including writing consent conditions, undertaking compliance monitoring and a citizen reporting process, with feedback from compliance and monitoring that operate effectively, so up-to-date information is available to decision-makers.

**BY WORKING TOGETHER WE CAN EXPECT:**

Those activities and discharges with the potential to cause harm are identified and addressed in a timely manner, before they degrade water quality and affect intrinsic and community values.

**2.3.2 Managing the cumulative effects of activities**

**LOOKING AFTER OUR WATER MEANS:**

Applying the same approach to the cumulative effects of activities as we do for managing the effects of individual activities [see 2.3.1] and, at the same time, practice integrated adaptive management. Together we enable activities being undertaken where they are not likely to exceed environmental limits. Adaptive management means that the cumulative effects of activities will not degrade Otago's water quality.

**BY WORKING TOGETHER WE CAN EXPECT:**

That the overall effect of discharges on water quality is minor or acceptable to the community.





# 3. WATER QUALITY FOR COMMUNITY WELLBEING

---

## 3.1 Water quality that supports community wellbeing

### ACHIEVING WATER QUALITY FOR COMMUNITY WELLBEING MEANS:

Otago communities and businesses pursue activities that make good use of our region's water resources while maintaining good water quality, and achieving economic, social and cultural wellbeing. It means setting environmental limits that take into account the quality of water needed by industry and community alike.

### BY WORKING TOGETHER WE CAN EXPECT:

Otago's water quality to strengthen and diversify our economy supporting social and economic activities, and providing competitive advantage and value for Otago businesses and communities.

Those activities that benefit local, regional, national communities are enabled, without harm to the environment, and without compromising our environmental aspirations.

## 3.2 Realising economic values

If the Otago Regional Council is to manage water quality in a manner that is cost-effective, then resource users' compliance costs must be minimised. Imposing unnecessary costs is likely to have negative effects on economic activities in Otago.

### 3.2.1 Avoiding unnecessary costs

#### ACHIEVING WATER QUALITY FOR COMMUNITY WELLBEING MEANS:

The Otago Regional Council has an established model for discharge management, the principles are:

- Those people that cause costs to be incurred (e.g. generate pollution) should be liable for those costs
- If the costs cannot be recovered from these polluters they should be recovered from those benefitting from the pollution being addressed.

**BY WORKING TOGETHER WE CAN EXPECT:**

Water quality is managed cost-effectively, with compliance costs to resource users being reasonable.

