



LOVING WATER, LOVING LIFE!

Otago's urban water quality strategy

Caring for Otago's environment; enabling communities to thrive.





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WATER QUALITY IN OTAGO

Otago will enjoy safe and healthy water resources which everyone can use and appreciate

Otago's lakes, rivers, wetlands, estuaries, and coastal water are key to our region's pride and identity. Our people want:

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

In Otago, water quality affects us all *ki uta ki tai* (from the mountains to the sea). Our water is a *taonga* (treasure) to both Tangata Whenua (people of the land), and to the wider community. Otago's residents and visitors enjoy the beauty and recreational opportunities offered by our

waterbodies. Along with our aquifers, they support healthy ecosystems, provide us with drinking water, water to grow food, water to generate electricity, and to enable a variety of other activities.

For Otago, good or excellent water quality in our urban areas comes from people working together: the regional council, the city and district councils, government agencies, iwi, education providers, businesses, community groups and individuals. By working together, we each play our part in maintaining and improving the quality of water in our lakes, rivers, wetlands, estuaries, and at the coast, for generations to come.

This urban water quality strategy is part of a wider vision, led by the Otago Regional Council, to better manage Otago's water and achieve our regional vision: **“Caring for Otago's environment: enabling communities to thrive”**.

ABOUT THIS STRATEGY

Loving water, loving life! is about setting out what the Otago community wants from the waterbodies we love and how we can work together to achieve that. It outlines how as a region-wide community we can approach and address issues which threaten to degrade our urban water quality. To achieve success, it expects organisations and the Otago community to work together for the same common purpose and for everyone to be responsible for their own actions.

This urban strategy is consistent with the approach used in Otago's rural areas and acknowledges that the management of stormwater and wastewater play a significant role in having good or excellent water quality in Otago.

Three key goals will help us achieve our urban water quality vision:

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

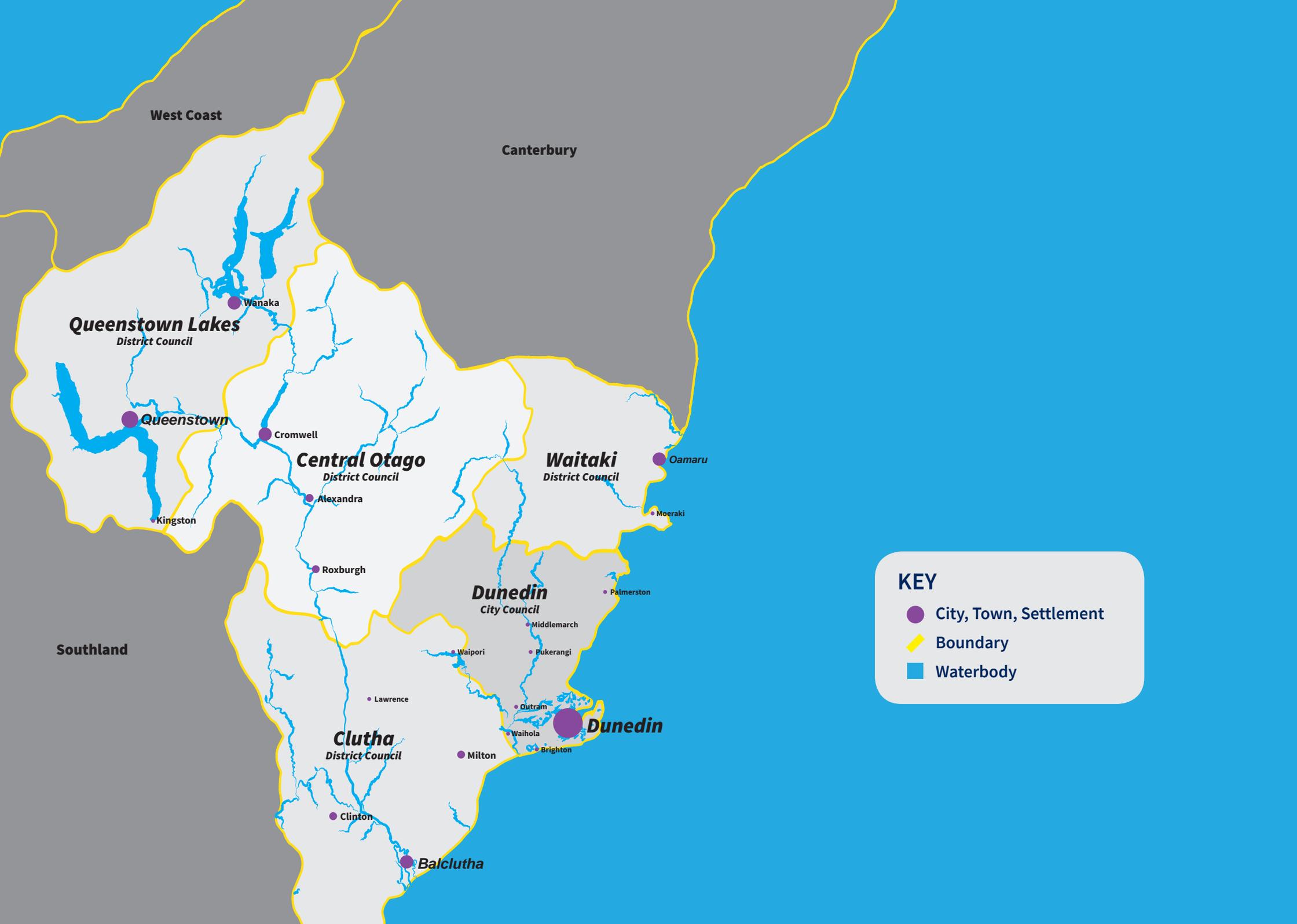
This strategy sets out an integrated, co-ordinated, and cost-effective approach to managing Otago's urban water quality. It indicates how collaboration between local government, communities and individuals can play a part in water quality, particularly in urban areas.