**3.2.2 Getting premiums from sustainable practices**

**ACHIEVING WATER QUALITY FOR COMMUNITY WELLBEING MEANS:**

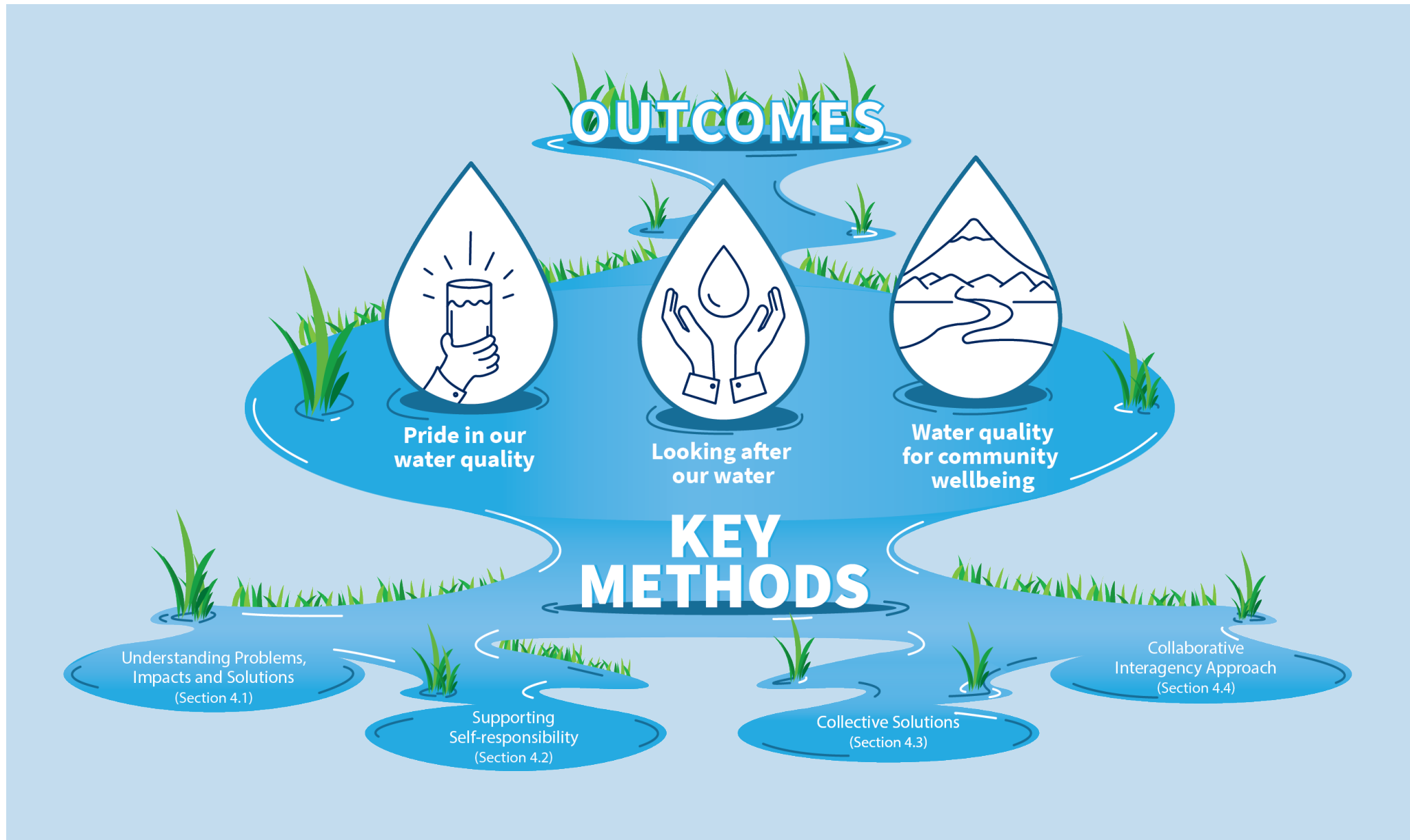
The Otago Regional Council and Territorial Authorities have shaped their Resource Management Act regulation of water quality in Otago, to ensure that water is suitable for industry to use as a marketing tool. Otago industries need to target customers who value the environment in the way that we do in Otago. They need to communicate to them the value that looking after the environment has for the quality of product they are buying.

**BY WORKING TOGETHER WE CAN EXPECT:**

Otago businesses, including tourism, who actively manage their activities, and limit environmental effects, benefit from their sustainable practices.



# URBAN WATER QUALITY STRATEGY





## 4. KEY METHODS

---

### 4.1 Understanding problems, impacts and solutions

We need to improve our understanding of the water quality problems and risks, and their potential solutions, if we are to manage our water resource successfully. We need to understand the things we can do individually or together to improve water quality.

#### LOOKING AFTER OUR WATER MEANS:

Organisations involved in monitoring water need to agree to review their monitoring, and share their information, to allow for successful integration of monitoring data. We need the scientific community's assistance in watching and improving knowledge on emerging water quality risks. We need industries and individuals to actively keep informed on water quality risks, issues and potential solutions. We need a national entity to take charge of collating the data on best practices.

Improve on current water quality monitoring, and complement it with site-specific studies. Encourage and co-ordinate the collation

and integration of the monitoring data collected across agencies and stakeholders. Keep abreast of emerging knowledge about contaminants and their risks. Inform the public of water quality issues and risks.

#### BY WORKING TOGETHER WE CAN EXPECT:

As a community we have good knowledge of:

- Water quality throughout Otago
- Sources of contamination degrading water quality
- Issues and risks on water quality
- Practices improving or protecting Otago's water quality.

### 4.2 Supporting self-responsibility

#### 4.2.1 Promoting self-responsibility

To manage water quality effectively, people need to take responsibility for the effects of their own actions and discharges, and for minimising the risk of spills.





#### **LOOKING AFTER OUR WATER MEANS:**

People need to understand how their actions impact on water quality, and to manage their daily activities accordingly. Encouraging and enabling this is achieved by:

- Collaboration between the Otago Regional Council, Territorial Authorities, industry representatives and individuals.
- Sharing information.
- Ensuring everyone understands the Water Plan including Territorial Authorities, industry representatives and individuals.
- Informing people about the risk of non-compliance, while taking the opportunity to provide guidance on matters that are important for achieving good water quality.

Territorial Authorities and industry groups should take the initiative and share information and advice on water quality matters with their residents. The Otago Regional Council needs to undertake enforcement when needed to encourage and ensure compliance.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

Individuals and businesses take responsibility for their discharges and behave in ways that minimise the effect of their discharges on water quality.

### **4.2.2 Community awareness of our impact on water**

#### **LOOKING AFTER OUR WATER MEANS:**

- Educating people about the impact their activities could have on urban water quality.
- Advising dischargers on measures for improving discharge quality.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

Widespread understanding among the people of Otago and visitors of the sensitivity of different waterbodies and the impact that their actions could have on water quality.

### **4.2.3 Promoting and enabling appropriate behaviour**

#### **LOOKING AFTER OUR WATER MEANS:**

The Otago Regional Council and Territorial Authorities need to promote and enable good behaviours, for example water-sensitive urban design and/or beneficial re-use of contaminants, by

- Encouraging developers and councils to retrofit or use these approaches when undertaking infrastructure renewals and improvements.
- Writing provisions in regional and district plans and other regulatory documents that minimise barriers to these sorts of good behaviour.
- Developing a community engagement programme, which educates and encourages best practice regarding water quality.



#### **BY WORKING TOGETHER WE CAN EXPECT:**

More people will be doing what is needed to protect water quality.

#### **4.2.4 Enabling self-monitoring**

##### **LOOKING AFTER OUR WATER MEANS:**

Development of rules and consent conditions enabling them to be self-checked. Encouraging technology entrepreneurs to provide solutions that help people do this themselves.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

That more people are checking their own compliance and rules and consent conditions concerning discharges to water.

#### **4.2.5 Accessing funding**

##### **LOOKING AFTER OUR WATER MEANS:**

Informing the banking and investment sector of the Water Plan objectives and rules and also of the likely result of breaching rules and degrading water quality.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

Those providing funding for new initiatives or upgrades understand Otago's water quality issues and the regulatory approach to those issues, and take this into account when making decisions on funding activities in Otago.

### **4.3 Collective solutions**

Including infrastructure, ecological solutions, collective consenting.

#### **4.3.1 Adopting collective solutions where needed**

##### **LOOKING AFTER OUR WATER MEANS:**

The Otago Regional Council, in collaboration with each Territorial Authority and community, need to use monitoring results and/or risk assessment to identify where collective solutions would be best placed, now or in the future. Those responsible need to install a preferred collective solution that is adequate to respond to future need.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

That collective responsibility is being taken, to provide fit-for-purpose solutions, when collective solutions are warranted.

#### **4.3.2 Adequate funding sources**

##### **ACHIEVING WATER QUALITY FOR COMMUNITY WELLBEING MEANS:**

Innovative funding options are explored; and the options which are selected and adopted are suitable and sustainable.

#### **BY WORKING TOGETHER WE CAN EXPECT:**

That there are suitable and sustainable funding models and sources of revenue available for addressing water quality problems, and that there are people, businesses and investors willing to fund collective solutions such as infrastructure.

### **4.4 Collaborative interagency approach**

#### **4.4.1 Consistent regulatory approach**

##### **LOOKING AFTER OUR WATER MEANS:**

The Otago Regional Council and Territorial Authorities need to take a consistent, coherent regional approach to water quality management that acknowledges the characteristics of urban catchments, and what makes them different from rural catchments. The Otago Regional Council and Territorial Authorities need to identify locally-specific values, issues or risks, and use a finer scale of management or a different approach, where needed. The Otago Regional Council need to set sub-regional targets and limits.

##### **BY WORKING TOGETHER WE CAN EXPECT:**

That the regulatory framework addresses cumulative effects on water quality of land-use and discharges at scales that are effective.

#### **4.4.2 Interagency collaboration**

##### **LOOKING AFTER OUR WATER MEANS:**

The Otago Regional Council needs to intergrate its management of water quality with its management of other aspects of water and water bodies. The Otago Regional Council, Territorial Authorities, the District Health Board, Iwi and University of Otago and the interested goverment agencies need to clarify what each agency is responsible for, and integrate their approaches, taking a “mountains to the sea approach”. These organisations need to proactively and freely share water quality information amongst themselves. The Otago Regional Council and Territorial Authorities need to adaptively manage their approach to water bodies, this involves learning together and operating an audit programme that tests against desired outcomes, using tight feedback loops to achieve responsiveness.

##### **BY WORKING TOGETHER WE CAN EXPECT:**

Integrated inter-agency collaboration, amongst the Otago Regional Council, Territorial Authorities, the District Health Board, Iwi and University of Otago and the interested goverment agencies working together effectively and efficiently to maintain good water quality across Otago.