WHO IS INVOLVED

The actions of Otago's residents, organisations and visitors all contribute to the state of Otago's water quality. No matter whether pollutants are sourced from an urban or rural area, they all end up in our waterbodies eventually.

Collaboration is the key to delivering on the outcomes of this strategy because we all have a role in managing our impact on water: city dwellers, people in rural areas, businesses, and the institutions who can assist with the management of water.

Integrating our approach to regulation, monitoring, and information-sharing is important if we want to achieve a successful long-term strategy and most importantly, good or excellent water quality throughout Otago.



West Coast

Canterbury

Queenstown Lakes
District Council

Wanaka

Queenstown

Cromwell

Central Otago
District Council

Alexandra

Kingston

Roxburgh

Waitaki
District Council

Oamaru

Moeraki

Dunedin
City Council

Palmerston

Middlemarch

Waipori

Pukerangi

Lawrence

Outram

Clutha
District Council

Waihola

Brighton

Milton

Dunedin

Clinton

Balclutha

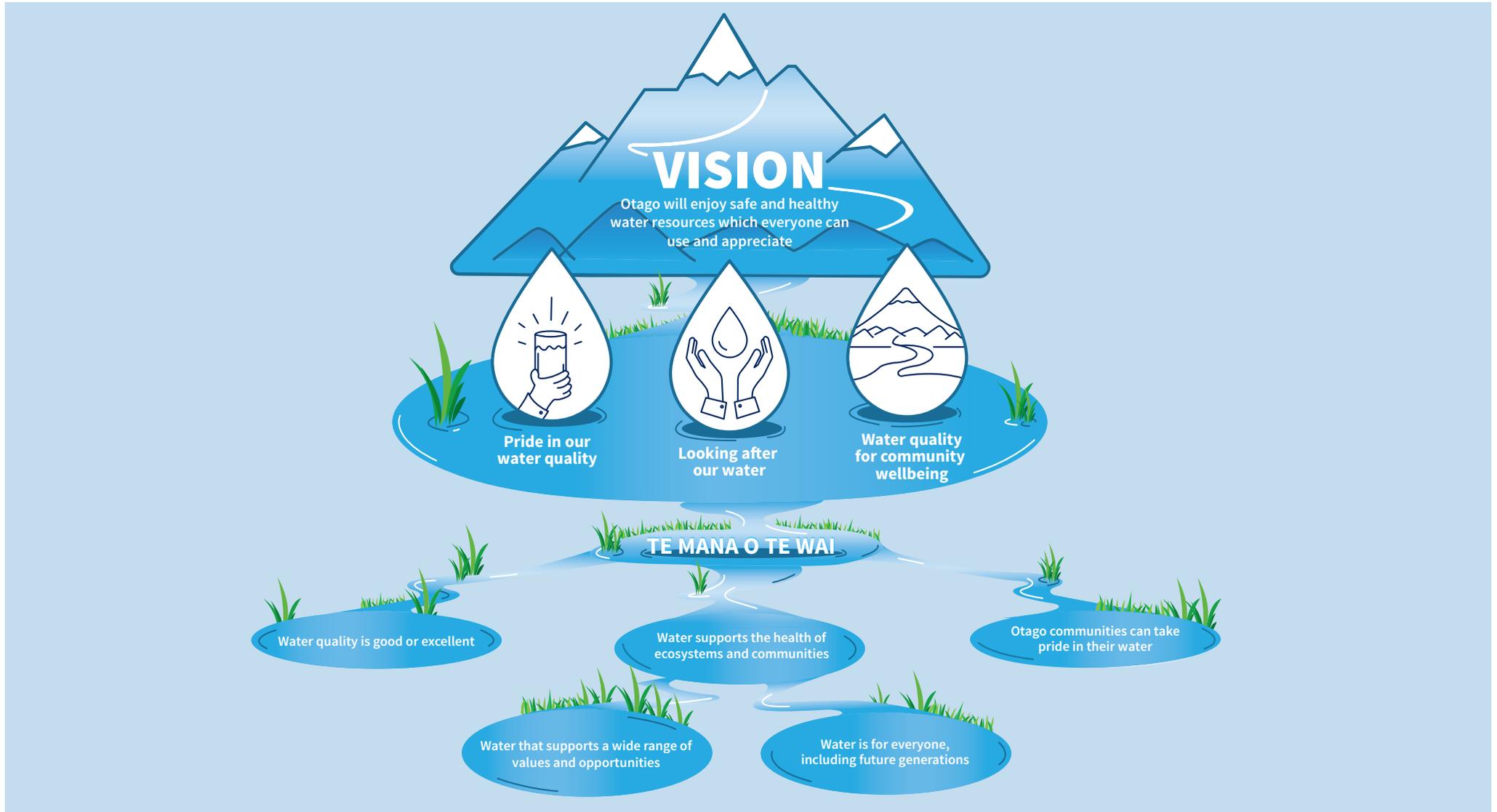
Southland

KEY

- City, Town, Settlement
- Boundary
- Waterbody

OTAGO'S VISION FOR WATER QUALITY

Based on the bicultural ethical principles of partnership, participation and protection, these outcome statements sit alongside the Māori values of *waiora* (health), *mana* (spiritual power), *kaitiakitanga* (guardianship), *whakapapa* (genealogy or descendents), *tikanga* (custom), and *rangatiratanga* (chieftainship).



DELIVERING WATER QUALITY

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



KEY ISSUES

Issue

Consequence

Cumulative effects

- | | |
|---|---|
| 1. At times, the everyday action of people degrades the quality of water for our communities | Some waterbodies have degraded water quality and there are others that are showing degrading trends |
| 2. Development around waterbodies with outstanding water quality can cause localised degradation | This risk could become a problem if not addressed and threatens what we value about Otago water |
| 3. 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, if possible |
| 4. The cumulative effect of discharges from many activities may degrade water quality in urban streams, lakes, estuaries, and aquifers | Some drinking water supplies risk being contaminated. Freshwater, estuarine, and marine ecosystems may be harmed. The amenity of these waterbodies may be reduced. Cultural values may be damaged and mahika kai opportunities may become limited

Estuaries are especially sensitive to cumulative effects, as they are at the receiving end of all water pollution in the catchment |

Complex environment

- | | |
|--|---|
| 5. 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 |
| 6. Many people, organisations, and laws are involved in managing water quality | This can make it difficult to respond to new issues, pressures, or risks in a timely manner. |

Infrastructure and funding

- | | |
|---|---|
| 7. 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 |
| 8. 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 |
| 9. 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 |



GOAL 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 helps make Otago a prosperous and sustainable region; one that is an attractive and healthy place to live, do business, and visit.

Sharing knowledge

Having pride in our region means motivating organisations and people to protect and enhance water quality in Otago.

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 our good or excellent water quality as part of their marketing and promotional campaigns. This will help sell our products, and attract people to our region.

By working together, we can ensure that Otago is an attractive place to live, visit, and do business. Our 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 good or excellent quality water will generate greater pride in the region and help motivate people to protect and enhance their water even more than they do now.

Leadership in water management

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

Having pride in our region means Otago shows leadership in water quality management and Otago Regional Council provides a strong effective lead for us all.

By working together, we can expect that the people of Otago will take pride in their water quality and that Otago is recognised as a leader in water quality management.



GOAL 2. LOOKING AFTER OUR WATER

Meeting the needs and aspirations of Otago's people

Having water quality that is good or excellent enables people to access and use water, and ensures that the values of aquatic environments are protected. Good or excellent water quality is essential to protect what we value about water: being able to drink it, healthy ecosystems, using it for recreation activities, or simply enjoying its amenity.

Looking after our water means everyone supports and enables individuals, corporates, and communities to take appropriate action to achieve the urban water quality outcomes sought in this strategy, and they encourage others to do the same.

We need to highlight which water bodies have excellent or good water quality and their ecosystems and community values. This can be done through maintaining shared information on water quality, accessible to all, enabling people to identify which waterbodies need rehabilitation.

At the same time, individuals, corporates, Territorial Authorities, District Health Boards, non-governmental organisations, government agencies and citizens all must take responsibility for what they discharge and their effects on water values. This is done to ensure that throughout Otago we

keep water quality good or excellent, or enhance water quality where it has been degraded.

By working together, we can expect the people of Otago to consistently act as good stewards of water, both now and in the future, and that the community value of good or excellent quality water is recognised.

Maintaining good or excellent water quality

In Otago we want to ensure that we maintain water quality where it is already good or excellent. We don't want water quality in our region to get worse.

Ensuring no degradation of water quality

Looking after our water means Otago Regional Council, in consultation with the community, defines desirable water quality for Otago waterbodies and sets environmental limits. It provides leadership to ensure no degradation of water quality by:

- Coordinating a systematic and 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 organisations and groups to put in place measures that focus on water bodies that are at-risk, degraded, or degrading in terms of their water quality,
- Working together with Territorial Authorities, and using tools to encourage a focus on water bodies that are at-risk, or have degrading water quality, or which the community would like to see restored,
- Setting appropriate water quality requirements in regional plans and discharge permits.

By working together, we can expect that to support human and environmental health, we must ensure:

- Water quality which is excellent remains excellent,
- Water quality which is good remains good.

Improving water quality where it does not meet community expectations

Looking after our water means changing our discharge practices where water quality is poor or at risk because of what we do every day.

Otago communities will decide on how and when degraded waterbodies will be rehabilitated, and who should partner in this rehabilitation activity. Rehabilitation will require an intensive effort with all parties working together to achieve an improvement. This may need a tailored approach and additional investment.

By working together we can expect to meet community aspirations by improving the quality of water bodies which do not meet community

expectations, or have been degraded. Once improved, waterbodies that have been rehabilitated or restored should remain in good condition with no further degradation.

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.

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 which:
 - detects when activities are causing effects that are more than minor or short-term
 - operates effective systems so up-to-date information is available to decision-makers. This includes writing consent conditions, undertaking compliance monitoring, citizen reporting, and feedback from them.

By working together we can expect individual 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.

Managing the cumulative effects of activities

Looking after our water means applying the same approach to managing the cumulative effects of activities as we do for managing the effects of individual activities, all whilst adapting our management practices. This enables activities to be undertaken where they are not likely to exceed environmental limits as long as the cumulative effects of activities do 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, and that the cumulative effects of all our activities do not collectively affect our waterbodies.





GOAL 3. WATER QUALITY FOR COMMUNITY WELLBEING

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 all while maintaining good or excellent water quality, and achieving economic, social, and cultural wellbeing. It means setting environmental limits that consider the quality of water needed by both industry and citizens.

By working together we can expect Otago's water quality to strengthen and diversify our economy. It will support social and economic activities and provide a competitive advantage and value for Otago businesses and communities.

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

Realising economic values

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

Avoiding unnecessary costs

Achieving water quality for community wellbeing means the Otago Regional Council uses an established model for discharge management. The principles are:

- The 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.

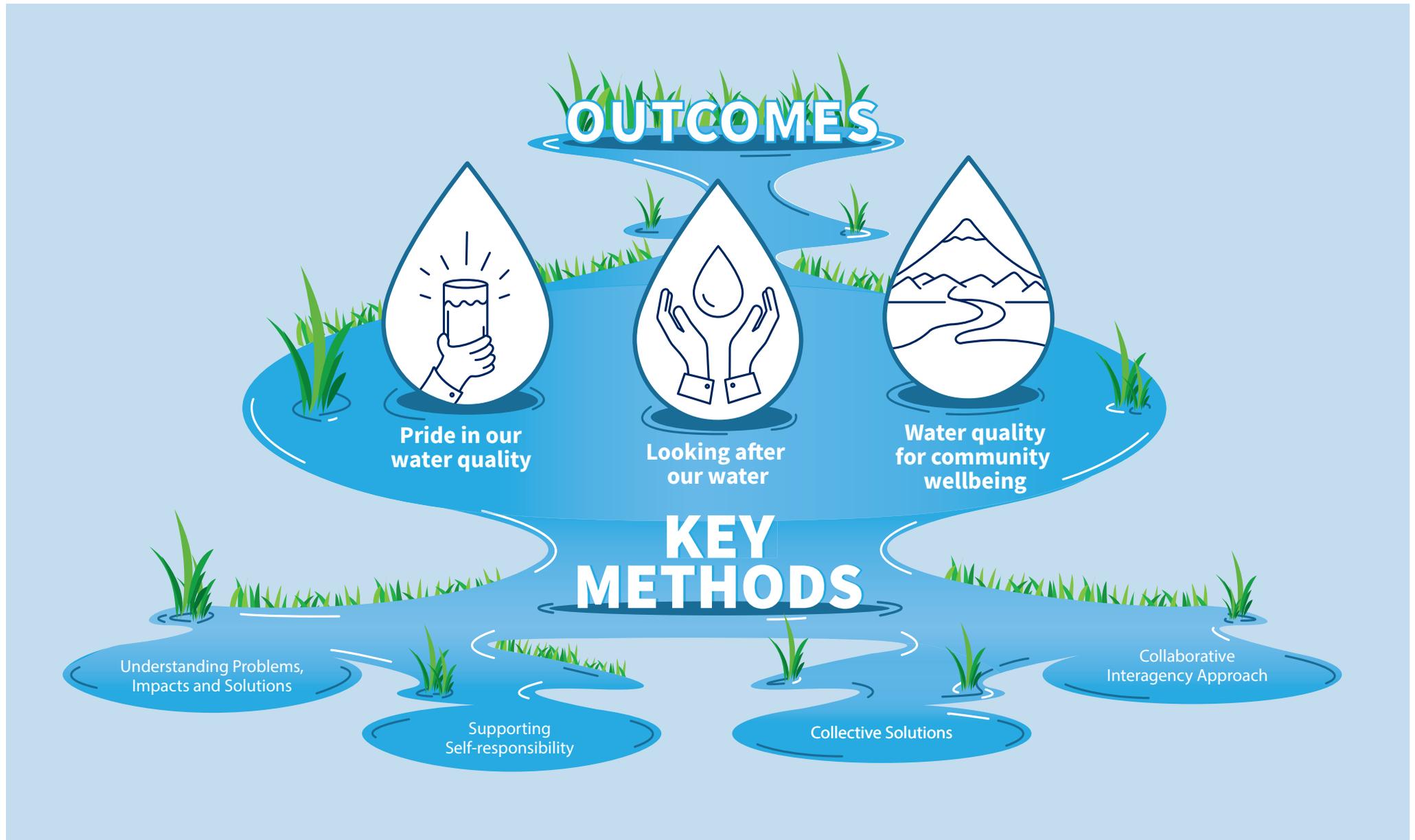
Getting premiums from sustainable practices

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 will benefit from targeting customers who value the environment in the way that we do in Otago and we need to communicate the value that looking after the environment has for the quality of product customers are buying.

By working together we can expect all Otago businesses who actively manage their activities, and limit environmental effects, will benefit from their sustainable practices.



KEY METHODS





KEY METHODS

Understanding problems, impacts and solutions

If we are to manage Otago's water successfully, we need to improve our understanding of the water quality problems and risks, and their potential solutions.

Understanding problems, impacts, and solutions means we need:

- to understand what we can do individually or together to improve water quality,
- organisations involved in monitoring water to agree to review their monitoring, and share their information, to allow for successful integration of monitoring data,
- the scientific community's assistance in watching and improving knowledge on emerging water quality risks; and to have our community involved through citizen science initiatives,
- industries and individuals to actively keep informed on water quality risks, issues, and potential solutions,
- a national entity to take charge of collating information on best practices,

- to improve on current water quality monitoring, and complement it with site-specific studies,
- to encourage and co-ordinate the collation and integration of the monitoring data collected across agencies and stakeholders,
- to keep abreast of emerging knowledge about contaminants and their risks, and inform the public of those water quality issues and risks.

By working together we can expect that as a community we have good knowledge of:

- water quality throughout Otago,
- sources of contamination degrading water quality,
- issues and risks to water quality,
- practices that will improve or protect Otago's water quality.

Supporting self-responsibility

Promoting self-responsibility

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



Promoting self-responsibility 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 need to 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 to take responsibility for their discharges and behave in ways that minimise the effect of their activities on water quality.

Community awareness of our impact on water

Having community awareness 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 its visitors, of:

- the importance of water quality to our community,
- the sensitivity of different waterbodies,
- the impact that their actions could have on water quality.

Promoting and enabling appropriate behaviour

Promoting and enabling appropriate behaviour means the Otago Regional Council and Territorial Authorities encourage the community and businesses to address adverse effects on water quality (e.g. 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,
- Having regard to flooding and erosion control.

By working together we can expect more people will be doing what is needed to protect water quality.



Enabling self-monitoring

Enabling self-monitoring means developing plan rules and consent conditions which enable people to self-check. It also means encouraging technology entrepreneurs to provide solutions that support people to do this by themselves.

By working together we can expect that more people are checking their own compliance against the rules and consent conditions that protect Otago's urban water quality.

Accessing funding

Accessing funding means informing the banking and investment sector of the Water Plan objectives and rules, and the consequences of breaching the rules and degrading water quality.

By working together we can expect those providing funding for new initiatives or upgrades to better 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.

Collective solutions

These can include infrastructure, ecological solutions, and collective consenting.

Adopting collective solutions where needed

Adopting collective solutions means the Otago Regional Council, in collaboration with each Territorial Authority and the relevant community, need to use monitoring results and/or risk assessments 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.

Adequate funding sources

Adequate funding sources means we explore innovative funding options; and the options 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.

Collaborative interagency approach

Consistent regulatory approach

A consistent regulatory approach means the Otago Regional Council and Territorial Authorities take a consistent, coherent regional approach to water quality management, one that acknowledges the characteristics of urban catchments, and what makes them different from rural catchments. Otago's plans and bylaws 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 sets 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.

Interagency collaboration

Collaboration means the Otago Regional Council integrates its management of water quality with its management of other aspects of water and water bodies; taking a more holistic view of water and waterways.

The Otago Regional Council, Territorial Authorities, the District Health Board, iwi and University of Otago and the interested government agencies clarify what each agency is responsible for, and integrate their approaches, taking a *ki uta ki tai* approach (mountains to the sea). These organisations proactively and freely share water quality information, and involve the wider community in water management. The Otago Regional Council and Territorial Authorities adaptively manage their approach to water bodies. This involves learning together and operating an audit programme that tests actions against outcomes, and adapts actions to enable us to respond as needed.

By working together we can expect that in Otago, the Regional Council, Territorial Authorities, District Health Board, iwi, University of Otago, interested government agencies, Otago citizens, and our visitors will all work together effectively and efficiently to have good or excellent water quality throughout the region.



